Catalog Home

For students whose initial enrollment occurs Fall 2019 - Summer 2020, this Catalog is valid through Summer 2028.

Individual program requirements described in the Graduate School Issue of the 2019-2020 Graduate Catalog of The University of Memphis are subject to change. Please consult your graduate advisor for changes that may occur before publication of the next issue of this Catalog.

The University reserves the right to cancel or alter any part of this Catalog without notice (subject to the following):

The course offerings and requirements of the University of Memphis are continually under examination and revision. This Catalog presents the offerings and requirements in effect at the time of publication, but is no guarantee that they will not be changed or revoked. The specific courses or activities constituting the degree requirements for any programs are subject to state contractual terms and do not constitute a contract between the student and the University of Memphis.

The University of Memphis reserves the right to make changes as required in course offerings, curricula, academic policies and other rules and regulations affecting students to be effective whenever determined by the institution. These changes will govern current and formerly enrolled students. Enrollment of all students is subject to these conditions. Any fees, charges or costs, and all academic regulations set forth in this Bulletin are subject to change at any time, and all courses, programs, and activities described in this Bulletin are subject to cancellation or termination by the University of Memphis at any time.

The University of Memphis provides the opportunity for students to increase their knowledge by providing programs of instruction in the various disciplines and programs through faculty who, in the opinion of the institution, are trained and qualified for teaching at the college level. However, the acquisition of knowledge by any student is contingent upon the student's desire and ability to learn and the application of appropriate study techniques to any course or program. Thus, the University of Memphis must necessarily limit representation of student preparedness in any field of study to the competency demonstrated at that specific point in time at which appropriate academic measurements were taken to certify course or program completion.

The University of Memphis offers equal educational opportunity to all persons without regard to race, religion, sex, creed, color, national origin or disability. The University does not discriminate on these bases in recruitment and admission of students or in the operation of its programs and activities, as specified by federal laws and regulations. The designated coordinators for University compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 are the Vice President for Student Affairs and the Equal Opportunity Compliance Officer. Information in this document will be provided in alternate format upon request.

The University of Memphis is an Equal Opportunity/Affirmative Action University. It is committed to education of a non-racially identifiable student body.

The University of Memphis is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097, telephone number 404.679.4501) to award bachelor's, first professional, master's, educational specialist, doctoral degrees, and graduate certificates.

About

ROBIN POSTON, Ph.D.
Dean of the Graduate School
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The University of Memphis is a Doctoral Extensive Research/High Activity university. The Graduate School is the center of advanced study and research within the University. The basic objectives of the Graduate School are:

- To preserve and disseminate knowledge;
- To extend knowledge through research; and
- To prepare men and women to assume responsible and useful roles in a changing society.

The Doctor of Philosophy degree is awarded in audiology and speech-language pathology, biology, biomedical engineering, business administration, chemistry, communication, computer science, counseling psychology, earth sciences, educational psychology and research, engineering, english, history, mathematical sciences, music, nursing, philosophy, psychology, and social and behavioral sciences. The degrees of Doctor of Audiology, Doctor of Education, Doctor of Liberal Studies, and Doctor of Musical Arts are awarded by the School of Communication Sciences and Disorders, the College of Education, the College of Professional and Liberal Studies, and the College of Communication and Fine Arts, respectively. The College of Education also awards the degree of Education Specialist with a major in education. The Cecil C. Humphreys School of Law awards the Juris Doctor degree.

Masters programs are offered in fifty-five major areas through seven colleges and four schools. The degrees include Master of Arts, Master of Science, Master of Architecture, Master of Arts in Liberal Studies, Master of Arts in Teaching, Master of Business Administration, International Master of Business Administration, Master of City and Regional Planning, Master of Education, Master of Fine Arts, Master of Health Administration, Master of Music, Master of Professional Studies, Master of Public Administration, Master of Public Health, Master of Social Work, and Master of Science in Nursing.

Mission of the University

The University of Memphis is a learner-centered metropolitan research university providing high quality educational experiences while pursuing new knowledge through research, artistic expression, and interdisciplinary and engaged scholarship.

Values

The University of Memphis, as an engaged learning community, celebrates:

- The pursuit of excellence in teaching and research as the highest measures of successful achievement.
- Interdisciplinary collaboration, artistic expression, and research as vehicles for leveraging our resources, solving problems, and multiplying our accomplishments.
- The transfer and dissemination of knowledge with community stakeholders for the intellectual, economic, and social advancement of our community.
- Innovation and creativity in everything we do.
- Respect for diversity and individual worth.
- Integrity and transparency in all our actions.
- Responsible stewardship and conservation of resources.
- Stewardship of wisdom, knowledge, and information created by our predecessors.
- Leadership and involvement in the economic, social, and professional growth of Memphis, the state of Tennessee, and the nation.

Role of the Graduate School

The role of the Graduate School includes the following items:

- Advocate graduate education and graduate student policies both on campus and in the profession
- Strengthen the link between the research mission and graduate education at the university
- Establish criteria for review and approval of graduate faculty
- Provide oversight for policies and standards for graduate education at the campus level
- Advance graduate education and enhance the graduate student experience

- Review all proposals for new courses, new academic programs, and curricular and program modifications
- Review, formulate, and approve policies and regulations relating to graduate education, graduate student recruitment, admission, retention, and graduation policies
- Maintain equitable standards and policies across disciplines and program
- Provide guidance relative to issues and problems affecting graduate education and graduate students at the university
- Promote excellence for graduate students and faculty relative to the graduate education experience
- Provide an administrative framework to facilitate efficient admission, retention, and graduation processes for graduate students
- Promote the diversity of our student population and making graduate study accessible.
- Advocate for adequate library and other research resources and services to support graduate education

History

The roots of The University date back to September 12, 1912, with the establishment and beginning of classes at West Tennessee State Normal School, which trained primary and secondary education teachers. However, the seeds for the normal school's creation were sown three years earlier, in 1909, when the Tennessee General Assembly passed a General Education law calling for the establishment and maintenance of three normal schools, one located in each of the three grand divisions of the state.

The eastern edge of Memphis became the site for West Tennessee State Normal School, which in 1929 became West Tennessee State Teachers College. In 1941, the college expanded its curriculum in liberal arts, and the name was changed to Memphis State College, an institution serving three to four thousand students. The undergraduate program was reorganized into three schools and a graduate school was added in 1951.

Memphis State achieved university status in 1957. On July 1, 1994, the name was officially changed to The University of Memphis.

Governing Body

The governance and control of The University of Memphis is vested in the University of Memphis Board of Trustees, with state coordination by the Tennessee Higher Education Commission (THEC). The composition and powers of the Board are set forth in Tennessee Code Annotated 49-8-101 through 49-8-303. The UofM Board consists of ten members of which nine members are voting and one member is nonvoting. Eight of the members are appointed by the Governor, one is chosen from among the faculty by the faculty senate and one is a student appointed by the Board.

Accreditation

The University of Memphis is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) (1866 Southern Lane, Decatur, GA 30030-4097; telephone number 404-679-4501) to award bachelor's, first professional, master's, education specialist, and doctoral degrees. Individual colleges, schools, and departments are accredited by the appropriate agencies.

Organization

The schools and colleges that make up The University are the Graduate School, the Cecil C. Humphreys School of Law, the School of Communication Sciences and Disorders, The School of Health Studies, The Kemmons Wilson School of Hospitality and Resort Management, the School of Public Health, and seven colleges offering graduate and undergraduate programs: the College of Arts and Sciences, the Fogelman College of Business and Economics, the College of Communication and Fine Arts, the College of Education, the Herff College of Engineering, the Loewenberg College of Nursing, and the College of Professional and Liberal Studies.

The Memphis Community

Memphis is one of the South's largest and most attractive cities. As a medical, educational, communication, distribution, and transportation center, Memphis offers a rich and full range of research opportunities and cultural experiences. The city, known worldwide for its musical heritage as home of the blues and the birthplace of rock and roll, has many fine restaurants, museums, and theaters, as well as one of the nations largest urban park systems. Annual events include the St. Jude/Liberty Bowl Football Classic, Memphis in May International Festival, Kroger/St. Jude Tennis Tournament, Africa in April Cultural Awareness Carnival, St. Jude Memphis Golf Classic, and Carnival Memphis. Tourist attractions include the Beale Street Historic District, the National Civil Rights Museum, the Center for Southern Folklore, and Elvis Presley's home, Graceland. The medical complex in Memphis is the South's largest and one of the nation's foremost centers of medical research.

The University's modern and beautifully landscaped campus is centrally located in an attractive residential area of Memphis, with shopping, recreation, and entertainment centers nearby. In addition to the Main Campus facilities, the University has research and athletic training facilities and married student housing on the South Campus, as well as teaching sites throughout West Tennessee.

Degree Programs

Graduate and prospective students are responsible for being thoroughly familiar with the rules, regulations, and degree requirements of the Graduate School and of the academic departments. The Fogelman College of Business and Economics, the College of Education and the Herff College of Engineering have additional college degree requirements.

For information regarding specific degree program requirements and courses available, click on the appropriate links below. Click here for a complete listing of all degree program contacts including web pages, telephone numbers and e-mail addresses

Minimum Degree Requirements for Graduate Academic Programs

Accounting - Data Analytics Concentration, (MS)

Master of Science Degree

The 30-hour master's program provides students with a corporate governance perspective that emphasizes accounting in a service-oriented economy. Three concentrations within the major are offered: accounting, accounting data analytics, and taxation.

The Master of Science degree requires:

1. Prerequisites (courses indicated [C or better in each course] or their equivalents) of ACCT 2010, Financial Accounting; ACCT 3110, Intermediate Accounting I; ACCT 3120, Intermediate Accounting II; ACCT 3310, Cost Accounting; ACCT 3510, Individual Taxation; ACCT 4020 Accounting Systems; ACCT 4240, Auditing; and SCMS 3711, Business Analytics.
2. A minimum of 30 semester hours of approved graduate courses. The 30 graduate credits must include 21 hours in Accounting, with no more than 9 hours of 6000 level courses.

General Requirements: 18 hours

ACCT 7521 - Taxation/Bus Entities

(3) (6520). Introduction to the federal income taxation of corporations, partnerships, estates, and trusts. PREPREQUISITE: ACCT 3510 or permission of instructor. PREREQUISITE(S): ACCT 3510 or permission of instructor.

ACCT 7140 - Financial Statement Analysis **

(3) Examining fmancial statements in the context of identifying the financial information available to analysts as well as techniques useful in transforming this basic information into forms more useful for analysis. PREREQUISITE(S): ACCT 2010 or ACCT 7080.

ACCT 7211 - Advanced Financial Reporting

(3) Business combinations; accounting methods for consolidated financial statements; foreign transactions and accounting for foreign subsidiaries; partnership accounting. PREREQUISITE(S): ACCT 3120 with a grade of "C" or better.

ACCT 6130 - Intermediate ACCT III

(3) Advanced topics in financial accounting including leases, pensions, earnings per share, and accounting changes and errors. PREREQUISITE(S): ACCT 3120.

ACCT 6250 - Accounting Ethics/Regulation

(3) Foundations of ethics including integrity, objectivity, independence, ethical reasoning, ethical decision-making and ethical dilemmas from the point of view of a professional accountant; legal topics, codes of professional conduct relating to accounting profession and accountancy regulatory bodies; related state and national regulatory requirements. Ethical case studies on topics of professional accounting responsibility. PREREQUISITE(S) or COREQUISITE(S): ACCT 4240

ACCT 6320 - Mgr Decision Making/ACCT

(3) Evolution of management accounting: functional tools used my manager/controllers; written and oral communication skills in the context of management accounting. Students will develop accounting data analytic skills and apply them to business setting using business cases. PREREQUISITE(S): ACCT 3120, ACCT 3310.

Data Analytics Electives: 12 hours (choose 4 of 5)

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

MIS 7190 - Programing For Business

(3) Fundamentals of programming for business projects, including Internet-based business applications and object-oriented programming languages. PREREQUISITE(S): permission of instructor.

MIS 7620 - Business Machine Learning I

(3) Business Intelligence is the study of computerized support for management decision making. Topics include data mining, artificial neural networks, text and web mining, data warehousing, expert systems, and knowledge management.

MIS 7621 - Business Machine Learning II

(3) This advanced course in business analytics goes into depth in techniques and methods applied to real world problems and data. Techniques covered include: artificial neural networks, decision trees, nearest neighbor approaches, predictive modeling, and genetic algorithms. The emphasis will be on application in business. The course will provide guidance on building the business case and the model including problem definition and data evaluation, and evaluation of the modal. Hands-on exercises will be required using analytics packages/languages as Tableau, Rapid Miner, IBM Modeler, Microsoft SQL, R. PREREQUISITE(S) or COREQUISITE(S): MIS 7620 or instructor permission.

MIS 7660 - Advanced Data Management

(3) Advanced concepts in data management and in the strategic use of data. Topics will be selected from data strategy, business intelligence, data mining and the strategic use of data warehouses, data quality, the business value of data, unstructured data, modern data administration, master data management, data management in cloud computing, data issues in agile development, and other contemporary data topics.

Note:

ACCT courses numbered 70XX, e.g., ACCT 7050 and ACCT 7080, are not acceptable choices. An internship does not count as credit toward the degree, but is reported on the transcript. There is a limitation of three 6000-level courses for credit toward the MS degree.

[1] Not required if you took Intermediate Accounting as a two-course sequence.

[2] If you passed this course or its equivalent in an undergraduate program you must select a different accounting elective instead.

Accounting - General Accounting Concentration, (MS)

Master of Science Degree

The 30-hour master's program provides students with a corporate governance perspective that emphasizes accounting in a service-oriented economy. Three concentrations within the major are offered: accounting, accounting data analytics, and taxation.

The Master of Science degree requires:

1. Prerequisites (courses indicated [C or better in each course] or their equivalents) of ACCT 2010, Financial Accounting; ACCT 3110, Intermediate Accounting I; ACCT 3120, Intermediate Accounting II; ACCT 3310, Cost Accounting; ACCT 3510, Individual Taxation; ACCT 4020 Accounting Systems; ACCT 4240, Auditing; and SCMS 3711, Business Analytics.
2. A minimum of 30 semester hours of approved graduate courses. The 30 graduate credits must include 21 hours in Accounting, with no more than 9 hours of 6000 level courses.

General Requirements: 18 hours

ACCT 7521 - Taxation/Bus Entities

(3) (6520). Introduction to the federal income taxation of corporations, partnerships, estates, and trusts. PREPREQUISITE: ACCT 3510 or permission of instructor. PREREQUISITE(S): ACCT 3510 or permission of instructor.

ACCT 7140 - Financial Statement Analysis **

(3) Examining fmancial statements in the context of identifying the financial information available to analysts as well as techniques useful in transforming this basic information into forms more useful for analysis. PREREQUISITE(S): ACCT 2010 or ACCT 7080.

ACCT 7211 - Advanced Financial Reporting

(3) Business combinations; accounting methods for consolidated financial statements; foreign transactions and accounting for foreign subsidiaries; partnership accounting. PREREQUISITE(S): ACCT 3120 with a grade of "C" or better.

ACCT 6130 - Intermediate ACCT III

(3) Advanced topics in financial accounting including leases, pensions, earnings per share, and accounting changes and errors. PREREQUISITE(S): ACCT 3120.

ACCT 6250 - Accounting Ethics/Regulation

(3) Foundations of ethics including integrity, objectivity, independence, ethical reasoning, ethical decision-making and ethical dilemmas from the point of view of a professional accountant; legal topics, codes of professional conduct relating to accounting profession and accountancy regulatory bodies; related state and national regulatory requirements. Ethical case studies on topics of professional accounting responsibility. PREREQUISITE(S) or COREQUISITE(S): ACCT 4240

ACCT 6320 - Mgr Decision Making/ACCT

(3) Evolution of management accounting: functional tools used my manager/controllers; written and oral communication skills in the context of management accounting. Students will develop accounting data analytic skills and apply them to business setting using business cases. PREREQUISITE(S): ACCT 3120, ACCT 3310.

General: 12 hours

Required: 3 hours

ACCT 7242 - Advanced Auditing

(3) (0551)(6241). Auditing of computer-based accounting systems; emphasis on audit software and computer auditing techniques used to evaluate accounting system controls and test accounting data integrity; nature and use of expert systems in accounting with emphasis on their use as an audit tool. PREREQUISITE(S): ACCT 3120 PREREQUISITE(S) or COREQUISITE(S): ACCT 4240.

1 Elective from:

ACCT 7412 - Legal/Acctg Aspects Entrep

(3) Prepares students to understand the regulatory framework for establishing a firm, legal forms of a business such as sole proprietorship, partnership, S corporation, and LLC; study of federal securities regulations, accounting, auditing, taxes, financial reporting, and uses of accounting data. The course also covers contract law, cyber law, copyrights and patents, ethics and social entrepreneurship.

ACCT 7626 - Financial Report/Audit Stand

(3) Theory and practice of financial accounting and reporting for profit and non-profit entities, including governments; auditing and attestation standards and procedures. PREREQUISITE(S): permission of the School of Accountancy.

ACCT 7627 - Regulatory/Business Envrnmnt

(3) Theory and practice of regulatory and business environments; nature and types of common business structures; technology in business environment; business laws and regulatory issues; taxation of businesses; individuals and property transactions. PREREQUISITE(S): permission of the School of Accountancy.

ACCT 7510 - Tax Research & Theory

(3) Advanced study of federal taxation with emphasis on tax research methodology and various theoretical precepts; integration of basic tax knowledge with skillful tax research to accomplish desired ethical tax objectives. PREREQUISITE(S): ACCT 7521.

Required 2 Electives from:

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

MIS 7190 - Programing For Business

(3) Fundamentals of programming for business projects, including Internet-based business applications and object-oriented programming languages. PREREQUISITE(S): permission of instructor.

MIS 7620 - Business Machine Learning I

(3) Business Intelligence is the study of computerized support for management decision making. Topics include data mining, artificial neural networks, text and web mining, data warehousing, expert systems, and knowledge management.

MIS 7621 - Business Machine Learning II

(3) This advanced course in business analytics goes into depth in techniques and methods applied to real world problems and data. Techniques covered include: artificial neural networks, decision trees, nearest neighbor approaches,

predictive modeling, and genetic algorithms. The emphasis will be on application in business. The course will provide guidance on building the business case and the model including problem definition and data evaluation, and evaluation of the modal. Hands-on exercises will be required using analytics packages/languages as Tableau, Rapid Miner, IBM Modeler, Microsoft SQL, R. PREREQUISITE(S) or COREQUISITE(S): MIS 7620 or instructor permission.

MIS 7660 - Advanced Data Management

(3) Advanced concepts in data management and in the strategic use of data. Topics will be selected from data strategy, business intelligence, data mining and the strategic use of data warehouses, data quality, the business value of data, unstructured data, modern data administration, master data management, data management in cloud computing, data issues in agile development, and other contemporary data topics.

Note:

ACCT courses numbered 70XX, e.g., ACCT 7050 and ACCT 7080, are not acceptable choices. An internship does not count as credit toward the degree, but is reported on the transcript. There is a limitation of three 6000-level courses for credit toward the MS degree.

[1] Not required if you took Intermediate Accounting as a two-course sequence.

[2] If you passed this course or its equivalent in an undergraduate program you must select a different accounting elective instead.

Accounting - Taxation Concentration, (MS)

Master of Science Degree

The 30-hour master's program provides students with a corporate governance perspective that emphasizes accounting in a service-oriented economy. Three concentrations within the major are offered: accounting, accounting data analytics, and taxation.

The Master of Science degree requires:

1. Prerequisites (courses indicated [C or better in each course] or their equivalents) of ACCT 2010, Financial Accounting; ACCT 3110, Intermediate Accounting I; ACCT 3120, Intermediate Accounting II; ACCT 3310, Cost Accounting; ACCT 3510, Individual Taxation; ACCT 4020 Accounting Systems; ACCT 4240, Auditing; and SCMS 3711, Business Analytics.
2. A minimum of 30 semester hours of approved graduate courses. The 30 graduate credits must include 21 hours in Accounting, with no more than 9 hours of 6000 level courses.

General Requirements: 18 hours

ACCT 7521 - Taxation/Bus Entities

(3) (6520). Introduction to the federal income taxation of corporations, partnerships, estates, and trusts. PREPREQUISITE: ACCT 3510 or permission of instructor. PREREQUISITE(S): ACCT 3510 or permission of instructor.

ACCT 7140 - Financial Statement Analysis **

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ACCT 7211 - Advanced Financial Reporting

(3) Business combinations; accounting methods for consolidated financial statements; foreign transactions and accounting for foreign subsidiaries; partnership accounting. PREREQUISITE(S): ACCT 3120 with a grade of "C" or better.

ACCT 6130 - Intermediate ACCT III

(3) Advanced topics in financial accounting including leases, pensions, earnings per share, and accounting changes and errors. PREREQUISITE(S): ACCT 3120.

ACCT 6250 - Accounting Ethics/Regulation

(3) Foundations of ethics including integrity, objectivity, independence, ethical reasoning, ethical decision-making and ethical dilemmas from the point of view of a professional accountant; legal topics, codes of professional conduct relating to accounting profession and accountancy regulatory bodies; related state and national regulatory requirements. Ethical case studies on topics of professional accounting responsibility. PREREQUISITE(S) or COREQUISITE(S): ACCT 4240

ACCT 6320 - Mgr Decision Making/ACCT

(3) Evolution of management accounting: functional tools used my manager/controllers; written and oral communication skills in the context of management accounting. Students will develop accounting data analytic skills and apply them to business setting using business cases. PREREQUISITE(S): ACCT 3120, ACCT 3310.

Taxation: 12 Hours

Required: 6 Hours

ACCT 7510 - Tax Research & Theory

(3) Advanced study of federal taxation with emphasis on tax research methodology and various theoretical precepts; integration of basic tax knowledge with skillful tax research to accomplish desired ethical tax objectives. PREREQUISITE(S): ACCT 7521.

ACCT 7511 - Tax- Partnships/Prtnrs

(3) Tax law organization, operation, and liquidation of partnerships; general overview of Subchapter K, acquisitions of partnership interests, basis of partner's partnership interest, taxation of partnership operations, transfers of partnership interests, partnership distributions, death or retirement of partner, adjustments to basis of partnership assets. PREREQUISITE(S): ACCT 7510 or permission of the instructor.

Required 1 Elective from:

ACCT 7242 - Advanced Auditing

(3) (0551)(6241). Auditing of computer-based accounting systems; emphasis on audit software and computer auditing techniques used to evaluate accounting system controls and test accounting data integrity; nature and use of expert systems in accounting with emphasis on their use as an audit tool. PREREQUISITE(S): ACCT 3120 PREREQUISITE(S) or COREQUISITE(S): ACCT 4240.

ACCT 7412 - Legal/Acctg Aspects Entrep

(3) Prepares students to understand the regulatory framework for establishing a firm, legal forms of a business such as sole proprietorship, partnership, S corporation, and LLC; study of federal securities regulations, accounting, auditing, taxes, financial reporting, and uses of accounting data. The course also covers contract law, cyber law, copyrights and patents, ethics and social entrepreneurship.

ACCT 7626 - Financial Report/Audit Stand

(3) Theory and practice of financial accounting and reporting for profit and non-profit entities, including governments; auditing and attestation standards and procedures. PREREQUISITE(S): permission of the School of Accountancy.

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MIS 7605 - Bus Database Systems

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of the modal. Hands-on exercises will be required using analytics packages/languages as Tableau, Rapid Miner, IBM Modeler, Microsoft SQL, R. PREREQUISITE(S) or COREQUISITE(S): MIS 7620 or instructor permission.

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(3) Advanced concepts in data management and in the strategic use of data. Topics will be selected from data strategy, business intelligence, data mining and the strategic use of data warehouses, data quality, the business value of data, unstructured data, modern data administration, master data management, data management in cloud computing, data issues in agile development, and other contemporary data topics.

Note:

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[1] Not required if you took Intermediate Accounting as a two-course sequence.

[2] If you passed this course or its equivalent in an undergraduate program you must select a different accounting elective instead.

Anthropology, (MA)

The Department of Anthropology offers a Master of Arts degree in Anthropology with the purpose of training students as competent practicing anthropologists to understand and address issues of social inequality using anthropological theory and methods.

Focus areas include community development, cultural heritage and identity, museum studies, health and health equity, environmental anthropology, food justice, economic and social behavior, and humanitarianism. Each student will plan his or her program in consultation with his or her major advisor.

A concentration is also available in Medical Anthropology. The concentration in Medical Anthropology involves the application of theories and methods in medical anthropology to better understand and address health disparities, health risks, and healthcare systems.

Program objectives are that students will: (a) demonstrate advanced comprehension of the holistic conceptual, theoretical and methodological foundations of anthropology; (b) enhance and apply critical analysis and independent thought in relation to core constructs, theories, and methods in anthropological works; (c) conceptualize, design, and implement research on significant anthropological problems for building and strengthening community wellbeing and quality of life; (d) enhance written and oral communication of Anthropological themes and topics; and (e) implement professional training and career opportunities in Anthropology through participation in professional activities such as conference presentations, certification, workshops, and related activities. Students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements for Graduate Academic Programs) as well as the program requirements of the degree being pursued.

MA Degree Program

Program Admission

Admission to both the Graduate School and the department is required. To meet departmental requirements for admission, students must submit a letter of intent, three letters of recommendation, and complete the GRE. All

applicants are encouraged to submit a writing sample and those applying for a Graduate Assistantship are required to submit a writing sample. In addition to their undergraduate academic record, applicants will be considered on the basis of their GRE scores, recommendation letters, work experience and career plans as described in the letter of intent. Except in exceptional circumstances, students should have a 3.0 undergraduate record.

Admission to the program is not automatic upon meeting minimum departmental admission requirements. Students are selected from the pool of qualified applicants and the number selected depends on the availability of financial aid and adequate faculty supervision. Applications submitted by January 31 will receive greater consideration for funding. Applications received after May 1 will be considered on a case-by-case basis. Applications for the spring semester should be submitted by November 30. Summer school admission must be completed by May 1 for entrance into the Graduate School and the departmental program. Late submissions may, in exceptional circumstances, be considered on an individual basis, but will normally be deferred to the following semester.

Program Requirements

1. A total of 30 semester hours course-work plus satisfactory performance in a practicum (ANTH 7985—6 hours credit). One hour of ANTH 7985 will be devoted to professional development and practicum preparation modules in the first semester.
2. Satisfactory completion of the core curriculum (12 hours).
    1. ANTH 7075 Methods In Anthropology
    2. ANTH 7076 Anth Analysis/Writing
    3. ANTH 7200 Roots of Anth Theory
    4. ANTH 7255 Applying Anthropology
3. For students in the Medical Anthropology concentration, satisfactory completion of concentration-specific requirements (6 hours).
    1. ANTH 7511 - Critically-Applied Med Anth
    2. ANTH 7521 - Biocultural Epidemiology
4. At least 70% of the program (i.e. 26 hours) must be taken at the 7000 level.
5. Satisfactory performance on a comprehensive exam.
6. The Master's Degree in Anthropology is an interdisciplinary degree and students are encouraged to take up to 9 semester hours of their work outside of the Department of Anthropology, depending upon their area of interest and the nature of previous work experience.

Architecture, (MArch)

The first professional Master of Architecture degree is for individuals with a pre-professional degree in architecture, environmental design, or equivalent program of study. The professional curriculum comprises the four-year Bachelor of Fine Arts in Architecture and the two-year Master of Architecture degrees. The post-professional Master of Architecture degree is for individuals already holding a professional degree in architecture who are interested in pursuing opportunities for research, teaching, and independent studies.

The University of Memphis, Department of Architecture, offers the following NAAB-accredited degree program:

M.Arch. (pre-professional degree + 60 graduate credits)

Next accreditation visit: 2023

The Department of Architecture is a member of the Association of Collegiate Schools of Architecture.

In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, the Doctor of

Architecture. A program may be granted an eight-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may require a pre-professional undergraduate degree in architecture for admission. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Program Objectives: The program of study for the Master of Architecture encompasses both the art and the science of design and is structured to engage students in the processes and professional standards of architecture and design. Through a series of professional core and elective courses, students (1) become competent in a range of intellectual, spatial, technical, and interpersonal skills; (2) understand the historical, socio-cultural, and environmental context of architecture; (3) are able to solve architectural design problems, including the integration of technical systems and health and safety requirements; and (4) comprehend the roles and responsibilities of the architect in society. The culturally diverse Memphis and Mid-South region serves as an urban and non-urban issues laboratory.

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements) as well as the program requirements of the degree being pursued.

Evaluation of Credentials: Applicants whose highest degree is from a foreign university must have their credentials evaluated. The university will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (www.naces.org). A course by course report is required.

Program Admission

In addition to application to the Graduate School, all persons making application to the MArch degree program must submit the following materials directly to the Department of Architecture:

1. Portfolio: Applicant portfolios are reviewed for demonstration of aesthetic judgment, basic design ability, visual investigation skills, and abilities in architectural design, including identification of building elements and an understanding of their assembly, integration of building systems, a knowledge of building structure, and other evidence of understanding and abilities conforming to NAAB performance criteria.
2. Letters of Recommendation: Three letters of recommendation are required.
3. Statement of Intent: Applicants must submit a two-page essay describing professional background, objectives, and motivation for pursuing graduate study in Architecture. This brief statement should reflect an individual interest in this graduate program and provide some indication of professional goals or intentions.

All admission documents and portfolio must be received by 15 March for fall admission. Students who, in the judgment of the faculty, have adequate preparation may be given advanced standing.

Program Prerequisites

1. Persons making application to the first professional MArch degree program must have completed an approved pre-professional undergraduate degree in Architecture, Environmental Design, or the equivalent.
    1. In assessing the pre-professional degree, the following course content or evidence of equivalent experience is required. Otherwise, the appropriate courses must be taken at the undergraduate level:
        1. Architectural Graphics (both technical and freehand drawing), 6 semester hours
        2. Architectural History (ancient through modern), 6 semester hours
        3. Structural Design Principles (statics; strength of materials; gravity and lateral load tracing; design in timber, steel, concrete), 6 semester hours
        4. Building Materials and Assembly (light construction), 3 semester hours
        5. Environmental Systems (heat, light, sound, human comfort), 3 semester hours
        6. Architectural Design Studio (in addition to "design fundamentals" courses), 20 semester hours

    2. Where slight deficiencies in preparation exist, applicants may be admitted with the stipulation that they complete additional design studio or supporting courses. These may not count toward the required graduate plan of study.
2. Persons making application to the post-professional MArch degree program must have completed a NAAB-accredited professional undergraduate degree in architecture. The Architecture Program director may approve a maximum of 30 semester hours in architecture course work from the professional degree. Registration as an architect in the United States may be substituted for the professional degree.

Program Requirements

1. A minimum of 60 semester hours, including 6 hours of thesis studio or professional project studio.
2. A total of 36 semester hours of Architecture core courses, consisting of 18 semester hours of advanced architectural design studios (ARCH 7711, ARCH 7712, ARCH 7713), 9 semester hours of architectural seminars (ARCH 7011, ARCH 7012, ARCH 7013), and 9 semester hours of architectural theory and advanced professional and technical courses (ARCH 7211, ARCH 7421, ARCH 7431)
3. A minimum of 3 semester hours of Architecture Research (ARCH 7930) and 6 semester hours of Architecture Thesis Studio (ARCH 7996) or Professional Project Studio (ARCH 7995). The thesis or professional project must be approved by a faculty committee. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
4. Students receiving assistantships are required to take a minimum of 12 credit hours per semester.

Transfer of Credits

The Architecture program director may recommend to the Graduate School acceptance of no more than 12 semester hours of credit for architecture course work successfully completed at another institution. For students formerly enrolled in programs accredited by the National Architectural Accrediting Board, a maximum of 30 semester hours in architecture course work may be approved.

Art (K-12), (MAT)

Art - Ceramics Concentration, (MFA)

MFA Degree Program

Program objectives are: (1) professional studio competence as exemplified by a significant body of work; (2) professional competence in the dissemination of knowledge, including logical and clear written and verbal expression of ideas in teaching contexts; and (3) development of skills for critical and analytical reasoning as a practicing art professional.

Program Admission

1. Portfolio: Approval by the area graduate committee of the applicant's creative work as specified below:
    1. Graphic Design: 20-30 images in a powerpoint presentation, of original and/or printed works. Submission of original work may be requested.
    2. Ceramics, Painting, Printmaking/ Photography, and Sculpture: 20-30 images in a powerpoint presentation, of work mainly in the applicant's concentration area plus some slides of drawings and optional other media. Include additional views of 3D pieces. Submission of original work might be requested.

2. Letters of recommendation: Letters from two persons familiar with the applicant's creative activity but who are not members of the area graduate committee. If applying for a teaching assistantship, each recommendation should contain reference to the applicant's teaching ability. Graphic design applicants are required to submit two letters of reference.
3. Statement: A brief, personal statement of professional ambitions, intended concentration area, other special creative interests, and outline of previous professional experience. Please include current and permanent e-mail address, mailing address, and phone numbers.
4. Deadline: All University and Department of Art MFA application materials are due November 1 for Spring admission and February 15 for Fall admission and assistantship consideration.
5. Address: Send images, work, letters of recommendation, and statement to:
   Coordinator of Graduate Studies
   Department of Art
   The University of Memphis
   Memphis, Tennessee 38152
6. Deficiencies: Students may be admitted but required to complete undergraduate prerequisites or otherwise correct deficiencies.
7. Students with assistantships are required to take 9 hours each semester, 3 of which may be chosen from ART 7880 or 7881. Eligibility for assistantships is based on students receiving a positive graduate review.

Program Prerequisites

1. Previous education and experience: Normally admission to the graduate program will require an undergraduate major in the applicant's concentration area. (See concentration areas listed above.) A baccalaureate degree from an accredited institution is required with not less than 70 semester hours of art, of which 12 hours should be in art history and 18 hours (24 hours for Graphic Design) must be in the concentration studio courses. Exceptions to the above requirements will be considered, however, when the portfolio and professional experience warrant it.
2. Transfer credit: Any applicant who holds an MA degree in studio art from another institution may transfer up to a maximum of 30 semester hours credit in art earned for that degree to apply toward the MFA degree.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy during the semester in which the student completes 30 hours of graduate work. To be approved for admission to candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale,
2. Removed all departmental prerequisite requirements,
3. A planned degree program that meets all departmental and graduate school requirements, and
4. Established an overall history of satisfactory ratings in periodic review (a semi-annual evaluation of each student's general level of achievement by a committee of area graduate faculty) and be approved for candidacy by that committee.

Program Requirements

1. A total of 60 semester hours, including a thesis of 6 semester hours in the student's area of concentration.
2. A total of 36 semester hours of studio art, excluding the thesis, with a minimum of 24 semester hours in the student's area of concentration.
3. Forty-two semester hours of 7000 level courses.
4. A total of 9 semester hours in art history.
5. A total of 9 semester hours of electives.
6. Students with a concentration in graphic design are required to take at least 12 semester hours of ART 7040 and ART 7240 combined.

7. Residency requirement for Graphic Design: The student must commit to full-time study for a minimum of two successive semesters after admission to concentration to fulfill the residency requirement.
8. Students from the concentrations of Ceramics, Painting, Photography, Printmaking, and/or Sculpture must enroll in ART 7651 (1 hour) when also enrolled in a 6000 or 7000 level studio course.
9. Satisfactory grade on a written comprehensive examination, with follow-up oral examination at option of examining committee.
10. Thesis (exhibition) to be approved by a faculty committee with the member under whom the thesis was prepared as chair. For graphic design candidates, a written thesis accompanied by appropriate visual documentation is required.

Art - Graphic Design Concentration, (MFA)

MFA Degree Program

Program objectives are: (1) professional studio competence as exemplified by a significant body of work; (2) professional competence in the dissemination of knowledge, including logical and clear written and verbal expression of ideas in teaching contexts; and (3) development of skills for critical and analytical reasoning as a practicing art professional.

Program Admission

1. Portfolio: Approval by the area graduate committee of the applicant's creative work as specified below:
    1. Graphic Design: 20-30 images in a powerpoint presentation, of original and/or printed works. Submission of original work may be requested.
    2. Ceramics, Painting, Printmaking/ Photography, and Sculpture: 20-30 images in a powerpoint presentation, of work mainly in the applicant's concentration area plus some slides of drawings and optional other media. Include additional views of 3D pieces. Submission of original work might be requested.
2. Letters of recommendation: Letters from two persons familiar with the applicant's creative activity but who are not members of the area graduate committee. If applying for a teaching assistantship, each recommendation should contain reference to the applicant's teaching ability. Graphic design applicants are required to submit two letters of reference.
3. Statement: A brief, personal statement of professional ambitions, intended concentration area, other special creative interests, and outline of previous professional experience. Please include current and permanent e-mail address, mailing address, and phone numbers.
4. Deadline: All University and Department of Art MFA application materials are due November 1 for Spring admission and February 15 for Fall admission and assistantship consideration.
5. Address: Send images, work, letters of recommendation, and statement to:
   Coordinator of Graduate Studies
   Department of Art
   The University of Memphis
   Memphis, Tennessee 38152
6. Deficiencies: Students may be admitted but required to complete undergraduate prerequisites or otherwise correct deficiencies.
7. Students with assistantships are required to take 9 hours each semester, 3 of which may be chosen from ART 7880 or 7881. Eligibility for assistantships is based on students receiving a positive graduate review.

Program Prerequisites

1. Previous education and experience: Normally admission to the graduate program will require an undergraduate major in the applicant's concentration area. (See concentration areas listed above.) A

baccalaureate degree from an accredited institution is required with not less than 70 semester hours of art, of which 12 hours should be in art history and 18 hours (24 hours for Graphic Design) must be in the concentration studio courses. Exceptions to the above requirements will be considered, however, when the portfolio and professional experience warrant it.

2. Transfer credit: Any applicant who holds an MA degree in studio art from another institution may transfer up to a maximum of 30 semester hours credit in art earned for that degree to apply toward the MFA degree.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy during the semester in which the student completes 30 hours of graduate work. To be approved for admission to candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale,
2. Removed all departmental prerequisite requirements,
3. A planned degree program that meets all departmental and graduate school requirements, and
4. Established an overall history of satisfactory ratings in periodic review (a semi-annual evaluation of each student's general level of achievement by a committee of area graduate faculty) and be approved for candidacy by that committee.

Program Requirements

1. A total of 60 semester hours, including a thesis of 6 semester hours in the student's area of concentration.
2. A total of 36 semester hours of studio art, excluding the thesis, with a minimum of 24 semester hours in the student's area of concentration.
3. Forty-two semester hours of 7000 level courses.
4. A total of 9 semester hours in art history.
5. A total of 9 semester hours of electives.
6. Students with a concentration in graphic design are required to take at least 12 semester hours of ART 7040 and ART 7240 combined.
7. Residency requirement for Graphic Design: The student must commit to full-time study for a minimum of two successive semesters after admission to concentration to fulfill the residency requirement.
8. Students from the concentrations of Ceramics, Painting, Photography, Printmaking, and/or Sculpture must enroll in ART 7651 (1 hour) when also enrolled in a 6000 or 7000 level studio course.
9. Satisfactory grade on a written comprehensive examination, with follow-up oral examination at option of examining committee.
10. Thesis (exhibition) to be approved by a faculty committee with the member under whom the thesis was prepared as chair. For graphic design candidates, a written thesis accompanied by appropriate visual documentation is required.

Art - Painting Concentration, (MFA)

MFA Degree Program

Program objectives are: (1) professional studio competence as exemplified by a significant body of work; (2) professional competence in the dissemination of knowledge, including logical and clear written and verbal expression of ideas in teaching contexts; and (3) development of skills for critical and analytical reasoning as a practicing art professional.

Program Admission

1. Portfolio: Approval by the area graduate committee of the applicant's creative work as specified below:
    1. Graphic Design: 20-30 images in a powerpoint presentation, of original and/or printed works. Submission of original work may be requested.
    2. Ceramics, Painting, Printmaking/ Photography, and Sculpture: 20-30 images in a powerpoint presentation, of work mainly in the applicant's concentration area plus some slides of drawings and optional other media. Include additional views of 3D pieces. Submission of original work might be requested.
2. Letters of recommendation: Letters from two persons familiar with the applicant's creative activity but who are not members of the area graduate committee. If applying for a teaching assistantship, each recommendation should contain reference to the applicant's teaching ability. Graphic design applicants are required to submit two letters of reference.
3. Statement: A brief, personal statement of professional ambitions, intended concentration area, other special creative interests, and outline of previous professional experience. Please include current and permanent e-mail address, mailing address, and phone numbers.
4. Deadline: All University and Department of Art MFA application materials are due November 1 for Spring admission and February 15 for Fall admission and assistantship consideration.
5. Address: Send images, work, letters of recommendation, and statement to:
   Coordinator of Graduate Studies
   Department of Art
   The University of Memphis
   Memphis, Tennessee 38152
6. Deficiencies: Students may be admitted but required to complete undergraduate prerequisites or otherwise correct deficiencies.
7. Students with assistantships are required to take 9 hours each semester, 3 of which may be chosen from ART 7880 or 7881. Eligibility for assistantships is based on students receiving a positive graduate review.

Program Prerequisites

1. Previous education and experience: Normally admission to the graduate program will require an undergraduate major in the applicant's concentration area. (See concentration areas listed above.) A baccalaureate degree from an accredited institution is required with not less than 70 semester hours of art, of which 12 hours should be in art history and 18 hours (24 hours for Graphic Design) must be in the concentration studio courses. Exceptions to the above requirements will be considered, however, when the portfolio and professional experience warrant it.
2. Transfer credit: Any applicant who holds an MA degree in studio art from another institution may transfer up to a maximum of 30 semester hours credit in art earned for that degree to apply toward the MFA degree.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy during the semester in which the student completes 30 hours of graduate work. To be approved for admission to candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale,
2. Removed all departmental prerequisite requirements,
3. A planned degree program that meets all departmental and graduate school requirements, and
4. Established an overall history of satisfactory ratings in periodic review (a semi-annual evaluation of each student's general level of achievement by a committee of area graduate faculty) and be approved for candidacy by that committee.

Program Requirements

1. A total of 60 semester hours, including a thesis of 6 semester hours in the student's area of concentration.

2. A total of 36 semester hours of studio art, excluding the thesis, with a minimum of 24 semester hours in the student's area of concentration.
3. Forty-two semester hours of 7000 level courses.
4. A total of 9 semester hours in art history.
5. A total of 9 semester hours of electives.
6. Students with a concentration in graphic design are required to take at least 12 semester hours of ART 7040 and ART 7240 combined.
7. Residency requirement for Graphic Design: The student must commit to full-time study for a minimum of two successive semesters after admission to concentration to fulfill the residency requirement.
8. Students from the concentrations of Ceramics, Painting, Photography, Printmaking, and/or Sculpture must enroll in ART 7651 (1 hour) when also enrolled in a 6000 or 7000 level studio course.
9. Satisfactory grade on a written comprehensive examination, with follow-up oral examination at option of examining committee.
10. Thesis (exhibition) to be approved by a faculty committee with the member under whom the thesis was prepared as chair. For graphic design candidates, a written thesis accompanied by appropriate visual documentation is required.

Art - Printmaking/Photography Concentration, (MFA)

MFA Degree Program

Program objectives are: (1) professional studio competence as exemplified by a significant body of work; (2) professional competence in the dissemination of knowledge, including logical and clear written and verbal expression of ideas in teaching contexts; and (3) development of skills for critical and analytical reasoning as a practicing art professional.

Program Admission

1. Portfolio: Approval by the area graduate committee of the applicant's creative work as specified below:
    1. Graphic Design: 20-30 images in a powerpoint presentation, of original and/or printed works. Submission of original work may be requested.
    2. Ceramics, Painting, Printmaking/ Photography, and Sculpture: 20-30 images in a powerpoint presentation, of work mainly in the applicant's concentration area plus some slides of drawings and optional other media. Include additional views of 3D pieces. Submission of original work might be requested.
2. Letters of recommendation: Letters from two persons familiar with the applicant's creative activity but who are not members of the area graduate committee. If applying for a teaching assistantship, each recommendation should contain reference to the applicant's teaching ability. Graphic design applicants are required to submit two letters of reference.
3. Statement: A brief, personal statement of professional ambitions, intended concentration area, other special creative interests, and outline of previous professional experience. Please include current and permanent e-mail address, mailing address, and phone numbers.
4. Deadline: All University and Department of Art MFA application materials are due November 1 for Spring admission and February 15 for Fall admission and assistantship consideration.
5. Address: Send images, work, letters of recommendation, and statement to:
   Coordinator of Graduate Studies
   Department of Art
   The University of Memphis
   Memphis, Tennessee 38152
6. Deficiencies: Students may be admitted but required to complete undergraduate prerequisites or otherwise correct deficiencies.

7. Students with assistantships are required to take 9 hours each semester, 3 of which may be chosen from ART 7880 or 7881. Eligibility for assistantships is based on students receiving a positive graduate review.

Program Prerequisites

1. Previous education and experience: Normally admission to the graduate program will require an undergraduate major in the applicant's concentration area. (See concentration areas listed above.) A baccalaureate degree from an accredited institution is required with not less than 70 semester hours of art, of which 12 hours should be in art history and 18 hours (24 hours for Graphic Design) must be in the concentration studio courses. Exceptions to the above requirements will be considered, however, when the portfolio and professional experience warrant it.
2. Transfer credit: Any applicant who holds an MA degree in studio art from another institution may transfer up to a maximum of 30 semester hours credit in art earned for that degree to apply toward the MFA degree.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy during the semester in which the student completes 30 hours of graduate work. To be approved for admission to candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale,
2. Removed all departmental prerequisite requirements,
3. A planned degree program that meets all departmental and graduate school requirements, and
4. Established an overall history of satisfactory ratings in periodic review (a semi-annual evaluation of each student's general level of achievement by a committee of area graduate faculty) and be approved for candidacy by that committee.

Program Requirements

1. A total of 60 semester hours, including a thesis of 6 semester hours in the student's area of concentration.
2. A total of 36 semester hours of studio art, excluding the thesis, with a minimum of 24 semester hours in the student's area of concentration.
3. Forty-two semester hours of 7000 level courses.
4. A total of 9 semester hours in art history.
5. A total of 9 semester hours of electives.
6. Students with a concentration in graphic design are required to take at least 12 semester hours of ART 7040 and ART 7240 combined.
7. Residency requirement for Graphic Design: The student must commit to full-time study for a minimum of two successive semesters after admission to concentration to fulfill the residency requirement.
8. Students from the concentrations of Ceramics, Painting, Photography, Printmaking, and/or Sculpture must enroll in ART 7651 (1 hour) when also enrolled in a 6000 or 7000 level studio course.
9. Satisfactory grade on a written comprehensive examination, with follow-up oral examination at option of examining committee.
10. Thesis (exhibition) to be approved by a faculty committee with the member under whom the thesis was prepared as chair. For graphic design candidates, a written thesis accompanied by appropriate visual documentation is required.

Art - Sculpture Concentration, (MFA)

MFA Degree Program

Program objectives are: (1) professional studio competence as exemplified by a significant body of work; (2) professional competence in the dissemination of knowledge, including logical and clear written and verbal expression of ideas in teaching contexts; and (3) development of skills for critical and analytical reasoning as a practicing art professional.

Program Admission

1. Portfolio: Approval by the area graduate committee of the applicant's creative work as specified below:
    1. Graphic Design: 20-30 images in a powerpoint presentation, of original and/or printed works. Submission of original work may be requested.
    2. Ceramics, Painting, Printmaking/ Photography, and Sculpture: 20-30 images in a powerpoint presentation, of work mainly in the applicant's concentration area plus some slides of drawings and optional other media. Include additional views of 3D pieces. Submission of original work might be requested.
2. Letters of recommendation: Letters from two persons familiar with the applicant's creative activity but who are not members of the area graduate committee. If applying for a teaching assistantship, each recommendation should contain reference to the applicant's teaching ability. Graphic design applicants are required to submit two letters of reference.
3. Statement: A brief, personal statement of professional ambitions, intended concentration area, other special creative interests, and outline of previous professional experience. Please include current and permanent e-mail address, mailing address, and phone numbers.
4. Deadline: All University and Department of Art MFA application materials are due November 1 for Spring admission and February 15 for Fall admission and assistantship consideration.
5. Address: Send images, work, letters of recommendation, and statement to:
   Coordinator of Graduate Studies
   Department of Art
   The University of Memphis
   Memphis, Tennessee 38152
6. Deficiencies: Students may be admitted but required to complete undergraduate prerequisites or otherwise correct deficiencies.
7. Students with assistantships are required to take 9 hours each semester, 3 of which may be chosen from ART 7880 or 7881. Eligibility for assistantships is based on students receiving a positive graduate review.

Program Prerequisites

1. Previous education and experience: Normally admission to the graduate program will require an undergraduate major in the applicant's concentration area. (See concentration areas listed above.) A baccalaureate degree from an accredited institution is required with not less than 70 semester hours of art, of which 12 hours should be in art history and 18 hours (24 hours for Graphic Design) must be in the concentration studio courses. Exceptions to the above requirements will be considered, however, when the portfolio and professional experience warrant it.
2. Transfer credit: Any applicant who holds an MA degree in studio art from another institution may transfer up to a maximum of 30 semester hours credit in art earned for that degree to apply toward the MFA degree.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy during the semester in which the student completes 30 hours of graduate work. To be approved for admission to candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale,
2. Removed all departmental prerequisite requirements,
3. A planned degree program that meets all departmental and graduate school requirements, and

4. Established an overall history of satisfactory ratings in periodic review (a semi-annual evaluation of each student's general level of achievement by a committee of area graduate faculty) and be approved for candidacy by that committee.

Program Requirements

1. A total of 60 semester hours, including a thesis of 6 semester hours in the student's area of concentration.
2. A total of 36 semester hours of studio art, excluding the thesis, with a minimum of 24 semester hours in the student's area of concentration.
3. Forty-two semester hours of 7000 level courses.
4. A total of 9 semester hours in art history.
5. A total of 9 semester hours of electives.
6. Students with a concentration in graphic design are required to take at least 12 semester hours of ART 7040 and ART 7240 combined.
7. Residency requirement for Graphic Design: The student must commit to full-time study for a minimum of two successive semesters after admission to concentration to fulfill the residency requirement.
8. Students from the concentrations of Ceramics, Painting, Photography, Printmaking, and/or Sculpture must enroll in ART 7651 (1 hour) when also enrolled in a 6000 or 7000 level studio course.
9. Satisfactory grade on a written comprehensive examination, with follow-up oral examination at option of examining committee.
10. Thesis (exhibition) to be approved by a faculty committee with the member under whom the thesis was prepared as chair. For graphic design candidates, a written thesis accompanied by appropriate visual documentation is required.

Art History - African American - African Diaspora Art Histories, (MA)

MA Degree Program

Program objectives are to equip students with knowledge in a specific field of art and visual culture; to foster critical analysis of the major theories and documents of art history as a practical tool for individual research; to provide field opportunities through museum internships or archaeological excavations; and to develop strategies for the presentation of research in a clear and persuasive manner.

Program Admission

1. For Fall semester admission with assistantship, completed materials must be received at the University by February 15. Applications received after April 1 cannot be guaranteed consideration for the Fall semester. For Spring semester admission, the deadline is November 1.
2. For the concentrations in African American - African Diaspora Art Histories, an undergraduate course in each of the major areas of art history is desirable: American, ancient, medieval, renaissance, baroque, and modern. If, after evaluation of the student's transcript, the art history faculty perceives a deficiency in these areas, the student may be required to successfully complete courses that will not count toward the Master of Arts degree.
3. A letter of intent, explaining the applicant's motivation and objectives in pursuing a graduate degree in art history.
4. A sample of undergraduate writing, preferably in art history.
5. Two letters of recommendation, at least one of which should be from a college faculty member who knows the student well.

Note:

Applications forms for assistantships are also available from the Department of Art.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy upon the completion of 18 semester hours of graduate work. All candidacy requirements listed below must be satisfied before registering for more than 18 hours of coursework at the graduate level. To be approved for admission for candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale.
2. Fulfilled all departmental prerequisite requirements.
3. A planned degree program that meets all departmental and graduate school requirements. Pass Qualifying Examinations
4. Pass Qualifying Examinations
    - Foreign language translation exam: The language is usually French, German, Italian or another research language appropriate to the student's field of study, to be approved by the Graduate Academic Advisor. The exam will consist of a 300-500 word passage chosen by a faculty member and must be translated within a two-hour period. Two additional attempts are allowed.
    - Image Identification Exam: For the concentration in African American - African Diaspora Art Histories, the examination covers works of art and visual culture from various regions and time periods, ancient to modern. Two additional attempts are allowed.
5. The student must establish a history of satisfactory ratings in periodic review, a semi-annual evaluation of each student's general level of achievement by all area graduate faculty. Two unsatisfactory ratings will result in dismissal from the program.

Thesis Comprehensive Exam

For students in all concentrations, a written exam will be given prior to the thesis defense.

Program Requirements

1. A total of 30 semester hours for the concentration in African American - African Diaspora Art Histories.
2. The completion of ARTH 6166 ; ARTH 7130 ; and ARTH 7996 .

African American - African Diaspora Art Histories:

6 semester hours at the 6000-level including:

ARTH 6183 - Visual Arts Of Africa

(3) Survey of arts of African continent from pre-historic to modern eras; African aesthetic traditions examined in relation to social and cultural contexts.

AND

ARTH 6184 - Arts of Colonialism/Empire

(3) Major themes in the study of African Diaspora art, artists, and visual culture, specifically the histories of migration, dispersal, and mobility of peoples of African descent both within and outside the continent; aesthetics, race and representation, politics, gender, class differences, sexuality, strategies of resistance, cross-cultural influences, issues of patronage, and cultural identity formation.

ARTH 6185 - African American Art

(3) Introduction to African American visual expression and culture from Colonial to modern eras, covering fine arts, photography, film, and popular culture.

9 semester hours selected from::

ARTH 7000 - Semn Art/Vis Cult Afr/Afr Dias

(3) Interdisciplinary seminar exploring art and visual culture in a diversity of geographical contexts and historical periods. Topics will vary and may include: the arts of post-colonial Africa, contemporary African American art, the festival arts of the Caribbean, or imaging race in nineteenth century European art and visual culture.

ARTH 7140 - Grad Prob Renaissance

(3) Selected areas or specific problems of Renaissance Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7150 - Grad Prob 19th Century

(3) Selected areas or specific problems in Nineteenth Century Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7165 - Gr Prob Am Art Anc/Mod

(3) Selected areas or specific problems in Pre-Columbian, North American Indian, Spanish Colonial, or American Art. May be repeated for a maximum of 12 hours when topic varies.Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given.

6 semester hours of elective credit outside the field of art history

May be selected with the permission of the advisor.

Note:

Students should consult with their academic advisor as to the required and recommended courses appropriate to their area of concentration.

Other Requirements

1. Twenty-one semester hours of 7000 level courses, including no more than 3 credit hours for the thesis.

2. Satisfactory completion of the qualifying examinations

3. Satisfactory completion of the Thesis Comprehensive Exam

4. An acceptable thesis and oral defense. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the thesis.

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the thesis.

5. Graduate Assistantships. Students with assistantships are required to take 9 hours each semester. Assistantships are renewed based on the following:

1. Students must attain the required 3.0 grade point average and maintain a good record in their assistantship work assignments.
2. Students must make satisfactory progress toward the degree. In order to maintain satisfactory progress toward the degree during the first two semesters of study, the student must:

1. pass the qualifying exam administered by the concentration, and

2. take the foreign language translation exam.

6.Students who fail to successfully complete these examinations by May 1 of the Spring semester will not receive a high priority for assistantship renewal for a third semester of study.

Art History - African American and African Diaspora Art Histories Concentration with Museum Studies Certificate (MA)

MA Degree Program

Program objectives are to equip students with knowledge in a specific field of art and visual culture; to foster critical analysis of the major theories and documents of art history as a practical tool for individual research; to provide field opportunities through museum internships or archaeological excavations; and to develop strategies for the presentation of research in a clear and persuasive manner.

Program Admission

1. For Fall semester admission with assistantship, completed materials must be received at the University by February 15. Applications received after April 1 cannot be guaranteed consideration for the Fall semester. For Spring semester admission, the deadline is November 1.
2. For the concentration in African American – African Diaspora Art Histories, an undergraduate course in each of the major areas of art history is desirable: American, ancient, medieval, renaissance, baroque, and modern[FCA(1] . If after evaluation of the student's transcript, the art history faculty perceives a deficiency in these areas, the student may be required to successfully complete courses that will not count toward the Master of Arts degree.

3. A letter of intent, explaining the applicant's motivation and objectives in pursuing a graduate degree in art history.
4. A sample of undergraduate writing, preferably in art history.

5. Two letters of recommendation, at least one of which should be from a college faculty member who knows the student well.

Note:

Applications forms for assistantships are also available from the Department of Art.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy upon the completion of 18 semester hours of graduate work. All candidacy requirements listed below must be satisfied before registering for more than 18 hours of coursework at the graduate level. To be approved for admission for candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale.
2. Fulfilled all departmental prerequisite requirements.
3. A planned degree program that meets all departmental and graduate school requirements.
4. Pass Qualifying Examinations
    - Foreign language translation exam: The language is usually French, German, Italian or another research language appropriate to the student's field of study, to be approved by the Graduate Academic Advisor. The exam will consist of a 300-500 word passage chosen by a faculty member and must be translated within a two-hour period. Two additional attempts are allowed.
    - Image Identification Exam: For the concentration in African American -African Diaspora Art Histroies with Museum Studies Certificate, the examination covers works of art and visual culture from various regions and time periods, ancient to modern. Two additional attempts are allowed.
5. The student must establish a history of satisfactory ratings in periodic review, a semi-annual evaluation of each student's general level of achievement by all area graduate faculty. Two unsatisfactory ratings will result in dismissal from the program.

Thesis Comprehensive Exam

For students in all concentrations, a written exam will be given prior to the thesis defense.

Program Requirements

1. The total semester hours vary from 30 to 33 depending on the concentration.
2. The completion of ARTH 6123 or ARTH 6166; ARTH 7130; and ARTH 7996 - Thesis.

African American and African Diaspora Art Histories with Museum Studies Certificate:

ARTH 6183 - Visual Arts Of Africa

(3) Survey of arts of African continent from pre-historic to modern eras; African aesthetic traditions examined in relation to social and cultural contexts.

ARTH 6185 - African American Art

(3) Introduction to African American visual expression and culture from Colonial to modern eras, covering fine arts, photography, film, and popular culture.

6 semester hours selected from

ARTH 6183 - Visual Arts Of Africa

(3) Survey of arts of African continent from pre-historic to modern eras; African aesthetic traditions examined in relation to social and cultural contexts.

ARTH 6184 - Arts of Colonialism/Empire

(3) Major themes in the study of African Diaspora art, artists, and visual culture, specifically the histories of migration, dispersal, and mobility of peoples of African descent both within and outside the continent; aesthetics, race and representation, politics, gender, class differences, sexuality, strategies of resistance, cross-cultural influences, issues of patronage, and cultural identity formation.

ARTH 6185 - African American Art

(3) Introduction to African American visual expression and culture from Colonial to modern eras, covering fine arts, photography, film, and popular culture.

6 semester hours from

ARTH 7000 - Semn Art/Vis Cult Afr/Afr Dias

(3) Interdisciplinary seminar exploring art and visual culture in a diversity of geographical contexts and historical periods. Topics will vary and may include: the arts of post-colonial Africa, contemporary African American art, the festival arts of the Caribbean, or imaging race in nineteenth century European art and visual culture.

ARTH 7140 - Grad Prob Renaissance

(3) Selected areas or specific problems of Renaissance Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7150 - Grad Prob 19th Century

(3) Selected areas or specific problems in Nineteenth Century Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7152 - Grad Prob 20th Century

(3) Selected areas or specific problems in Twentieth Century Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7165 - Gr Prob Am Art Anc/Mod

(3) Selected areas or specific problems in Pre-Columbian, North American Indian, Spanish Colonial, or American Art. May be repeated for a maximum of 12 hours when topic varies.Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given.

Students enrolled in

Students enrolled in any seminars other than ARTH 7000 must conduct research dealing with the African Diaspora In the Western world:

6 semester hours from

ARTH 7661 - Museum Practices

(3) (Same as ANTH 7661) Museum administration, finance, collection management, conservation, education, exhibition design, marketing, and visitor services. PREREQUISITE(S): Permission of instructor.

ARTH 7662 - Museums & Communities

(3) (Same as ANTH 7662) History and theory of museums, governance, audiences, and current topics in the profession. PREREQUISITE(S): Permission of instructor.

6 semester hours of

ARTH 7669 - Museum Internship

(3-6) (Same as ANTH 7669) Structured experience in selected aspects of museum practice. Includes 150 contract hours in museum and colloquium. May be repeated for a maximum of 6 credit hours. May be repeated for a maximum of 6 credit hours PREREQUISITE(S): ANTH 7661, ANTH 7662 and/or permission of instructor Grades of A-F, or IP will be given.

ARTH 6166 - American Art: 1500s-1940s

(3) (6167, 6168) (6167, 6168). American art examined in social, cultural, and historical contexts; presents broad range of creative expression, including fine and applied arts and popular culture, from conquest period to modern developments in American visual studies.

Note:

Students should consult with their academic advisor as to the required and recommended courses appropriate to their area of concentration.

Other Requirements

1. Twenty-one semester hours of 7000 level courses, including no more than 3 credit hours for the thesis.

2. Satisfactory completion of the qualifying examinations

3. Satisfactory completion of the Thesis Comprehensive Exam

4. An acceptable thesis and oral defense. For the concentration in African American and African Diaspora Art Histories with Museum Studies Certificate, students will be responsible for developing and presenting a museum project. which will include a writing component.

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the thesis.

5. Graduate Assistantships. Students with assistantships are required to take 9 hours each semester. Assistantships are renewed based on the following:

1. Students must attain the required 3.0 grade point average and maintain a good record in their assistantship work assignments.
2. Students must make satisfactory progress toward the degree. In order to maintain satisfactory progress toward the degree during the first two semesters of study, the student must:
    1. pass the qualifying exam administered by the concentration, and
    2. take the foreign language translation exam.
3. Students who fail to successfully complete these examinations by May 1 of the Spring semester will not receive a high priority for assistantship renewal for a third semester of study.

Art History - Egyptian Art and Archaeology, (MA)

MA Degree Program

Program objectives are to equip students with knowledge in a specific field of art and visual culture; to foster critical analysis of the major theories and documents of art history as a practical tool for individual research; to provide field opportunities through museum internships or archaeological excavations; and to develop strategies for the presentation of research in a clear and persuasive manner.

Program Admission

1. For Fall semester admission with assistantship, completed materials must be received at the University by February 15. Applications received after April 1 cannot be guaranteed consideration for the Fall semester. For Spring semester admission, the deadline is November 1.
2. For the concentration in Egyptian Art and Archaeology, an undergraduate major in Egyptology, art history, anthropology, history, classical studies, or archaeology is desirable. If, after evaluation of the student's transcript, the art history faculty preceives a deficiency in these areas, the student may be required to successfully complete courses that will not count toward the Master of Arts degree.
3. A letter of intent, explaining the applicant's motivation and objectives in pursuing a graduate degree in art history.
4. A sample of undergraduate writing, preferably in art history.
5. Two letters of recommendation, at least one of which should be from a college faculty member who knows the student well.

Note:

Applications forms for assistantships are also available from the Department of Art.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy upon the completion of 18 semester hours of graduate work. All candidacy requirements listed below must be satisfied before registering for more than 18 hours of coursework at the graduate level. To be approved for admission for candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale.
2. Fulfilled all departmental prerequisite requirements.
3. A planned degree program that meets all departmental and graduate school requirements. Pass Qualifying Examinations
4. Pass Qualifying Examinations
    - Foreign language translation exam: The language is usually French, German, Italian or another research language appropriate to the student's field of study, to be approved by the Graduate Academic Advisor. For the concentration in Egyptian Art and Archaeology, French or German is preferred. The exam will consist of a 300-500 word passage chosen by a faculty member and must be translated within a two-hour period. Two additional attempts are allowed.
    - Image Identification Exam: For the concentration in Egyptian Art and Archaelogy, the test covers key monuments of ancient Egyptian art and an entry level examiniation in Middle Egyptian. Two additional attempts are allowed.
5. The student must establish a history of satisfactory ratings in periodic review, a semi-annual evaluation of each student's general level of achievement by all area graduate faculty. Two unsatisfactory ratings will result in dismissal from the program.

Thesis Comprehensive Exam

For students in all concentrations, a written exam will be given prior to the thesis defense.

Program Requirements

A total of 30 semester hours for the concentrationin Egyptian Art and Archaeology.

9 semester hours required from

ARTH 6123 - Greek Art

(3) Architecture, sculpture, and painting from the Bronze Age to the end of the Hellenistic period.

ARTH 7120 - Grad Prob Medieval Art

(3) Selected areas or specific problems in Early Medieval, Romanesque, or Gothic Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7996 - Thesis

(1-6) Preparation and defense of a thesis prepared under direction of major professor. Studio Art thesis requires an exhibition. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Egyptian Art and Archaeology:

3 semester hours selected from:

ARTH 6111 - Art/Arch Egypt

(3) Pre-dynastic to Late Period.

ARTH 6112 - Egypt Art-Old Kingdom

(3) Art, architecture, and archaeology, 3000-1500 BC.

ARTH 6113 - Egypt Art-New Kingdom

(3) Art, architecture, and archaeology, 1500 BC. to 642 AD.

6 semester hours required from:

ARTH 7115 - Middle Egyptian I

(3) Grammar and translation of hieroglyphs.

ARTH 7116 - Middle Egyptian II

(3) Readings in hieroglyphs PREREQUISITE(S): ARTH 7115 or equivalent.

12 additional semester hours in the major area (ARTH) outside the required courses (ARTH 6123 , ARTH 7130 and ARTH 7996). Of these, 6 semester hours may come from outside the department (ARTH).

6 additional semester hours may come from outside the department (ARTH).

Note:

Students should consult with their academic advisor as to the required and recommended courses appropriate to their area of concentration.

Other Requirements

1. Twenty-one semester hours of 7000 level courses, including no more than 3 credit hours for the thesis.
2. Satisfactory completion of the qualifying examinations
3. Satisfactory completion of the Thesis Comprehensive Exam
4. An acceptable thesis and oral defense. For concentrations combined with the Graduate Certificate in Museum Studies, students will be responsible for developing and presenting a museum project. which will include a writing component.
   NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the thesis.
5. Graduate Assistantships. Students with assistantships are required to take 9 hours each semester. Assistantships are renewed based on the following:
    1. Students must attain the required grade point average 3.4 and maintain a good record in their assistantship work assignments.
    2. Students must make satisfactory progress toward the degree. In order to maintain satisfactory progress toward the degree during the first two semesters of study, the student must:
        1. pass the qualifying exam administered by the concentration, and

2. take the foreign language translation exam.

3. Students who fail to successfully complete these examinations by May 1 of the Spring semester will not receive a high priority for assistantship renewal for a third semester of study.

Art History - General Art History, (MA)

MA Degree Program

Program objectives are to equip students with knowledge in a specific field of art and visual culture; to foster critical analysis of the major theories and documents of art history as a practical tool for individual research; to provide field opportunities through museum internships or archaeological excavations; and to develop strategies for the presentation of research in a clear and persuasive manner.

Program Admission General Art History

1. For Fall semester admission with assistantship, completed materials must be received at the University by February 15. Applications received after April 1 cannot be guaranteed consideration for the Fall semester. For Spring semester admission, the deadline is November 1.
2. For the concentration in General Art History, an undergraduate course in each of the major areas of art history is desirable: American, ancient, medieval, renaissance, baroque, and modern. If, after evaluation of the student's transcript, the art history faculty perceives a deficiency in these areas, the student may be required to successfully complete courses that will not count toward the Master of Arts degree.
3. A letter of intent, explaining the applicant's motivation and objectives in pursuing a graduate degree in art history.
4. A sample of undergraduate writing, preferably in art history.
5. Two letters of recommendation, at least one of which should be from a college faculty member who knows the student well.

Note General Art History

Applications forms for assistantships are also available from the Department of Art.

Prerequisites for Admission to Degree Candidacy General Art History

The student shall apply for admission to degree candidacy upon the completion of 18 semester hours of graduate work. All candidacy requirements listed below must be satisfied before registering for more than 18 hours of coursework at the graduate level. To be approved for admission for candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale.
2. Fulfilled all departmental prerequisite requirements.
3. A planned degree program that meets all departmental and graduate school requirements. Pass Qualifying Examinations
4. Pass Qualifying Examinations
    - Foreign language translation exam: The language is usually French, German, Italian or another research language appropriate to the student's field of study, to be approved by the Graduate Academic Advisor. The exam will consist of a 300-500 word passage chosen by a faculty member and must be translated within a two-hour period. Two additional attempts are allowed.
    - Image Identification Exam: For the concentration in General Art History the examination covers works of art and visual culture from various regions and time periods, ancient to modern. Two additional attempts are allowed.

5. The student must establish a history of satisfactory ratings in periodic review, a semi-annual evaluation of each student's general level of achievement by all area graduate faculty. Two unsatisfactory ratings will result in dismissal from the program.

Thesis Comprehensive Exam

For students in all concentrations, a written exam will be given prior to the thesis defense.

Program Requirements General Art History

1. A total of 30 semester hours for the concentration in General Art History.
2. The completion of ARTH 6123 or ARTH 6166 (see concentration requirements); ARTH 7130; and ARTH 7996 - Thesis.

General Art History:

A minimum of 24 semester hours in art history (including the required ARTH 6123 or ARTH 6166, ARTH 7130, and 3 hours in ARTH 7996) with no more than 9 semester hours in 6000-level courses.

Up to 6 hours of elective credit outside the field of art history may be selected with the permission of the advisor. Included among these electives would be:

ARTH 6381 - Art Curatorial Tech

(3) Concentrates on curatorial responsibilities and functions, receiving and shipping methods, registration, physical and environmental security, research, conservation, and a study of the art market and publications.

ARTH 6660 - Museum Collections

(3) (Same as ANTH 6660) Museum collection theory and methods, including collection policy, development, preservation, documentation, and interpretation. PREREQUISITE(S): Permission of instructor.

ARTH 6661 - Collections Research

(3) (Same as ANTH 6661) Introduces students in object-based disciplines to museum collections research methods and their applications to exhibitions, catalogs, and scholarly publications. PREREQUISITE(S): Permission of instructor.

ARTH 6662 - Museum Exhibitions

(3) (Same as ANTH 6662) Museum exhibition methods and theory, including research, design, layout, object selection and handling, installation, public programing, and evaluation. PREREQUISITE(S): Permission of instructor.

ARTH 7661 - Museum Practices

(3) (Same as ANTH 7661) Museum administration, finance, collection management, conservation, education, exhibition design, marketing, and visitor services. PREREQUISITE(S): Permission of instructor.

ARTH 7662 - Museums & Communities

(3) (Same as ANTH 7662) History and theory of museums, governance, audiences, and current topics in the profession. PREREQUISITE(S): Permission of instructor.

Note:

Students should consult with their academic advisor as to the required and recommended courses appropriate to their area of concentration.

Other Requirements Gen Art History

1. Twenty-one semester hours of 7000 level courses, including no more than 3 credit hours for the thesis.
2. Satisfactory completion of the qualifying examinations
3. Satisfactory completion of the Thesis Comprehensive Exam
4. An acceptable thesis and oral defense.
   NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the thesis.
5. Graduate Assistantships. Students with assistantships are required to take 9 hours each semester. Assistantships are renewed based on the following:
    1. Students must attain the required 3.0 grade point average and maintain a good record in their assistantship work assignments.
    2. Students must make satisfactory progress toward the degree. In order to maintain satisfactory progress toward the degree during the first two semesters of study, the student must:
        1. pass the qualifying exam administered by the concentration, and
        2. take the foreign language translation exam.
    3. Students who fail to successfully complete these examinations by May 1 of the Spring semester will not receive a high priority for assistantship renewal for a third semester of study.

Art History - Museum Practices, (MA)

MA Degree Program

Program objectives are to equip students with knowledge in a specific field of art and visual culture; to foster critical analysis of the major theories and documents of art history as a practical tool for individual research; to provide field opportunities through museum internships or archaeological excavations; and to develop strategies for the presentation of research in a clear and persuasive manner.

Students who complete the requirements of the Museum Practices concentration within the MA in Art History will also receive the Graduate Certificate in Museum Studies.

Program Admission

1. For Fall semester admission with assistantship, completed materials must be received at the University by February 15. Applications received after April 1 cannot be guaranteed consideration for the Fall semester. For Spring semester admission, the deadline is November 1.
2. For the concentration in African American – African Diaspora Art Histories, an undergraduate course in each of the major areas of art history is desirable: American, ancient, medieval, renaissance, baroque, and modern[FCA(1] . If after evaluation of the student's transcript, the art history faculty perceives a deficiency in these areas, the student may be required to successfully complete courses that will not count toward the Master of Arts degree.

3. A letter of intent, explaining the applicant's motivation and objectives in pursuing a graduate degree in art history.
4. A sample of undergraduate writing, preferably in art history.
5. Two letters of recommendation, at least one of which should be from a college faculty member who knows the student well.

Note:

Applications forms for assistantships are also available from the Department of Art.

Prerequisites for Admission to Degree Candidacy

The student shall apply for admission to degree candidacy upon the completion of 18 semester hours of graduate work. All candidacy requirements listed below must be satisfied before registering for more than 18 hours of coursework at the graduate level. To be approved for admission for candidacy, the student shall have:

1. A grade point average of at least 3.0 on a 4.0 scale.
2. Fulfilled all departmental prerequisite requirements.
3. A planned degree program that meets all departmental and graduate school requirements. Pass Qualifying Examinations
4. Pass Qualifying Examinations
    - Foreign language translation exam: The language is usually French, German, Italian or another research language appropriate to the student's field of study, to be approved by the Graduate Academic Advisor. The exam will consist of a 300-500 word passage chosen by a faculty member and must be translated within a two-hour period. Two additional attempts are allowed.
    - Image Identification Exam: For the concentration in Museum Practices the examination covers works of art and visual culture from various regions and time periods, ancient to modern. Two additional attempts are allowed.
5. The student must establish a history of satisfactory ratings in periodic review, a semi-annual evaluation of each student's general level of achievement by all area graduate faculty. Two unsatisfactory ratings will result in dismissal from the program.

Thesis Comprehensive Exam

For students in all concentrations, a written exam will be given prior to the thesis defense.

Museum Practices with Graduate Certificate In Museum Studies:

3 semester hours selected from ARTH 6000-level

(excludlng ARTH 6381. ANTH 6660. ANTH 6661. ANTH 6662)

3 semester hours of electives

Determined through consultation with Museum Studies advisor.

ARTH 7661 - Museum Practices

(3) (Same as ANTH 7661) Museum administration, finance, collection management, conservation, education, exhibition design, marketing, and visitor services. PREREQUISITE(S): Permission of instructor.

ARTH 7662 - Museums & Communities

(3) (Same as ANTH 7662) History and theory of museums, governance, audiences, and current topics in the profession. PREREQUISITE(S): Permission of instructor.

6 semester hours of

ARTH 7669 - Museum Internship

(3-6) (Same as ANTH 7669) Structured experience in selected aspects of museum practice. Includes 150 contract hours in museum and colloquium. May be repeated for a maximum of 6 credit hours. May be repeated for a maximum of 6 credit hours PREREQUISITE(S): ANTH 7661, ANTH 7662 and/or permission of instructor Grades of A-F, or IP will be given.

6 hours drawn from

ARTH 7120 - Grad Prob Medieval Art

(3) Selected areas or specific problems in Early Medieval, Romanesque, or Gothic Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7121 - Grad Prob Ancient Art

(3) Selected areas or specific problems in Egyptian, Near Eastern, Greek, or Roman Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

ARTH 7125 - Egyptian Art & Arch

(3) Topics and problems in Egyptian art and archaeology. May be repeated for a maximum of 12 hours when topic varies. May be repeated for a maximum of 12 hours when topic varies.

ARTH 7140 - Grad Prob Renaissance

(3) Selected areas or specific problems of Renaissance Art. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies Grades of A-F, or IP will be given.

through

ARTH 7165 - Gr Prob Am Art Anc/Mod

(3) Selected areas or specific problems in Pre-Columbian, North American Indian, Spanish Colonial, or American Art. May be repeated for a maximum of 12 hours when topic varies.Grades of A-F, or IP will be given. May be repeated for a maximum of 12 hours when topic varies. Grades of A-F, or IP will be given.

ARTH 7660 - Dir Indiv Study

(3-9) Individual investigation of special research problems or projects. May be repeated upon recommendation of advisor.Grades of A-F, or IP will be given. May be repeated upon recommendation of advisor. Grades of A-F, or IP will be given.

Note:

Students should consult with their academic advisor as to the required and recommended courses appropriate to their area of concentration).

Students must submit an application for admission to the Museum Studies Graduate Certificate program before the end of their first year of study. Admission to the Museum Practices concentration does not automatically enroll the student in the Graduate Certificate in Museum Studies program.

Other Requirements

1. Twenty-one semester hours of 7000 level courses, including no more than 3 credit hours for the thesis.
2. Satisfactory completion of the qualifying examinations
3. Satisfactory completion of the Thesis Comprehensive Exam
4. An acceptable thesis and oral defense. For concentrations combined with the Graduate Certificate in Museum Studies, students will be responsible for developing and presenting a museum project. which will include a writing component.
   NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the thesis.
5. Graduate Assistantships. Students with assistantships are required to take 9 hours each semester. Assistantships are renewed based on the following:
    1. Students must attain the required grade point average (3.4 in Egyptology, 3.0 in all other concentrations) and maintain a good record in their assistantship work assignments.
    2. Students must make satisfactory progress toward the degree. In order to maintain satisfactory progress toward the degree during the first two semesters of study, the student must:
        1. pass the qualifying exam administered by the concentration, and
        2. take the foreign language translation exam.
    3. Students who fail to successfully complete these examinations by May 1 of the Spring semester will not receive a high priority for assistantship renewal for a third semester of study.

Program Requirements

A total of 33 semester hours is required for the concentration in Museum Practices with concurrent Graduate Certificate in Museum Studies.

9 semester hours required from:

ARTH 6123 - Greek Art

(3) Architecture, sculpture, and painting from the Bronze Age to the end of the Hellenistic period.

OR

ARTH 6166 - American Art: 1500s-1940s

(3) (6167, 6168) (6167, 6168). American art examined in social, cultural, and historical contexts; presents broad range of creative expression, including fine and applied arts and popular culture, from conquest period to modern developments in American visual studies.

ARTH 7130 - Art Hist Methods & Prac

(3) History of the discipline along with current research methods. Students develop research presentations in oral and written formats.

ARTH 7996 - Thesis

(1-6) Preparation and defense of a thesis prepared under direction of major professor. Studio Art thesis requires an exhibition. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Bioinformatics, (MS)

Master of Science

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements) as well as the program requirements of the degree being pursued.

Bioinformatics is an emerging multidisciplinary field which combines mathematical and computer science approaches to solve biological problems. The Master's in Bioinformatics is designed to train highly skilled individuals with fundamental understanding of computer programming and data structures, statistical analysis of data, as well as genomics and systems biology.

Admission Requirements

1. GRE scores are required and are an important factor for admission;
2. Two letters of recommendation;
3. A minimum score of 550 on the paper-based TOEFL, or 80 on the internet-based TOEFL (for students whose native language is not English);
4. Undergraduate degree in biology, computer science, or related field with a minimum GPA of 3.0 on a 4.0 scale.

Prerequisites

Satisfactory completion of at least two undergraduate level courses in each of the following disciplines: biology, mathematics and computer science. Students should have some background in computer programming, data structures, statistics, and molecular biology. Students deficient in prerequisite courses will be considered on a case-by-case basis.

Program Requirements:

Candidates must satisfactorily complete 36 credit hours of graduate course work, 26 hours of which must be 7000 level or higher) as approved by the Program Advisor and distributed as follows:

Major Field Core (14 credit hours):

BINF 7970 - Curr Lit Bioinformatics

(1) Lectures, readings, discussions, and oral presentation from current bioinformatics research articles. One class is required to meet degree requirements. PREREQUISITE(S): permission of instructor.

BINF 7980 - Rsch Sem/Bioinformatics

(1) Current research topics in Bioinformatics. One class is required to meet degree requirements. PREREQUISITE(S): Permission of Instructor.

COMP 6030 - Desgn/Anlys Algorithms

(3) Asymptotic behavior of programs; basic paradigms in algorithm design: greedy, divide-and-conquer, dynamic programming; analysis of efficiency, and optimality of representative algorithms, including graph, pattern matching, numerical, randomized, and approximation algorithms; approaches to lower bound analysis; basic parallel algorithms. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 2150 and 3410 or permission of instructor.

or

COMP 7712 - Algorithms/Prob Solv

(3) Covers algorithms problems, techniques, and design emphasizing problem solving and implementation skills; topics include advanced data structures, graph algorithms, string matching, network flow, dynamic programming, and randomized algorithms.

COMP 7295 - Algorithms Comp Biol/Bioinform

(3) Algorithms for problems arising in molecular biology, such as sequence matching, alignment, gene finding, sequence assembly, phylogeny, and structure prediction; internet resources; statistical analysis of DNA, RNA, and protein sequences.

MATH 6635 - Intro Probability Theory

(3) Definition and properties of probability functions; random variables, moment generating functions; mean, variance and higher moments; discrete distributions: binomial, hypergeometric, Poisson, geometric, negative binomial; continuous distributions: uniform, exponential, gamma,normal Cauchy, chi-square, t, and F distributions; central limit theorem; functions of a random variable; bivariate, marginal, and conditional distributions and covariance.

MATH 7643 - Least Sq/Regr Analysis

(3) Basic concepts of hypothesis testing and confidence intervals; simple and multiple regression analyses, model selection, Mallow's Cp, examination of residuals, Box-Cox transformation, influence diagnostics, multicolinearity, ridge-regression, probit, logit, and log-linear analyses; intensive use of SAS or other statistical packages. PREREQUISITE(S): Completion of 18 graduate level credit hours in music, including MUHL 7400 and MUHL 6801.

or

PUBH 7153 - Biostat. in Bioinformatics

(3) This course is offered every other year to Master (7000 level) and Doctoral (8000 level) students. This course focuses on statistical methods in application to bioinformatics data and other large data sets with similar features. Students will be introduced to R programming, a commonly used programming language implemented in bioinformatics data analyses. This will be an applied course with focus on learning the methods, applying the methods, and programming in R.

or

BIOL 7708 - Special Topics in Biology

(1-4) Current topics of special interest in biology PREREQUISITE(S): Permission of instructor.

Biology Core: 6 credit hours chosen from:

BIOL 6092 - Special Topics

(1-3) Topics are varied and announced in Online course listings; may be repeated with different topics for a maximum of 4 hours

BIOL 6470 - Molecular Biology of the Gene

(3) (MMCS 6470) (MMCS 6470). Theoretical and application based approaches to molecular biology and regulation of gene expression. Course surveys modern methods in research and medicine. Stem cells and cancer cells used as model systems to understand changes in gene regulation at the level of genome, transcriptome, and proteome. Three lecture hours per week. PREREQUISITE(S): BIOL 3072 or permission of instructor.

BINF 7701 - Adv. Genomics & Bioinformatics

(3) Accelerated introduction to molecular and genomic sciences, covering basic concepts of gene and protein structure/ function, genome sequencing and annotation, single nucleotide polymorphism, genetic variation, gene expression, and functional genomics and systems biology. PREREQUISITE(S): Permission of Instructor.

BIOL 7440 - Molecular Biol/Cancer

(3) Introduction to molecular basis of cancer, cancer therapy and prevention; includes disease-, chemical carcinogen-, and viral-based views of cancer process; surveys modern tools for identifying cancer susceptibility genes and classifying tumors. Three lecture hours per week. PREREQUISITE(S): BIOL 4503-BIOL 6503 or BIOL 4470-BIOL 6470, or permission of instructor.

Electives: 6-12 credit hours chosen from:

BIOL 6480 - Cellular/Molec Pharmacol

(3) Provides basic understanding of mechanisms by which therapeutic agents regulate physiological function of cells comprising organ systems such as the heart and central nervous system; drug action (pharmacodynamics) addressed at the molecular, cellular, and organ level, as well as common diseases affecting a system. Three lecture hours per week. PREREQUISITE(S): CHEM 1120 and BIOL 3130.

COMP 6001 - Intro to Python Programming

(3) Basic concepts in computer programming. Incorporates object oriented concepts, variables, flow control statements, arrays and lists, debugging and testing. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor PREREQUISITE(S): permission of instructor; COMP 2700 recommended.

COMP 6014 - Intro Java Programming

(3) Java problem-solving strategies with emphasis in fundamental programming skills, primitive data types, control structures, arrays, strings, I/O, basic recursion, documentation, testing and debugging techniques; introduction to object-oriented concepts. NOTE: This course may not be used to fulfill degree requirements. NOTE: This course may not be used to fulfill degree requirements. PREREQUISITE(S): Knowledge of a programming language and descriptive statistics, or equivalent, or permission of instructor.

COMP 6118 - Introduction to Data Mining

(3) an introductory exploration of data mining. Topics include data preparation and preprocessing; association rules; classification; clustering; dimension reduction; recommendation engines; mining social network graphs. PREREQUISITE(S): COMP 6601 or permission of instructor.

COMP 6272 - System Admin and Unix Prog

(3) Fundamental of UNIX and operating systems principles; scripting; principles and practices of systems administration and management; network file systems; account management; OS installation; startup and shutdown, booting, backup, restore; system administration tools; web administration; duties and responsibilities of a system administrator. PREREQUISITE(S): COMP 3825, or permission of instructor.

COMP 6745 - Intro to Machine Learning

(3) Overview of machine learning. Hypotheses spaces, concept learning, supervised, unsupervised and reinforcement learning; classification and clustering; Bayesian methods; active learning. PREREQUISITE(S): COMP 2150 or permission of instructor.

COMP 7012 - Fndtns/Software Engr

(3) (Same as EECE 7012-EECE 8012) (Same as EECE 7012-8012). Covers project management; software disciplines (requirements, analysis, design, implementation, testing); software modeling notations; mapping designs to code. Students work in teams to develop a significant software system. PREREQUISITE(S): COMP 7713 or COMP 7715 or permission of instructor.

COMP 7115 - Database Systems

(3) Review of the relational model; query processing and optimization; physical database design and tuning; transaction processing; concurrency control; crash recovery; database buffer management; database security. PREREQUISITE(S): COMP 6730 or COMP 6720 or permission of instructor.

COMP 7116 - Adv Database Systems

(3) Advanced data modeling; object-oriented and object-relational databases; indexing of complex data; advanced transaction processing; on-line analytical processing and data warehousing; distributed database processing. PREREQUISITE(S): COMP 6040 or COMP 6041 or permission of instructor.

COMP 7118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S): Permission of instructor.

COMP 7130 - Inform Retrieval/Web Search

(3) Computational aspects, algorithms, and techniques for information retrieval from large collections of documents; major topics include ad-hoc retrieval, text processing, classical models of retrieval, term-weighting schemes, query operations, web search, text categorization, and text classification.

COMP 7150 - Fundamentals of Data Science **

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

COMP 7212 - Operating/Distrib Sys

(3) Overview of operating system architecture for centralized and distributed systems; storage device and file systems; process management, scheduling, synchronization, interprocess communications and security; case studies of selected operating systems.

COMP 7740 - Neural Networks

(3) (Same as EECE 7740-EECE 8740) (Same as EECE 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, backpropagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive, and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

COMP 7780 - Natural Lang Processng

(3) (Same as PSYC 7221-PSYC 8221) (Same as PSYC 7221-8221). Computational aspects, algorithms, and techniques for human language processing; topics include lexical analysis, syntactic parsing, semantics, word sense disambiguation, logic forms, dialog, and pragmatics; applications include question answering and information extraction among others. Grades of S, U, or IP will be given.

MATH 6607 - Intro SAS Programming

(3) SAS program statement syntax and flow control; selecting and summarizing observations; combining, dividing and updating SAS data set; input tailoring and output customization; SAS built-in functions, SAS/IML matrix programming language and SAS statistical packages such as SAS/UNIVARIATE, FREQ, TABULATE, SAS/CHART, PLOT and SAS/REG, GLM, CORR, NPARIWAY. PREREQUISITE(S): Introductory course in statistics.

MATH 6608 - R for Data Proc and Visual

(3) One semester introductory course in the use of R programming language for data processing, visualization, and analysis of data.

MATH 6611 - Intro Applied Statistics

(3) (6671) Binomial, hypergeometric, Poisson, multinomial and normal distributions; test of hypotheses, chi-square test, t-tests, F- test, nonparametric tests; correlation analysis.Credit earned for this course may not be applied toward requirements for the Mathematical Sciences major. Students who have a calculus background are encouraged to take MATH 6635 or 6614 instead of this course. PREREQUISITE(S): 6 hours in mathematics at level of MATH 1710 or above.

MATH 6636 - Intro Statistical Theory

(3) Functions of two random variables; gamma, beta, multinomial, and bivariate normal distributions; Bayes estimators; maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing.

MATH 6685 - Statistical Learning I

(3) Introduction to statistical foundations of computational tools for modeling and understanding big data. Emphasis is on application to real data sets.Topics include linear regression, shrinkage methods, classification algorithms, principle component analysis, support vector algorithms, clustering methods, and ethical aspects of statistical learning. PREREQUISITE(S): MATH 4/6614 with a minimum grade of C-, or MATH 4/6635 with a minimum grade of C-, or with permission of instructor.

MATH 6686 - Statistical Learning II

(3) Statistical foundations of computer-based tools used in the modeling and analysis of big data. Emphasis is on application of Bayesian methods to real data sets. Topics include cross-validation, Bayesian inference and computation, non-parametric methods and ethical aspects of statistical learning. PREREQUISITE(S): MATH 6685 with a minimum grade of C-, or permission of the instructor.

MATH 7221 - Stat Gene Expression

(3) Design of microarray experiements; normalization procedures for Oligonucleotide and cDNA microarrays; clustering procedures: hierarchical clustering, principal compenents and analysis, discriminant analysis, eigenvalue decomposition discriminant analysis and nonparametric clustering methods; controlling error rates in multiple testing through resampling methods, false discovery rates, Bayesian and empirical Bayes techniques, Support Vector Machines.

MATH 7607 - Adv Prog In Sas

(3) Covers SAS macro language and SAS SOL; topics include macro variables, macro processing, Marco expressions, Marco quoting; Proc SQL, retrieving data from tables, creating and updating tables and views; applications in statistics.

MATH 7608 - Statistical Programming with R

(3) Covers R programming language for statistical computation; Topics include: Input/output, R objects, functions, graphics, numerical techniques, optimization, simulation, Monte Carlo techniques.

MATH 7641 - Analysis Of Variance

(3) Basic concepts of ANOVA, partitioning of the sums of squares, fixed effects models, t- and F-tests, multiple comparison procedures, random effect models, variance component models, analysis of covariance and introduction to MANOVA (SAS or comparable statistical packages used extensively to analyze different types of designs). PREREQUISITE(S): 18 credit hours in Ethnomusicology or Southern Regional Music.

MATH 7642 - Experimental Design

(3) Fundamental concepts in designing experiments, justification of linear models, randomization, principle of blocking, use of concomitant observations, principle of confounding, fractional replication, composite designs, incomplete block designs. COREQUISITE(S): NURS 7990 or permission of instructor.

MATH 7647 - Non-Param Stat Meth

(3) Use of distribution-free statistics for estimation, hypothesis testing, and correlation measures in designing and analyzing experiments.

MATH 7657 - Multivar Stat Meth

(3) Basic contents: multivariate normal distributions; Wishart distribution, Hotelling-T2, Matric-t and Beta distributions; generalized regression models and growth curve models; multivariate analysis of variance; principal component analysis; discriminant analysis; factor analysis; curve fitting procedures in multivariate cases. All topics will be illustrated by practical examples.

MATH 7660 - App Time Series Analy

(3) Basic concepts and examples of stationary and nonstationary time series; random harmonic analysis; spectral density functions, model building procedures for time series models; model identification; diagnostic checking, smooth, forecasting and control; Box-Jenkin approach of time series analysis; some seasonal models. May be repeated when topic changes.

MATH 7680 - Bayesian Inference

(3) Nature of Bayesian inference; formulation and choice of prior distributions; advantages and disadvantages of Bayesian approach; applications of Bayesian approach to Behren-Fisher problems, to regression analysis, and to the analysis of random effect models; applications of Bayesian approach to the assessment of statistical assumptions; Bayesian prediction procedures.

MATH 7685 - Simulation & Computing

(3) Uniform random number generation and testing, generation methods for non-uniform random variables, simulating random numbers from specific distributions, Metropolis-Hastings algorithm, Markov Chain Monet-Carlo (MCMC), Gibbs sampling. PREREQUISITE(S): Two semesters (or equivalent) of undergraduate improvisation, and permission of instructor.

MATH 7695 - Bootstrap/Other Methods

(3) Empirical distribution and plug-in principle; bias reduction; bootstrapping regression models; the jackknife; balanced repeated replication; bootstrap confidence intervals; parametric bootstrap; permutation tests.

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

PUBH 7153 - Biostat. in Bioinformatics

(3) This course is offered every other year to Master (7000 level) and Doctoral (8000 level) students. This course focuses on statistical methods in application to bioinformatics data and other large data sets with similar features. Students will be introduced to R programming, a commonly used programming language implemented in bioinformatics data analyses. This will be an applied course with focus on learning the methods, applying the methods, and programming in R.

Research: 1-3 credit hours chosen from:

BINF 7092 - Research

(1-3) Non-traditional setting in which master's students develop research in consultation with the instructor and the program director that will lead to development of Master's Thesis or Project. Two written reports are required per semester. May be repeated for a total of 12 semester hours. Up to four credit hours may be applied toward the degree requirement. Grades of S/U, or IP will be given. May be repeated for a total of 12 semester hours. Up to four credit hours may be applied toward the degree requirement

Internship: 1-3 credit hours chosen from:

BINF 7991 - Bioinformatics Internship

(1-3) Supervised practical experience conducted in industrial, academic research or clinical research organizations. The project must be approved by the program director and may be supervised by any faculty in the program. A written report is required. Up to three credit hours may be applied toward the degree requirement. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Thesis or Project: 3 credit hours

BINF 7996 - Bioinformatics Thesis

(1-6) Supervised research in preparation for advanced degree thesis. May be repeated for up to 6 hours. Grades of S, U, or IP will be given. May be repeated for up to 6 hours PREREQUISITE(S): BIOL 1120 and 1121. Grades of S, U, or IP will be given.

or

BINF 7992 - Bioinformatics Project

(3) Research project conducted in lieu of a Master's thesis under the supervision of a faculty advisor. The project must be approved by the program director and may be supervised by any faculty in the program. A written report and an oral presentation are required for satisfactory completion of the course. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Biological Sciences, (MS)

MS Degree Program

Program objectives are: (1) understand biological principles, concepts, and theories, and in-depth knowledge in a chosen specialty; (2) develop expertise in experimental design, data analysis, and oral and written presentation of research results; and (3) become competitive for professional positions in the biological sciences.

Program Admission

1. Application to The University of Memphis Graduate School. Application can be made on-line (http://apply.memphis.edu/ and http://www.memphis.edu/biology/graduate/).
2. Official transcripts of all previous academic coursework must be sent directly to The University of Memphis Graduate Admissions from the issuing institution. An overall minimum grade point average of 2.75 (on a 4.0 scale) at the undergraduate level is usually competitive. Applicants whose highest degree is from a foreign institution must have their credentials evaluated by any credentialing agency listed on the National Association of Credential Evaluation Services' website. The course-by-course report is required.
    1. Applicants must have satisfactorily completed ("C" or better) three upper division courses within the following six areas: Ecology, Genetics, Cell Biology, Microbiology, Physiology, and Evolution.
    2. Students must have satisfactorily completed ("C" or better) five courses within the following nine areas: General Chemistry I, General Chemistry II, Organic Chemistry I, Organic Chemistry II, Biochemistry, Physics I, Physics II, Calculus, and Statistics. Other courses in the sciences may substitute for these requirements.
3. The Graduate Record Exam (GRE) is required and scores for the Verbal, Quantitative, and Analytical Writing sections are an important factor in the admission process. GRE scores should be submitted directly to The University of Memphis Graduate Admissions by the testing agency.
4. Department of Biological Sciences Graduate Student Application, to be submitted in an online fillable form (http://www.memphis.edu/biology/graduate/graduate-application.php).
5. A written letter from a prospective advisor within the Department of Biological Sciences that states that he/she will accept the applicant and how the student will be funded while in the program must be submitted to the Department of Biological Sciences. Applicants for the Master's degree are expected to have made prior contact with potential research advisors in the department's graduate program. This is a critical first step; no applicants will be accepted without an advisor. Faculty research interests are listed on the departmental website; applicants are encouraged to interact directly with those faculty members who have research interests that match their own interests.

6. Two letters of recommendation from persons capable of assessing the applicant's suitability for graduate work in biology must be submitted to the Department of Biological Sciences.
7. International students for whom English is not their native language must submit proof that they have taken the Test of English as a Foreign Language (TOEFL); acceptable minimums are 550 for paper-based (PBT) and 79 for internet-based (IBT) exams. International applicants for Graduate Teaching Assistantships in the Department of Biological Sciences must obtain a score of 26 or higher on the spoken English component of the TOEFL iBT. Alternatively, applicants must take the SPEAK test (Speaking Proficiency English Assessment Kit) and obtain a score of 50 or higher in order to be appointed as a Teaching Assistant. The SPEAK test is The University of Memphis version of the TSE (Test of Spoken English), which was produced by Educational Testing Service.

Program Requirements (Thesis)

1. A minimum of 30 semester hours is required beyond the baccalaureate degree, of which 21 must be at the 7000 level.
2. A grade point average of 3.0 must be maintained. A student whose grade point average drops below 3.0 will have one semester to raise his or her GPA to 3.0 or better. Continuation of a student who fails to reach a 3.0 overall GPA during two semesters while in the graduate program is at the discretion of the Graduate Studies Committee (in consultation with the student's advisory committee).
3. BIOL 7000, BIOL 7004, BIOL 7102, BIOL 7200, BIOL 7600, and BIOL 7996. Attendance at departmental seminars is mandatory. BIOL 7000 must be completed during the first year of residence and BIOL 7600 in the last semester.
4. All students are required to take and pass a written and oral Comprehensive Examination administered by the student's advisory committee usually before the end of their fifth semester in residence. The scope of this examination is broad and includes a review of general biological principles. This exam must be taken at least one semester prior to graduation.
5. Presentation of research (BIOL 7600) and a thesis (BIOL 7996) as approved by the student's Advisory Committee. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
6. Pass a final oral examination administered by the student's advisory committee. This exam is a defense of the thesis research and is usually taken in the student's final semester.

Program Requirements (Non-Thesis)

1. A minimum of 36 semester hours of graduate courses is required, of which 26 must be at the 7000 level. The total number of semester hours required for graduation will be determined by the student's advisory committee based on academic background. No more than 3 semester hours can be satisfied by BIOL 7092.
2. BIOL 7000, BIOM 7004, and BIOL 7200. BIOL 7000 must be completed during the first year of residence. Attendance at departmental seminars is mandatory. Though students will not present in BIOL 7200, their participation is expected.
3. A grade point average of 3.0 must be maintained. A student whose grade point average drops below 3.0 will have one semester to raise his or her GPA to 3.0 or better. Continuation of a student who fails to reach a 3.0 overall GPA during two semesters while in the graduate program is at the discretion of the Graduate Studies Committee (in consultation with the student's Advisory Committee).
4. All students are required to take and pass a written and oral Comprehensive Examination, administered by the student's advisory committee usually before the end of their fifth semester in residence. The scope of this examination is broad and includes a review of general biological principles.

Biomedical Engineering, (MS)

MS Degree Program

The Department of Biomedical Engineering at The University of Memphis and the Department of Orthopaedic Surgery and Biomedical Engineering at The University of Tennessee Health Science Center, Memphis, participate in the Joint Graduate Program in Biomedical Engineering. The Joint Program offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in Biomedical Engineering. Students may elect courses of study in the following areas:

- Biomechanics, Movement Science, and Rehabilitation
- Biomaterials, Drug Delivery and Regenerative Technology
- Biosensors and Electrophysiology
- Cellular Biomechanical Responses

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements for Graduate Academic Programs) and the program requirements of the degree being pursued. The Joint Graduate Program uses an application website hosted at: https://uthsc.liaisoncas.com/applicant-ux/#/login.

ENTRANCE EXAMINATION

Applicants must have taken the ETS® GRE® revised General Test within five years of the application date. The GRE revised General Test is a third-party evaluative tool administered by the ETS (Educational Testing Service) organization. Test scores must be sent directly to Graduate Admissions from the testing agency. For the Joint Graduate Program in Biomedical Engineering, use the UTSHC code number for reporting GRE and TOEFL scores: 1850.

TRANSCRIPTS and LETTERS OF RECOMMENDATION

All college transcripts and test score information should also be sent directly to Graduate Admissions. Programs in the academic Joint Graduate Program in Biomedical Engineering, a collaboration between the University of Tennessee Health Science Center and the University of Memphis, require three (3) three letters of recommendation from separate evaluators attesting to qualifications for successfully undertaking graduate studies in order to consider your application complete.

The evaluators/faculty members who you choose should be individuals that you believe are best able to comment objectively on your intellectual and professional achievements and potential. We may call or write your recommenders for more information.

INTERNATIONAL APPLICANTS

Evaluation of Credentials: Applicants whose highest degree is from a foreign university must have their credentials evaluated. Evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org) are acceptable. A course-by course report is required and must be sent directly to Graduate Admissions from the credentialing agency.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into graduate programs. Conditional admission may be granted depending on individual academic departmental policy. If English conditional admission is offered, students will need to register for English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived depending on specific academic department policy. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (http://www.memphis.edu/graduateadmissions).

Please note that a student cannot be a graduate assistant (GA) until she/he has been fully admitted to the Biomedical Engineering graduate program. Questions can be directed to the program's graduate coordinator. Students will pay IEI

fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

PROGRAM OBJECTIVES

Program objectives are: (1) ability to apply advanced knowledge of engineering principles, physical and biological sciences and mathematics to the solution of practical engineering problems in medicine and biology; (2) meet or exceed the needs and expectations of public and private sector employers for MS graduates; and (3) preparation to pursue additional advanced studies if so desired.

Admission Requirements

In addition to meeting the minimum admission requirements of the two universities and the Herff College of Engineering, applicants should meet the following criteria:

1. An appropriate bachelor's degree (biomedical, chemical, electrical, mechanical, or others as defined by the Joint Program);
2. An undergraduate GPA of at least 3.00 from an accredited college or university;
3. It is recommended to obtain a GRE score above 300 (combined verbal reasoning and quantitative reasoning) including a minimum 154 on the quantitative reasoning;
4. Applicants whose native language is other than English and who have earned neither a bachelor's nor a master's degree from a college or university in an English-speaking country must have achieved a TOEFL score of at least 213/79 on the computerbased/Internetbased exam or an IELTS score of 6.5 (earned within 2 years prior to application). Any applicant whose first language is not English but who has earned a baccalaureate or master's degree from a college or university in an English-speaking country where instruction was in English may be exempted from the requirement for the TOEFL or IELTS examination.

These are the minimum program admission requirements. Meeting minimum requirements does not guarantee admission into the Joint Program. Applicants are further advised that the department reserves the right to deny some applications for admission because of limited availability of faculty, funding, or physical facilities to accommodate the applicant's research interests. In unusual circumstances where the above admission requirements cannot be met, an applicant may seek exceptions by contacting the Coordinator of Graduate Studies for the Joint Program.

Graduation Requirements

Students may elect to graduate from the Joint Program with a Master of Science in Biomedical Engineering through either a thesis or a project option. Courses are offered using registration numbers for both universities; students may obtain credit in individual courses for either a UM or UT course number, but not for both.

Thesis Option:

Thesis Option: Students must complete 30 credit hours and are required to take 6 credit hours in the life sciences area (typically BIOM 7004 and BIOM 7005), 3 credit hours in mathematics (BIOM 7110), 3 credit hours in biomedical engineering core (BIOM 7209), 3 credit hours of a required focus area core course, and 9 credit hours of elective focus area courses (core and elective focus area courses approved by research advisory committee) for a total of 24 course credit hours. Candidates without an undergraduate engineering degree are required to complete an Engineering Design course. A minimum of 70% of the total required hours for the master's degree must be 7000-level or higher course work (or The University of Tennessee equivalent). Six (6) credit hours of thesis (BIOM 7996) is required; University requirements for continued enrollment until completion may produce extra hours of thesis credit, which do not count toward the degree requirements.

The Final Examination for this degree option will be composed of an Oral Defense of the thesis and may incorporate an additional oral and/or written examination component covering a breadth of topics with the format determined by their

graduate committee. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

BIOM 7004 - Life Sciences Biom I

(3) This introduction and application to aspects of the entire body provides engineers and physical scientists with an understanding of aspects of the chemical, physical, and mechanical basis of cell shape, function, and motility; integrated treatment of topics in cellular biochemistry, protein synthesis, energy releasing pathways, and membrane biophysics.

BIOM 7005 - Life Sciences Biom II

(3) Continuation of 7004-8004. An introduction for engineers and physical scientists to aspects of systemic physiology with an emphasis on and connections to biomedical engineering.

BIOM 7110 - Biostatistics

(3) Introduction to statistical techniques used for analysis of basic and clinical biomedical engineering data; sampling theory, hypothesis testing, ANOVA, and nonparametric techniques.

BIOM 7209 - Biom Msrmnt/Instrmnt

(3) Measurement techniques applicable in biomedical engineering; data acquisition system, mechanical instrumentation, interface systems, signal analyses; biocompatibility requirements.

BIOM 7996 - Masters Thesis

(1-12) Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Project Option:

Project Option: Students will be required to complete 33 credit hours. Of the 33 hours, 24 credit hours have the pattern for the Thesis Option, namely: 6 credit hours in the life sciences area (typically BIOM 7004 and BIOM 7005), 3 credit hours in mathematics (BIOM 7110), 3 credit hours in biomedical engineering core (BIOM 7209), 3 credit hours of a required focus area core course, and 9 credit hours of elective focus area courses (core and elective focus area courses approved by research advisory committee). The remaining 9 credit hours of course work must include 3 credit hours of project (BIOM 7991), and 6 credit hours in engineering, science, or mathematics topics approved by the student's advisory committee as suitable for a career in biomedical engineering. . Candidates without an undergraduate engineering degree are required to complete an Engineering Design course. A minimum of 70% of the total required hours for the master's degree project option must be 7000-level or higher course work (or The University of Tennessee equivalent).

The Final Examination will be composed of an Oral Defense of the project and may incorporate an additional oral and/or written examination component covering a breadth of topics with the format determined by the project committee.

BIOM 7004 - Life Sciences Biom I

(3) This introduction and application to aspects of the entire body provides engineers and physical scientists with an understanding of aspects of the chemical, physical, and mechanical basis of cell shape, function, and motility;

integrated treatment of topics in cellular biochemistry, protein synthesis, energy releasing pathways, and membrane biophysics.

BIOM 7005 - Life Sciences Biom II

(3) Continuation of 7004-8004. An introduction for engineers and physical scientists to aspects of systemic physiology with an emphasis on and connections to biomedical engineering.

BIOM 7209 - Biom Msrmnt/Instrmnt

(3) Measurement techniques applicable in biomedical engineering; data acquisition system, mechanical instrumentation, interface systems, signal analyses; biocompatibility requirements.

BIOM 7991 - Project I

(1-3) Independent study in Biomedical Engineering on topic selected in conjunction with instructor. Oral and written reports required. May be used for curricular training as a part of an internship program. Grades of A-F, or IP will be given. Grades of A-F, or IP will be given.

Professional Development Requirements

1. MS degree seeking students are required to attend Joint Program weekly seminars as scheduled each semester while enrolled as full-time students.
2. Each semester after the first semester, each MS student is to meet with their faculty committee to present their progress as a written report and/or an oral presentation (as determined by the faculty committee) and their plans toward completing either the thesis or project option for the degree.

Retention Policy

1. Students who have been admitted to the program on the condition that they complete prerequisite course work must make satisfactory progress toward this goal each semester of enrollment. Failure to make satisfactory progress may result in dismissal from the program.
2. All students are required to maintain a grade point average (GPA) of at least 3.00. Failure to maintain the minimum GPA is considered sufficient cause for being dismissed from the program. In addition, a student whose GPA falls below 3.0 is ineligible for a graduate assistantship.
3. No more than seven (7) hours of C, C+, or C- grades will be counted toward degree requirements. Grades of D or F are not accepted for credit for graduation purposes, but the grades are computed in the overall cumulative GPA.. Students will be evaluated by the Joint Program faculty at the end of the semester in which a third grade C, C+, or C- or lower is earned for possible dismissal from the program.

Biostatistics (MS)

Master of Science (MS) Degree Program

Hongmei Zhang, PhD, MS
Professor and Director, Division of Epidemiology, Biostatistics and Environmental Health

224 Robison Hall

901.678.1715

Email: hzhang6@memphis.edu

The goal of the MS in Biostatistics program is to train students for positions in government and private health agencies, industry, and research institutes, and to prepare students who plan to enter a doctoral program in biostatistics or bioinformatics. The MS in Biostatistics is more focused and provides in depth training on biostatistical analytical tools and their related theoretical background. An MS in Biostatistics is beneficial to mid-career professionals who want to engage in population health and work in population health related research institutes, hospitals, and pharmaceutical companies. Program objectives are: (1) Prepare students with analytical expertise in the field of public health; (2) Prepare students who plan to enter a doctoral program in biostatistics or bioinformatics with solid theoretical foundation; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health.

Program Admission

A bachelor's degree is required for admission. It is required that applicants have the necessary mathematical, computational, and statistics background (e.g., calculus and linear algebra, programming, and introduction to statistics). Applicants for this program must show a potential for further study by having maintained a GPA of at least a 3.0 average in their bachelor's-level coursework. An acceptable score on the Graduate Record Examination (GRE) general test (verbal and quantitative) is required from within the past five years. Verbal and quantitative GRE scores at 50% or above are preferred in each area. Other professional school standardized test scores (MCAT, DAT, GMAT, or LSAT) may be substituted for the GRE by applicants who are working toward or who have already earned post-baccalaureate degrees for example, in medicine, dentistry, business, or law.

All applicants who will be attending the University on a visa and who are not native speakers of English must supply a minimum score of 79 on the internet-based Test of English as a Foreign Language (TOEFL/iBT), 220 on the computer-based test, or 550 on the paper-based test (TOEFL/PBT). International English Language Testing System (IELTS) is also acceptable in lieu of the TOEFL with a minimum acceptable score of 6.0.

Letters of recommendation from three individuals (at least one letter from a former professor or instructor) familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health professional, are required. Applicants must also submit a personal statement of approximately 750 to 1000 words indicating his/her present interests and career goals, including how the MS in Biostatistics will prepare the candidate to achieve these goals.

Materials submitted will be reviewed by the faculty admissions committee. Admissions decisions are made based on the overall quality of the applicant's scholarship and academic ability (based on GPAs, GRE scores, undergraduate coursework completed, and recommendations).

Program Requirements

The total number of credit hours is 36, including two (2) core courses, seven (7) biostatistics/statistics core courses, two (2) elective courses, and a thesis. Instead of completing a thesis and thesis defense, students have the option to take a written comprehensive exam plus a Master's project with a report focusing on data analyses. Students are required to take a qualifying exam at the end of year one.

Courses Include:

General Core Courses:

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Biostatistics/Statistics core courses:

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

MATH 6636 - Intro Statistical Theory

(3) Functions of two random variables; gamma, beta, multinomial, and bivariate normal distributions; Bayes estimators; maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing.

MATH 7654 - Inference Theory

(3) Bayes and maximum likelihood estimators, sufficient statistics; Rao-Blackwell Theorem, sampling distributions; unbiasedness, completeness and UMVU estimators; efficient estimators, Cramer-Rao inequality; simple robust estimators; UMP-tests; likelihood ratio tests, t-tests and F-tests.

Elective courses (6 hours)

PUBH 7190 - Adv SAS for PUBH Prof 1

(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

MATH 7680 - Bayesian Inference

(3) Nature of Bayesian inference; formulation and choice of prior distributions; advantages and disadvantages of Bayesian approach; applications of Bayesian approach to Behren-Fisher problems, to regression analysis, and to the analysis of random effect models; applications of Bayesian approach to the assessment of statistical assumptions; Bayesian prediction procedures.

PUBH 7308 - Appl Multivariate Stat

(3) (PSYC 7308-8308). Covers multivariate analysis of variance (MANOVA) with independent designs and extensions to repeated measures and ANOVA. Goals include review of conceptual bases, learning SPSS and SAS procedures, learning analysis of simple and complex designs, and learning special post-hoc procedures. PRE-REQUISITES: PUBH 7152/8152 OR EQUIVALENT.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7153 - Biostat. in Bioinformatics

(3) This course is offered every other year to Master (7000 level) and Doctoral (8000 level) students. This course focuses on statistical methods in application to bioinformatics data and other large data sets with similar features. Students will be introduced to R programming, a commonly used programming language implemented in bioinformatics data analyses. This will be an applied course with focus on learning the methods, applying the methods, and programming in R.

PUBH 7172 - Epidemiology PUBH II **

(3) This course is designed for epidemiology majors and other students requiring a more thorough knowledge of the concepts and methods used in epidemiological research. This course stresses analytical study designs and etiologic

research. Topics include exposure-disease associations, threats to internal validity and their control, and valid interpretation of study results, including concepts of association, causality, and effect modification. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR

PUBH 7141 - Epidemiologic Survey Method **

(3) This course provides students in Public Health with the basic elements in designing and performing survey research. The course describes the initial steps in formulating and focusing the research question and proceeds to the key steps in performing survey research, i.e., identifying the target population, obtaining an appropriate sample, designing the survey instrument and implementing it.

PUBH 7300 - Spatial Anlys/Sim for UrbnHlth

(3) The use of spatial analysis and simulation has become increasingly common in the study of urban health problems. This course aims to provide graduate students the framework and basic concepts of spatial epidemiology, health geography and system sciences. Students are expected to understand and be able to apply the major methods from spatial analysis, GIS, and Agent-based model for health problems. The spatial analysis and simulation methods will be learned within the context of urban health, focusing on urban environment and health disparities. Students will apply and integrate various methods collectively for a selected project.

PUBH 7450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice.

HADM 7206 - Managerial Epidemiology

(3) Introduction to principles and tools of epidemiology, exploring distribution and determinants of disease, and examining ways to apply this knowledge to the management of health service organizations.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

> ***To take MATH 6636 (Introduction to Statistical Theory), students must have either taken or Introduction to Probability Theory (MATH 6635) or are able to document its equivalent. Given the importance of this pre-requisite course, each student's academic advisor will ensure that his/her advisees meet this requirement before taking MATH 6636.

Note:

** denotes courses that may be available online.

Retention Requirements

All students enrolled in the MS Biostatistics program are expected to attain high academic achievement in all courses taken. The following criteria will be used to determine retention status of students:

Students having been admitted unconditionally who maintain a cumulative GPA of 3.00 or higher will be considered in good standing if not more than 2 (two) grades of 2.00C+ or lower has been earned.

Students must maintain a GPA of 3.00. In accordance with the Graduate School guidelines, any student not meeting this requirement will be placed on probation. The Coordinator of the MS Biostatistics will review each student's academic record to determine whether to request permission from the Graduate School to allow a student who has not maintained a 3.00 GPA to continue to enroll in classes while on probation. The Coordinator of the MS in Biostatistics must approve courses for a student on probation. Probationary status continues even if the student has a grade under appeal. If a student remains on probation for two consecutive semesters or remains on probation after taking three courses (9 semester hours) without raising the overall GPA to 3.00, the student will be suspended from the program. Appeals of suspension must be submitted in writing to the Coordinator of the MS in Biostatistics.

A student who has been suspended from the MS in Biostatistics program will be denied enrollment in PUBH courses subsequent after suspension.

Graduation Requirements

To qualify for graduation, students need to meet the following requirements: Complete a minimum of 36 semester hours of graduate course work beyond the bachelor's degree including a 3 hour thesis credits (students have an option to replace these 3 credits by a written comprehensive exam plus a Master project with a report focusing on data analyses for a research project).

Business Administration - Biomedical Management Concentration, (MBA)

The program is currently not accepting applications.

Master of Business Administration

An MBA is designed for those students who are interested in managerial careers -- for those with leadership aspirations and abilities. Specific program objectives include:

1. acquisition of managerial-level knowledge of and skills in economics, financial reporting and analysis, operations, strategic use of science and technology, and creating customer and societal value in the global arena;
2. acquisition of managerial-level knowledge of and skills in creativity and innovation, leadership and team-building, ethics and law;
3. acquisition of managerial-level knowledge of and appreciation for the global implications of all business decision-making.

Program Admission

Applicants to all MBA programs must have:

1. An undergraduate degree from an accredited college or institution.
2. A Graduate School application for admission and the appropriate fee.
3. An official transcript from each college or university attended.
4. Applicants must present an acceptable score on a recent (five years or less) Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). Official GRE or GMAT scores are required for

admission. Admission is competitive based on standardized test scores, cumulative grade point averages, (etc.).

5. A current resume
6. A personal statement of interest
7. Response to the required essay questions (available at http://www.mba.memphis.edu)
8. Two letters of recommendation

A separate application and additional information materials must be submitted for admission to the Executive concentration (www.memphis.edu/executivemba/) , the International MBA (www.memphis.edu/internationalmba/), or the CD-MBA concentration (www.memphis.edu/cdmba/). Business experience requirements include one year work experience for the MBA and at least five years professional or managerial experience for the Executive concentration.

Arrangements for taking the GMAT can be made by using www.mba.com. Arrangements for taking the GRE can made by writing to the Educational Testing Service, P.O. Box 6000, Princeton, New Jersey 08541-6000, by calling 1-866-473-4373, or by using www.ets.org.

Registration packets for the GRE may be obtained from the Testing Center on campus in John W. Brister (JWB) Hall room 112.

Applicants with at least five years of managerial experience may choose to submit a portfolio of professional accomplishments in lieu of a GMAT or GRE score. An admissions committee will review each applicant's portfolio of professional accomplishments to decide if a GMAT/GRE waiver is warranted. If an applicant's portfolio is not adequate to warrant a GMAT/GRE waiver, that applicant will be asked to submit a GMAT or GRE score, as per standard admission procedure. Applicants who request a GMAT/GRE waiver must submit their portfolios to the department academic advisor.

Qualified applicants may enter the MBA or the MBA with Law concentration in either the Fall or Spring semesters, while admission to the International MBA, the MBA with Executive concentration, and the CD-MBA is for Fall only.

MBA Preparatory Knowledge

Students entering the MBA programs are expected to be fluent in the language of business; students are expected to have a working understanding of key concepts in economics, finance, and accounting. In addition, students are expected to have a working proficiency in statistics. If students have deficiencies in the basic concepts and skills of business, they may be counseled (by the MBA Program Director and/or the MBA program staff) to take preparatory courses and/or secure self-paced review materials. There are no prerequisite courses to the MBA programs.

MBA Program Requirements

Each candidate for an MBA degree must complete a minimum of 33 semester hours of course work that include 30 hours of Core Knowledge and Skills. Students who desire a concentration are required to take an additional 15 hours of coursework beyond the 30 hour Core as per the specifications of each concentration. Students who do not desire an MBA concentration are required to take a 3 hour elective (approved by the MBA Program Director) beyond the 30 hour Core.

Core Knowledge and Skills (30 hours):

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

ACCT 7080 - Financial/Managerial Acct Mgrs **

(3) Use of accounting information by an organization's investors, creditors, regulatory authorities and managers; develops financial credit analysis skills useful in business decision making; analysis of accounting information useful for monitoring efficiency, quality, and timeliness of an operation; pricing and costing of products and services; planning and performance measurement.

ECON 7100 - Econ for Global Executive **

(3) Essential economic theory and its application to business and economic issues. Consumer behavior, managerial economics and strategy, market structure in a global context.

MKTG 7555 - Creativity and Innovation **

(2) Focused analysis and discussion of imaginative, creative processes used for innovation in business contexts; explores theoretical underpinnings of creativity and innovation, with special attention to environmental effects on individual and group creativity; creativity knowledge is applied in areas of ideation, innovation management, and product design. May be repeated for a maximum of 6 credit hours when topics change

MGMT 7135 - Seminar in Leadership **

(2) Theoretical and practical consideration of leadership in high performing business organizations; detailed analysis of relevant organizational behavior concepts; particular focus on theories of motivation, styles of leadership, and emotional intelligence.

ACCT 7050 - Corp Governance/Bus Ethics **

(2) Detailed analysis of the role of corporate governance in the free enterprise system and capital markets; focused consideration of moral principles, ethical standards, and corporate code of business ethics.

SCMS 7313 - Global Operations Mgmt **

(3) (ISDS 7/8313) Acquisition, transformation, and distribution of goods and services within the global supply chain; covers concepts, tools, and strategies to design and manage operations, such as strategic implications, performance measurement, process management, sourcing, operations design, quality, inventory, logistics, enabling information systems and technology, and global issues among other topics.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

MKTG 7140 - Global Strategic Marketing **

(3) Marketing strategy and in-depth analysis of issues impacting global management of marketing, including: interrelationships among global business environments and strategies, analysis value creating global strategies, competitive intelligence gathering, customer segment analysis, integrated marketing technologies, customer relationship management.

MGMT 7160 - Global Strategic Mgmt **

(3) (7410) Decisions and actions for the development and implementation of long-term plans that determine organizational performance; role of top management decision making in establishing the firm's mission; focus on strategic analysis of alternative actions; evaluation of environmental conditions, industry characteristics, and organizational capabilities in determining strategy in a global context.

Biomedical Management CD-MBA/Professional MBA Concentration: Program Requirements

The Biomedical Management MBA concentration consists of 45 credit-hours. Classes are offered during the day and the evening. A 3-credit-hour internship with a sponsoring company may be required. The Biomedical Management MBA curriculum is as follows:

Biomedical Management Concentration Courses (12 hours)

ECON 7715 - Global Healthcare Economics

(3) Applies basic economic concepts toward understanding market economics, regulatory apparatus, and other strategic complexities in the biomedical industry and related markets; analysis of global healthcare issues and systems. PREREQUISITE(S): ECON 7100 or permission of instructor.

MKTG 7520 - Medical Dev New Prod Dev

(3) Covers strategic planning and policy for new products, opportunity analysis, idea generation and concept development, project evaluation, product design and development, prototyping and testing, product launch and commercialization, and various product management tools. PREREQUISITE(S): MKTG 7140 SCMS 7315 HADM 7718

SCMS 7315 - Dsgn/Mgmt Sup Chns Biom Ind

(3) (ISDS 7315) Concepts and tools for designing and managing modern supply chains in the biomedical industry; includes purchasing and sourcing, demand forecasting, inventory resource planning, domestic and international transportation, customer relationship management, facility location, service-response logistics, and performance measurement.

HADM 7718 - Med Tech Purchasing/Sales

(3) Describes changing health care market environment, provides knowledge and skills about purchasing behavior and selling strategies important in adoption of medical technologies and services surrounding their adoption; reviews purchasing behaviors of key stakeholders e.g., physicians, pharmacists, and materials managers in major health care institutions; covers appropriate approaches to selling medical technology products to health institutions.

Note:

Specific courses may change periodically as market needs, technology, and applied business knowledge changes.

Company Internship or elective (3 hours)

Business Administration - Executive Concentration, (MBA)

Master of Business Administration

An MBA is designed for those students who are interested in managerial careers – for those with leadership aspirations and abilities. Specific program objectives include:

1. acquisition of managerial-level knowledge of and skills in economics, financial reporting and analysis, operations, strategic use of science and technology, and creating customer and societal value in the global arena;
2. acquisition of managerial-level knowledge of and skills in creativity and innovation, leadership and team-building, ethics and law;
3. acquisition of managerial-level knowledge of and appreciation for the global implications of all business decision-making.

Program Admission

Applicants to all MBA programs must have:

1. An undergraduate degree from an accredited college or institution.
2. A Graduate School application for admission and the appropriate fee.
3. An official transcript from each college or university attended.
4. Applicants must present an acceptable score on a recent (five years or less) Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). Official GRE or GMAT scores are required for admission. Admission is competitive based on standardized test scores, cumulative grade point averages, (etc.).
5. A current resume
6. A personal statement of interest
7. Response to the required essay questions (available at http://www.memphis.edu/mba/)
8. Two letters of recommendation

A separate application and additional information materials must be submitted for admission to the Executive concentration (www.memphis.edu/executivemba/) , the International MBA (www.memphis.edu/internationalmba/), or the CD-MBA concentration (www.memphis.edu/cdmba/). Business experience requirements include one year work experience for the MBA and at least five years professional or managerial experience for the Executive concentration.

Arrangements for taking the GMAT can be made by using www.mba.com. Arrangements for taking the GRE can made by writing to the Educational Testing Service, P.O. Box 6000, Princeton, New Jersey 08541-6000, by calling 1-866-473-4373, or by using www.ets.org.

Registration packets for the GRE may be obtained from the Testing Center on campus in John W. Brister (JWB) Hall room 112.

Applicants with at least five years of managerial experience may choose to submit a portfolio of professional accomplishments in lieu of a GMAT or GRE score. An admissions committee will review each applicant's portfolio of professional accomplishments to decide if a GMAT/GRE waiver is warranted. If an applicant's portfolio is not adequate to warrant a GMAT/GRE waiver, that applicant will be asked to submit a GMAT or GRE score, as per standard admission procedure. Applicants who request a GMAT/GRE waiver must submit their portfolios to the department academic advisor.

Qualified applicants may enter the MBA or the MBA with Law concentration in either the Fall or Spring semesters, while admission to the International MBA, the MBA with Executive concentration, and the CD-MBA is for Fall only.

MBA Preparatory Knowledge

Students entering the MBA programs are expected to be fluent in the language of business; students are expected to have a working understanding of key concepts in economics, finance, and accounting. In addition, students are expected to have a working proficiency in statistics. If students have deficiencies in the basic concepts and skills of business, they may be counseled (by the MBA Program Director and/or the MBA program staff) to take preparatory courses and/or secure self-paced review materials. There are no prerequisite courses to the MBA programs.

MBA Program Requirements

Each candidate for an MBA degree must complete a minimum of 33 semester hours of course work that include 30 hours of Core Knowledge and Skills. Students who desire a concentration are required to take an additional 15 hours of coursework beyond the 30 hour Core as per the specifications of each concentration. Students who do not desire an MBA concentration are required to take a 3 hour elective (approved by the MBA Program Director) beyond the 30 hour Core.

Core Knowledge and Skills (31 hours):

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

ACCT 7080 - Financial/Managerial Acct Mgrs **

(3) Use of accounting information by an organization's investors, creditors, regulatory authorities and managers; develops financial credit analysis skills useful in business decision making; analysis of accounting information useful for monitoring efficiency, quality, and timeliness of an operation; pricing and costing of products and services; planning and performance measurement.

ECON 7100 - Econ for Global Executive **

(3) Essential economic theory and its application to business and economic issues. Consumer behavior, managerial economics and strategy, market structure in a global context.

MKTG 7555 - Creativity and Innovation **

(2) Focused analysis and discussion of imaginative, creative processes used for innovation in business contexts; explores theoretical underpinnings of creativity and innovation, with special attention to environmental effects on

individual and group creativity; creativity knowledge is applied in areas of ideation, innovation management, and product design. May be repeated for a maximum of 6 credit hours when topics change

MGMT 7136 - Exec. Seminar in Leadership

(3) Theoretical and practical consideration of leadership in high performing business organizations; team building; detailed analysis of relevant organizational behavior concepts; particular focus on theories of motivation, styles of leadership, and emotional intelligence. NOTE: only open to those enrolled in the Executive MBA program. NOTE: only open to those enrolled in the Executive MBA program.

ACCT 7050 - Corp Governance/Bus Ethics **

(2) Detailed analysis of the role of corporate governance in the free enterprise system and capital markets; focused consideration of moral principles, ethical standards, and corporate code of business ethics.

SCMS 7313 - Global Operations Mgmt **

(3) (ISDS 7/8313) Acquisition, transformation, and distribution of goods and services within the global supply chain; covers concepts, tools, and strategies to design and manage operations, such as strategic implications, performance measurement, process management, sourcing, operations design, quality, inventory, logistics, enabling information systems and technology, and global issues among other topics.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

MKTG 7140 - Global Strategic Marketing **

(3) Marketing strategy and in-depth analysis of issues impacting global management of marketing, including: interrelationships among global business environments and strategies, analysis value creating global strategies, competitive intelligence gathering, customer segment analysis, integrated marketing technologies, customer relationship management.

MGMT 7160 - Global Strategic Mgmt **

(3) (7410) Decisions and actions for the development and implementation of long-term plans that determine organizational performance; role of top management decision making in establishing the firm's mission; focus on strategic analysis of alternative actions; evaluation of environmental conditions, industry characteristics, and organizational capabilities in determining strategy in a global context.

Executive MBA Concentration: Program Requirements

The MBA with Executive Concentration is a 41 credit-hour program that can be completed in 17 months. All students generally progress together through the program with some flexibility built in to allow specialization based on the background and needs of executive cohorts. Courses are offered in a variety of formats, including in-class sessions, technology-enhanced instruction, hybrid format, weekend classes, intensive domestic residencies, innovation projects and an international study residency. Learning materials and content are specially designed for corporate executives in all formats. Classes meet on weekends during the Fall and Spring semesters. The international business residency will generally be in the summer after the first Spring semester of the program.

The Executive MBA curriculum is as follows:

Executive Concentration Courses (10 hours)

BA 7950 - Practicum Intl Business

(3) Practicum in foreign business or academic organization to gain management skills and experience; work experience in non-English speaking country; enrollment must be approved by the Associate Dean for Academic Programs. PREREQUISITE(S): 12 hours of graduate business courses.

MGMT 7421 - Self Leadership/Executives

(2) Application of critical thinking skills to the major theories, concepts, and principles of self leadership; emphasizes understanding each stage of the self leadership process, applying critical thinking skills to each element of self leadership, and the overall logic of self leadership.

MGMT 7250 - Strategic Human Captl Mgmt

(3) Theories, research, and practice in managing human resources strategically in business organizations. Topics include strategic HRM and planning, legal environment and managing diversity, job analysis, job design, recruitment, selection, training and development, performance management, turnover, and retention.

BA 7719 - Special Topics in Business Administration

(1-6)

Note:

The program website www.memphis.edu/executivemba provides additional information regarding course schedule, etc.

Business Administration - Finance Concentration, (MS)

Master of Science

Program objectives are: (1) an understanding of the general context of business in society and a foundation knowledge of the essential business functions; (2) acquisition of an advanced level of knowledge of a specialized business discipline; (3) ability to make significant professional contributions within a functional area of business; and (4) ability to compete effectively for professional positions in the private or public sectors.

Program Admission

Applicants to all MS programs in the Fogelman College must have the following:

1. An undergraduate degree from an accredited college or institution;
2. Application for admission and appropriate fee;
3. Official transcript from each college or university attended;

4. Satisfactory performance on undergraduate coursework and a satisfactory score on the Graduate Management Admissions test or the Graduate Record Examination GRE;
5. International applicants must submit an acceptable TOEFL score.

Qualified candidates may enter these programs at the beginning of any semester.

The Graduate Non-Degree classification allows individuals who have not yet decided to pursue a graduate degree or who have professional development needs to enroll in MS courses (a maximum of 9 credit hours). To remain enrolled as a Graduate Non-Degree student, individuals must maintain a minimum GPA of 3.0. Students should note that the 9-hour maximum is more stringent than the University Graduate School policy.

Program Requirements

Prerequisite of MATH 1830 or its equivalent

Students with the necessary pre-qualifications may have the prerequisite waived by the program coordinator.

Each candidate must complete a minimum of 33 semester hours of approved graduate courses

The 33 graduate credits include a minimum of 21 hours in the concentration (24 if a thesis is written; students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write).

Business Administration Core:

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

FIR 7410 - Invst Thry Portfol Mgmt

(3) Introductory graduate level course in the area of investments and portfolio management; considers qualitative and quantitative risk and return characteristics of various investment opportunities, fundamental valuation models, timing techniques, efficient markets, speculation and hedging, and portfolio theory and practice.

Candidates must pass a written or oral comprehensive examination

Finance Concentration:

Two required courses (6 semester hours) and seven elective courses (21 semester hours) approved by the program coordinator.

Two required courses (6 semester hours)

ACCT 7080 - Financial/Managerial Acct Mgrs **

(3) Use of accounting information by an organization's investors, creditors, regulatory authorities and managers; develops financial credit analysis skills useful in business decision making; analysis of accounting information useful for monitoring efficiency, quality, and timeliness of an operation; pricing and costing of products and services; planning and performance measurement.

FIR 7810 - Adv Financial Mgmt

(3) The most significant contributions to the advanced literature on managerial finance. Topics include capital budgeting under risk, capital rationing, cost of capital, capital structure, dividend policy, firm valuation, and working capital management.

Seven electives courses (21 semester hours)

Four elective courses (12 semester hours) must come from List A

The other three elective courses (9 semester hours) may come from List A, List B, or related courses approved by the program coordinator.

List A (12-21 hours):

FIR 7171 - Intl Financial Markets

(3) Analysis of operation and regulation of international financial markets for derivatives (options, futures, and swaps), equities, debt, and currencies.

FIR 7173 - Financial Analys/Certification

(3) Course is desinged to accomplish three objectives: (1) Prepare students for careers in financial markets, (2) Develop investments skills for person financial planning such as savings and retirement, and (3) Familiarize students with certifications such as CFA, CFP and the content for such exams.

FIR 7648 - Entrepreneurial Finance

(3) The purpose of this course is to provide students with an understanding of how new business ventures are conceived, planned, financed and harvested. The course is taught primarily from the vantage point of the entrepreneur, but will also view things from the perspective of investors (Angel investors, Venture Capitalists, etc.). Grades of S, U, or IP will be given.

FIR 7911 - Internship in FIR

(3) Internship in Finance, Insurance and Real Estate to gain on-the-job experience in real-life environment. Project to be approved and supervised by department faculty. Credit allowed only after acceptance of report.

ACCT 7140 - Financial Statement Analysis **

(3) Examining fmancial statements in the context of identifying the financial information available to analysts as well as techniques useful in transforming this basic information into forms more useful for analysis. PREREQUISITE(S): ACCT 2010 or ACCT 7080.

FIR 7840 - Quantitative Finan App

(3) Application of statistical and quantitative tools to problem solving and decision making in all disciplines of finance. The tools include, but are not limited to, spreadsheet analysis, linear programming, and regression analysis. Extensive use of computer software packages.

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

List B (0-9 hours):

MBA Courses:

ECON 7100 - Econ for Global Executive **

(3) Essential economic theory and its application to business and economic issues. Consumer behavior, managerial economics and strategy, market structure in a global context.

Finance Courses:

FIR 6331 - Stock Portfolio Mgmt

(3) (Same as FIR 4331) (Same as FIR 4331). Development and monitoring of investment portfolio by explaining possible investment alternatives; terminology and analysis techniques necessary to fulfull future financial goals. Undergraduate students will assist graduate students in managing a real equity portfolio of $500,000. May be repeated for credit toward the concentration in French up to a maximum of 6 hours Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FIR 6610 - Cases Managerial Fin

(3) Application of tools and principles introduced in previous courses to develop up-to-date problem-solving techniques; cases approached from standpoint of top-level management, utilizing both quantitative and qualitative analysis. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FIR 6720 - Mgmt Financl Institutns

(3) Financial policies and decision-making peculiar to financial institutions in the United States; management of institutions consistent with adequate standards of liquidity and solvency.

FIR 6721 - Fixed Income and Derivatives

(3) Introduction to fixed income securities, interest rate risk and the structure of debt markets, as well as futures, options, forwards and swaps (widely used by investment firms and corporations to manage financial risks), with primary emphasis on their practical application. PREREQUISITE(S): FIR 7410.

FIR 6770 - Security Analysis/Port Mgmt

(3) Development of techniques for finding actual worth of securities, primarily stocks and bonds; selection, timing, diversification, and other aspects of supervising investment funds. May be repeated for a maximum of 6 hours PREREQUISITE(S): Permission of department.

Real Estate Courses:

FIR 6310 - Real Estate Law **

(3) This course covers law and legal instruments as applied to real estate and is designed to serve the needs of property owners and those engaged in the real estate business. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FIR 6320 - Real Estate Finance **

(3) Terminology, legislation, principles, and analytical techniques pertaining to financing of real estate; perspective of lender, residential borrower, and income property borrower. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FIR 6340 - Real Estate Appraisal

(3) Basic terminology, principles, procedures, and issues; nature of value, principles of value, appraisal process, market approach, cost approach, capitalization of income approach, gross rent multiplier approach, and appraisal reports. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FIR 6350 - Real Estate Investment **

(3) Principles and practices reviewed and evaluated; investment strategy, ownership forms, tax implications, cash flow analysis, measures of return, risk management, and property selection. May be repeated for credit toward the concentration in French up to 9 hours Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FIR 7301 - Contemp Rles Thry/Prac

(3) Overview of significant topics in real estate finance, investments, and valuation; lecture and group discussion of key issues in real estate theory and practice.

FIR 7302 - Rl Estate Dvlpmt & Sustainblty

(3) Analysis of methodologies and market strategies in the evaluation of investments in commercial and industrial land development; identification, conceptualization, and execution of action programs associated with developing energy efficient and sustainable real estate projects, industrial parks, warehouse-distribution centers, and related land uses.

Business Administration - Professional Concentration, (MBA)

Master of Business Administration

An MBA is designed for those students who are interested in managerial careers -- for those with leadership aspirations and abilities. Specific program objectives include:

1. acquisition of managerial-level knowledge of and skills in economics, financial reporting and analysis, operations, strategic use of science and technology, and creating customer and societal value in the global arena;
2. acquisition of managerial-level knowledge of and skills in creativity and innovation, leadership and team-building, ethics and law;
3. acquisition of managerial-level knowledge of and appreciation for the global implications of all business decision-making.

Program Admission

Applicants to all MBA programs must have:

1. An undergraduate degree from an accredited college or institution.
2. A Graduate School application for admission and the appropriate fee.
3. An official transcript from each college or university attended.
4. Applicants must present an acceptable score on a recent (five years or less) Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). Official GRE or GMAT scores are required for admission. Admission is competitive based on standardized test scores, cumulative grade point averages, (etc.).
5. A current resume
6. A personal statement of interest
7. Response to the required essay questions (available at http://www.mba.memphis.edu)
8. Two letters of recommendation

A separate application and additional information materials must be submitted for admission to the Executive concentration (www.memphis.edu/executivemba/) , the International MBA (www.memphis.edu/internationalmba/), or the CD-MBA concentration (www.memphis.edu/cdmba/). Business experience requirements include one year work experience for the MBA and at least five years professional or managerial experience for the Executive concentration.

Arrangements for taking the GMAT can be made by using www.mba.com. Arrangements for taking the GRE can made by writing to the Educational Testing Service, P.O. Box 6000, Princeton, New Jersey 08541-6000, by calling 1-866-473-4373, or by using www.ets.org.

Registration packets for the GRE may be obtained from the Testing Center on campus in John W. Brister (JWB) Hall room 112.

Applicants with at least five years of managerial experience may choose to submit a portfolio of professional accomplishments in lieu of a GMAT or GRE score. An admissions committee will review each applicant's portfolio of professional accomplishments to decide if a GMAT/GRE waiver is warranted. If an applicant's portfolio is not adequate to warrant a GMAT/GRE waiver, that applicant will be asked to submit a GMAT or GRE score, as per standard admission procedure. Applicants who request a GMAT/GRE waiver must submit their portfolios to the department academic advisor.

Qualified applicants may enter the MBA or the MBA with Law concentration in either the Fall or Spring semesters, while admission to the International MBA, the MBA with Executive concentration, and the CD-MBA is for Fall only.

MBA Preparatory Knowledge

Students entering the MBA programs are expected to be fluent in the language of business; students are expected to have a working understanding of key concepts in economics, finance, and accounting. In addition, students are expected to have a working proficiency in statistics. If students have deficiencies in the basic concepts and skills of business, they may be counseled (by the MBA Program Director and/or the MBA program staff) to take preparatory courses and/or secure self-paced review materials. There are no prerequisite courses to the MBA programs.

MBA Program Requirements

Each candidate for an MBA degree must complete a minimum of 33 semester hours of course work that include 30 hours of Core Knowledge and Skills. Students who desire a concentration are required to take an additional 15 hours of coursework beyond the 30 hour Core as per the specifications of each concentration. Students who do not desire an MBA concentration are required to take a 3 hour elective (approved by the MBA Program Director) beyond the 30 hour Core.

Core Knowledge and Skills (30 hours):

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

ACCT 7080 - Financial/Managerial Acct Mgrs **

(3) Use of accounting information by an organization's investors, creditors, regulatory authorities and managers; develops financial credit analysis skills useful in business decision making; analysis of accounting information useful for monitoring efficiency, quality, and timeliness of an operation; pricing and costing of products and services; planning and performance measurement.

ECON 7100 - Econ for Global Executive **

(3) Essential economic theory and its application to business and economic issues. Consumer behavior, managerial economics and strategy, market structure in a global context.

MKTG 7555 - Creativity and Innovation **

(2) Focused analysis and discussion of imaginative, creative processes used for innovation in business contexts; explores theoretical underpinnings of creativity and innovation, with special attention to environmental effects on individual and group creativity; creativity knowledge is applied in areas of ideation, innovation management, and product design. May be repeated for a maximum of 6 credit hours when topics change

MGMT 7135 - Seminar in Leadership **

(2) Theoretical and practical consideration of leadership in high performing business organizations; detailed analysis of relevant organizational behavior concepts; particular focus on theories of motivation, styles of leadership, and emotional intelligence.

ACCT 7050 - Corp Governance/Bus Ethics **

(2) Detailed analysis of the role of corporate governance in the free enterprise system and capital markets; focused consideration of moral principles, ethical standards, and corporate code of business ethics.

SCMS 7313 - Global Operations Mgmt **

(3) (ISDS 7/8313) Acquisition, transformation, and distribution of goods and services within the global supply chain; covers concepts, tools, and strategies to design and manage operations, such as strategic implications, performance measurement, process management, sourcing, operations design, quality, inventory, logistics, enabling information systems and technology, and global issues among other topics.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

MKTG 7140 - Global Strategic Marketing **

(3) Marketing strategy and in-depth analysis of issues impacting global management of marketing, including: interrelationships among global business environments and strategies, analysis value creating global strategies, competitive intelligence gathering, customer segment analysis, integrated marketing technologies, customer relationship management.

MGMT 7160 - Global Strategic Mgmt **

(3) (7410) Decisions and actions for the development and implementation of long-term plans that determine organizational performance; role of top management decision making in establishing the firm's mission; focus on strategic analysis of alternative actions; evaluation of environmental conditions, industry characteristics, and organizational capabilities in determining strategy in a global context.

Professional MBA Concentration: Program Requirements

The MBA with a Professional concentration is a flexible format 45-credit-hour program. Classes are offered during the day and evening. The concentration courses consist of 15 credit-hours chosen with the approval of the MBA Program Director and faculty advisors. The concentration courses are carefully selected to provide students with maximum professional impact. The Professional MBA concentration curriculum is as follows:

Professional Concentration Courses (15 hours)

Elective courses taken upon advice of the program director and faculty advisors.

Business Administration - Services Marketing Concentration, (MBA)

This program is currently not accepting applications.

Master of Business Administration

An MBA is designed for those students who are interested in managerial careers -- for those with leadership aspirations and abilities. Specific program objectives include:

1. acquisition of managerial-level knowledge of and skills in economics, financial reporting and analysis, operations, strategic use of science and technology, and creating customer and societal value in the global arena;
2. acquisition of managerial-level knowledge of and skills in creativity and innovation, leadership and team-building, ethics and law;
3. acquisition of managerial-level knowledge of and appreciation for the global implications of all business decision-making.

Program Admission

Applicants to all MBA programs must have:

1. An undergraduate degree from an accredited college or institution.
2. A Graduate School application for admission and the appropriate fee.
3. An official transcript from each college or university attended.
4. Applicants must present an acceptable score on a recent (five years or less) Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). Official GRE or GMAT scores are required for admission. Admission is competitive based on standardized test scores, cumulative grade point averages, (etc.).
5. A current resume
6. A personal statement of interest
7. Response to the required essay questions (available at http://www.mba.memphis.edu)
8. Two letters of recommendation

A separate application and additional information materials must be submitted for admission to the Executive concentration (www.memphis.edu/executivemba/) , the International MBA (www.memphis.edu/internationalmba/), or the CD-MBA concentration (www.memphis.edu/cdmba/). Business experience requirements include one year work experience for the MBA and at least five years professional or managerial experience for the Executive concentration.

Arrangements for taking the GMAT can be made by using www.mba.com. Arrangements for taking the GRE can made by writing to the Educational Testing Service, P.O. Box 6000, Princeton, New Jersey 08541-6000, by calling 1-866-473-4373, or by using www.ets.org.

Registration packets for the GRE may be obtained from the Testing Center on campus in John W. Brister (JWB) Hall room 112.

Applicants with at least five years of managerial experience may choose to submit a portfolio of professional accomplishments in lieu of a GMAT or GRE score. An admissions committee will review each applicant's portfolio of professional accomplishments to decide if a GMAT/GRE waiver is warranted. If an applicant's portfolio is not adequate to warrant a GMAT/GRE waiver, that applicant will be asked to submit a GMAT or GRE score, as per standard admission procedure. Applicants who request a GMAT/GRE waiver must submit their portfolios to the department academic advisor.

Qualified applicants may enter the MBA or the MBA with Law concentration in either the Fall or Spring semesters, while admission to the International MBA, the MBA with Executive concentration, and the CD-MBA is for Fall only.

MBA Preparatory Knowledge

Students entering the MBA programs are expected to be fluent in the language of business; students are expected to have a working understanding of key concepts in economics, finance, and accounting. In addition, students are expected to have a working proficiency in statistics. If students have deficiencies in the basic concepts and skills of

business, they may be counseled (by the MBA Program Director and/or the MBA program staff) to take preparatory courses and/or secure self-paced review materials. There are no prerequisite courses to the MBA programs.

MBA Program Requirements

Each candidate for an MBA degree must complete a minimum of 33 semester hours of course work that include 30 hours of Core Knowledge and Skills. Students who desire a concentration are required to take an additional 15 hours of coursework beyond the 30 hour Core as per the specifications of each concentration. Students who do not desire an MBA concentration are required to take a 3 hour elective (approved by the MBA Program Director) beyond the 30 hour Core.

Core Knowledge and Skills (30 hours):

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

ACCT 7080 - Financial/Managerial Acct Mgrs **

(3) Use of accounting information by an organization's investors, creditors, regulatory authorities and managers; develops financial credit analysis skills useful in business decision making; analysis of accounting information useful for monitoring efficiency, quality, and timeliness of an operation; pricing and costing of products and services; planning and performance measurement.

ECON 7100 - Econ for Global Executive **

(3) Essential economic theory and its application to business and economic issues. Consumer behavior, managerial economics and strategy, market structure in a global context.

MKTG 7555 - Creativity and Innovation **

(2) Focused analysis and discussion of imaginative, creative processes used for innovation in business contexts; explores theoretical underpinnings of creativity and innovation, with special attention to environmental effects on individual and group creativity; creativity knowledge is applied in areas of ideation, innovation management, and product design. May be repeated for a maximum of 6 credit hours when topics change

MGMT 7135 - Seminar in Leadership **

(2) Theoretical and practical consideration of leadership in high performing business organizations; detailed analysis of relevant organizational behavior concepts; particular focus on theories of motivation, styles of leadership, and emotional intelligence.

ACCT 7050 - Corp Governance/Bus Ethics **

(2) Detailed analysis of the role of corporate governance in the free enterprise system and capital markets; focused consideration of moral principles, ethical standards, and corporate code of business ethics.

SCMS 7313 - Global Operations Mgmt **

(3) (ISDS 7/8313) Acquisition, transformation, and distribution of goods and services within the global supply chain; covers concepts, tools, and strategies to design and manage operations, such as strategic implications, performance measurement, process management, sourcing, operations design, quality, inventory, logistics, enabling information systems and technology, and global issues among other topics.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

MKTG 7140 - Global Strategic Marketing **

(3) Marketing strategy and in-depth analysis of issues impacting global management of marketing, including: interrelationships among global business environments and strategies, analysis value creating global strategies, competitive intelligence gathering, customer segment analysis, integrated marketing technologies, customer relationship management.

MGMT 7160 - Global Strategic Mgmt **

(3) (7410) Decisions and actions for the development and implementation of long-term plans that determine organizational performance; role of top management decision making in establishing the firm's mission; focus on strategic analysis of alternative actions; evaluation of environmental conditions, industry characteristics, and organizational capabilities in determining strategy in a global context.

Services Marketing CD-MBA/Professional MBA Concentration: Program Requirements

The Services Marketing MBA concentration consists of 45 credit hours. Classes are offered during the day and evening. A three-credit-hour internship with a sponsoring company may be required. The Services Marketing curriculum is as follows:

Services Marketing Concentration Courses (12 hours)

MKTG 7540 - Applied Consumer Behavior

(3) Application of basic and advanced concepts of consumer behavior in business to consumer and business to business contexts; application of value based marketing to acquisition, development and maintenance of profitable customer relationships; psychological underpinnings of consumer behavior; exploring consumer behavior in a multi cultural environment. PREREQUISITE(S): MKTG 7140 or equivalent.

MKTG 7542 - Retail Marketing Strategy

(3) Focus on strategic role of retailing in the distribution of consumer goods and services; understanding consumer insights and execution of critical factors for building retail brands; role of new technology and media in developing multi channel retailing strategies. PREREQUISITE(S): MKTG 7140 or equivalent.

MKTG 7544 - Integ Mktg Comm/Branding

(3) Application of theories in marketing communications and marketing psychology to understanding consumers responses to new media; study changing media trends; study theories on branding such as brand personalities, branding services, people as brands and brand communities; building and measuring brand equity; leveraging brands for brand extension and managing a brand portfolio in a global context. PREREQUISITE(S): MKTG 7140 or equivalent

MKTG 7546 - Mktg in Digital Environment

(3) Studying and applying marketing orientation in a digital environment; understanding emerging business models for the online market space; studying and implementing eCommerce project management techniques; understand the converging trends in the digital world in relation to consumers and consumer segments. PREREQUISITE(S): MKTG 7140 or equivalent

Note:

Specific courses may change periodically as market needs, technology, and applied business knowledge changes.

Company Internship or Elective (3 hours)

Business Administration, (MS)

Master of Science

Program objectives are: (1) an understanding of the general context of business in society and a foundation knowledge of the essential business functions; (2) acquisition of an advanced level of knowledge of a specialized business discipline; (3) ability to make significant professional contributions within a functional area of business; and (4) ability to compete effectively for professional positions in the private or public sectors.

Program Admission

Applicants to all MS programs in the Fogelman College must have the following:

1. An undergraduate degree from an accredited college or institution;
2. Application for admission and appropriate fee;
3. Official transcript from each college or university attended;
4. Satisfactory performance on undergraduate coursework and a satisfactory score on the Graduate Management Admissions test or the Graduate Record Examination GRE;
5. International applicants must submit an acceptable TOEFL score.

Qualified candidates may enter these programs at the beginning of any semester.

The Graduate Non-Degree classification allows individuals who have not yet decided to pursue a graduate degree or who have professional development needs to enroll in MS courses (a maximum of 9 credit hours). To remain enrolled as a Graduate Non-Degree student, individuals must maintain a minimum GPA of 3.0. Students should note that the 9-hour maximum is more stringent than the University Graduate School policy.

Program Requirements

Prerequisite of MATH 1830 or its equivalent

Students with the necessary pre-qualifications may have the prerequisite waived by the program coordinator.

Each candidate must complete a minimum of 33 semester hours of approved graduate courses

The 33 graduate credits include a minimum of 21 hours in the concentration (24 if a thesis is written; students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write).

Business Administration Core:

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

FIR 7410 - Invst Thry Portfol Mgmt

(3) Introductory graduate level course in the area of investments and portfolio management; considers qualitative and quantitative risk and return characteristics of various investment opportunities, fundamental valuation models, timing techniques, efficient markets, speculation and hedging, and portfolio theory and practice.

Candidates must pass a written or oral comprehensive examination

Chemistry, (MS)

MS Degree Program

Program objectives are: (1) competence in a common core of material in the major area of specialization; (2) experience in experimental design, data analysis, and oral and written presentation of research results; (3) competitive for professional positions in the chemical sciences.

Program Admission and Prerequisites

Prospective students, in addition to meeting the requirements for admission to The Graduate School, are required to present as a prerequisite for admission a satisfactory record of undergraduate work in chemistry; normally 32 semester hours of chemistry will be required, including quantitative analysis, organic, inorganic, and physical chemistry (biochemistry may also be taken). Students who are deficient in undergraduate work may be admitted and the deficiencies removed without graduate credit. Submission of GRE scores is required for admission, but permission for a waiver may be requested from the department for extraordinary circumstances.

Program Requirements

Diagnostic Examinations

Before registering for the first time, incoming graduate students will take a series of six standardized examinations, in general, analytical, biochemistry, inorganic, organic, and physical chemistry. The examinations are at a level equivalent to completion of the following undergraduate courses at the University of Memphis: CHEM 4111 (inorganic),4211 (analytical), 3310 and 3511 (organic), 4411 (physical), and 4512 (biochemistry).

Note:

A candidate for the Master of Science degree must make at least 50th percentile on the general chemistry test to remain in the program. A candidate for the Master of Science degree must make at least 50th percentile on the analytical and organic tests plus one of the remaining three or take the equivalent classes (CHEM 6111, CHEM 6211, CHEM 6311, CHEM 6411, CHEM 6511). Students should note that a score of 75th percentile on the test or a "B" or better in the course is prerequisite to higher level graduate courses in each area.

Course Work Requirements

The thirty semester-hour total required is subject to the following restrictions:

No more than 9 hours of

No more than 9 hours of credit at the 6000 level may be counted towards the Master of Science degree. At least 9 hours must be in courses numbered CHEM 7100-7899, with at least two areas of chemistry represented.

A maximum of 6 semester hours

A maximum of 6 semester hours of CHEM 7996 - Thesis can be applied to the 30 semester hour requirement.

CHEM 7996 - Thesis

(1-6) An original investigation undertaken with the supervision of a member of the graduate staff. The investigation will be the basis of a thesis. A maximum of 6 credit hours can be counted toward the thesis Master's degree. Grades of S, U, or IP will be given.

A maximum of 3 semester hours

A maximum of 3 semester hours of CHEM 7910 - Spec Prob In Chem/CHEM 8910 - Spec Prob In Chem may be counted toward the 30 semester hour requirement.

CHEM 7910 - Spec Prob In Chem

(1-12) Individual investigation and report under the guidance of the student's major advisor. Grades of S, U, or IP will be given.

CHEM 8910 - Spec Prob In Chem

(1-12) Individual investigation and report under the guidance of the student's major advisor. Grades of S, U, or IP will be given.

Presentation

Presentation (CHEM 7911) is required of all graduate students. A maximum of 4 semester hours from some combination of CHEM 7911 and CHEM 7913 - Chemistry Seminar/ CHEM 8913 - Chemistry Seminar may be used to meet the 30 semester hours required.

A maximum of 6 semester-hours

A maximum of 6 semester-hours credit can be granted for graduate courses successfully completed at other regionally accredited institutions. Credit previously earned at another institution must be presented for evaluation not later than the end of the student's second semester of enrollment.

No more than 6 semester hours

No more than 6 semester hours of CHEM 7001 - Directed Research and CHEM 7996 - Thesis combined may be counted toward the 30 semester-hour requirement.

Comprehensive Examinations

The student must begin the written part of the comprehensive examinations by the beginning of the third semester and take up to eight consecutive tests. These are described in the summary of the administration of the graduate program. A student pursuing the master's degree must obtain a total of at least six points. Any student who has not amassed six points at the completion of eight tests is automatically terminated from the Master's degree program. Written permission from the student's Advisory Committee and the Graduate Studies Committee is required to delay beginning the tests or to delay continuing once the student has begun taking tests. Within six months of obtaining the required six points, students must complete the oral part of the comprehensive examinations. The student will prepare a Research Prospectus on his or her thesis research problem, to be presented orally to the Advisory Committee in an open meeting and in a written form to the Graduate Studies Committee. The oral comprehensive examination can be repeated only once.

Seminar

Participation in seminar is required during each semester of residence (excluding summer terms).

The Advisory Committee

Upon admission to the Graduate School, the student will be advised by the Department's Graduate Studies Committee. A student must choose a major professor before the end of the first semester following enrollment. The major professor, in consultation with the student, will recommend the faculty members to be appointed to the student's Advisory Committee. This committee, which is appointed before the student's First Year Conference, must be composed of at least three members, with the major professor serving as chair. Upon appointment, the committee will review the student's progress to date and outline an appropriate program tailored to the student's individual interests to permit fulfillment of the degree requirements. The student will be regularly evaluated by their Advisor and Advisory Committee. In the unlikely event that a student changes major professors, a new Advisory Committee must be appointed.

Thesis Option

Each student must submit a thesis acceptable to the student's Advisory Committee. The thesis can be based on work done for CHEM 7996, for which a maximum of six credit-hours can be applied to the degree requirement. NOTE:

Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Non-Thesis Option

If a non-thesis program is selected, a student must 1) take two additional 7/8000-level course and 2) prepare a detailed report in the form of a review or proposal (which can be based on literature research). Three hours credit for CHEM 7910 will be earned. A minimum of three semester-hours from one credit of CHEM 7911 and two credits of CHEM 7913/CHEM 8913 (Seminar) must be earned. Thesis credits (CHEM 7996) do not count toward the non-thesis degree. No more than four credits of CHEM 7001 and CHEM 7910 together may be counted toward the non-thesis MS. For the non-thesis option, a maximum of 9 hours of course work may be included in a field related to chemistry (physical or biological sciences, mathematical sciences, or engineering).

CHEM 7910 - Spec Prob In Chem

(1-12) Individual investigation and report under the guidance of the student's major advisor. Grades of S, U, or IP will be given.

CHEM 7911 - Presentation

(1) Preparation and presentation of a short talk or lecture based on a laboratory or library project. Topic chosen in consultation with advisor. Grades of S, U, or IP will be given.

CHEM 7913 - Chemistry Seminar

(1) Formal meetings, presentation, and discussion of current topics of interest; students, faculty, and visiting scientists participate. Required of all regularly enrolled graduate students. A maximum of 4 credit hours from a combination of CHEM 6911, 7911, 8911, and 7-8913 may be counted toward the degree. Grades of S, U, or IP will be given.

CHEM 8913 - Chemistry Seminar

(1) Formal meetings, presentation, and discussion of current topics of interest; students, faculty, and visiting scientists participate. Required of all regularly enrolled graduate students. A maximum of 4 credit hours from a combination of CHEM 6911, 7911, 8911, and 7-8913 may be counted toward the degree. Grades of S, U, or IP will be given.

CHEM 7996 - Thesis

(1-6) An original investigation undertaken with the supervision of a member of the graduate staff. The investigation will be the basis of a thesis. A maximum of 6 credit hours can be counted toward the thesis Master's degree. Grades of S, U, or IP will be given.

CHEM 7001 - Directed Research

(1-10) An original investigation undertaken with the supervision of a member of the graduate staff to be the basis of a contribution to the chemical literature. May be repeated for a maximum of 30 credit hours. May be repeated for a maximum of 30 credit hours Grades of S, U, or IP will be given.

Final Oral Examination

A final oral examination on the student's thesis or report and related material will be administered by the student's Advisory Committee after completion of all other requirements. This examination will be held seven or more days after the student has distributed copies of the thesis or report to the members of the Advisory Committee, which must be done at least one month before the end of the semester in which the student expects to graduate. If the final oral examination is unsatisfactory it must be repeated within one year; it may not be repeated more than once.

Retention

A student pursuing the Master's degree program may be terminated for any of the following reasons:

1. Failure to maintain a grade point average of 3.0 or above. A student who has a cumulative grade point average below 3.0 will be placed on probation. Continuation in graduate school must be approved by the Vice Provost for Graduate Studies. Any person whose continuation is denied may appeal the decision to the University Council for Graduate Studies.
2. Failure to accumulate the requisite number of points on the departmental comprehensive examinations (See Comprhensive Examination Section).
3. Failure to complete the degree requirements within six years of initial enrollment in the graduate program.
4. Failure to make satisfactory progress towards the degree in a timely fashion, as determined by the Departmental Program Retention Committee.
5. Failure to satisfy the Advisory Committee on the final oral examination (See Final Oral Examination Section).

City and Regional Planning, (MCRP)

MCRP Degree Program

Program Admission

1. Applicants must satisfy the University's Graduate School admission standards and receive favorable endorsement from the planning faculty.
2. Admission will be based on applicable test scores (GRE or MAT); undergraduate grade point average; previous education and/or experience; and ability to articulate career and education objectives.
3. In addition to completing the Graduate School application, applicants should also submit the following material directly to the Graduate Program in City & Regional Planning:
    - A personal statement (500 words) describing related background, career objectives and interest in studying planning at the University of Memphis.
    - Current resume
4. In order to receive full consideration for Graduate Assistantships, application must be received by April 15.

Program Prerequisite

Students are accepted from all undergraduate disciplines and professional areas; however, the department determines if students must do remedial work. Some credit may be granted by the department for remedial work if obtained at the graduate level after entering the program.

Program Requirements

The student is required to complete a minimum of 48 semester hours comprising the following:

- Twenty-four (24) hours in the core curriculum: PLAN 7000, PLAN 7002, PLAN 7004, PLAN 7006, PLAN 7008, PLAN 7011, PLAN 7012, and PLAN 7202.
- Between eighteen (18) and twenty-one (21) hours of electives.
- Terminal project options: Either an individual three (3) hour capstone project OR six (6) hours of studio courses (PLAN 7801 Design Collaborative Studio or PLAN 7007 Project Planning Studio).

The eighteen (18) to twenty-one (21) hours of electives allow the student to extend basic knowledge gained in the core curriculum and can include such subjects as economic development planning, urban design, land use and transportation planning, planning information systems, housing, community development planning, planning law, social justice, sustainability, and environmental planning.

Students have two options for meeting the Terminal Project requirement: an individual capstone research option or a group studio option.

Terminal Project Option 1. Students who wish to pursue individual research can complete a 3-hour Capstone Project, submitted as a written report and orally defended, as a terminal experience designed to demonstrate mastery of planning process and substance.

Terminal Project Option 2. Students seeking more community engagement opportunities and experience in field-work and group development of planning policies and interventions can complete two additional studio courses for a total of six (6) hours from among PLAN 7801 Design Collaborative Studio or PLAN 7007 - Project Planning Studio.

A comprehensive examination must be successfully completed by the end of the semester in which the student expects to graduate.

Transfer of Credits

The Director may recommend to the Graduate School credit for planning course-work successfully completed at other institutions but not to exceed 12 semester hours. For those students formerly enrolled in graduate planning programs accredited by the Planning Accreditation Board, a maximum of 24 hours in planning course-work may be approved. Credit previously earned at another institution must be presented for evaluation not later than the end of the student's second semester of enrollment.

Civil Engineering - Engineering Seismology Concentration, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean.

In addition to meeting the University minimum admission requirements, applicants must have:

1. a bachelors degree in engineering or a related science or mathematics program;
2. an undergraduate GPA that is competitive for the students' bachelors program;
3. an acceptable score on the verbal, quantitative, and analytic portions of the GRE;
4. three (3) letters of recommendation from faculty members able to objectively comment on your intellectual and professional achievements and potential.

An applicant who lacks a civil engineering bachelors degree may be required to complete undergraduate deficiency courses. If the number of deficiency courses is large, the applicant may be required to complete an undergraduate degree in civil engineering before seeking admission to the graduate program.

In addition to the above requirements, applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS). Applicants whose highest degree is from an international university may be required to have their credentials (transcripts) evaluated. The department will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Applicants are advised that the stated admission requirements are minimum requirements. Meeting the minimum requirements does not guarantee admission into the masters program.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into the graduate program. English conditional admission may be granted on a case-by-case basis. Students will need to register for an English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions). Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Program Prerequisites

Bachelor of Science Degree

Program Requirements

1. Thesis option: 30 credit hours total. Students electing the thesis option will be required to complete an independent research project culminating in a master's thesis. Upon completion of the thesis, the student must successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in Civil Engineering. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
2. Non-thesis option: 33 credit hours total. Students electing the non-thesis option must take CIVL 7001, CIVL 7012, and CIVL 7993. Upon completion of CIVL 7993, non-thesis students must make an oral presentation of their project and pass a comprehensive examination.
3. A minimum of 18 hours of Civil Engineering course work at the 7000 level will be required for all MS degree programs. No more than 9 hours of committee/advisor-approved course work below the 7000 level will be allowed in any program of study. Classes taken outside the department must be approved by the committee/advisor and must complement the student's program of study in Civil Engineering.

Engineering Seismology:

CIVL 7002 - Prog Tools for Scits & Engrs

(3) (Same as CERI 7102). An introduction to applied programming and programming tools for scientists and engineers at a graduate level with limited background on computer programing.

CIVL 7116 - Structural Dynamics

(3) Dynamic analysis of single-degree-of-freedom structures; response to general dynamic loading; modal analysis of multistory shear buildings; introduction to nonlinear and random vibration.

CIVL 7119 - Earthquake Resist Design

(3) Earthquake strong motion; response spectrum analysis; seismic design of buildings.

CIVL 7123 - Seismic Risk Assess

(3) Evaluation of seismic hazard and site-specific ground motion for critical facilities; analysis of structural reliability and seismic risk.

CIVL 7125 - Earthquake Ground Motion Simul

(3) (Same as CERI 7124). Contemporary methods in earthquake ground motion simulation, applications in seismic hazard analysis and engineering, state-of-the-art simulation software. PREREQUISITE(S): Permission of instructor.

CIVL 7126 - Data Analysis in Geophysics

(3) (Same as CERI 7104) Through project-based work, students will develop programming skills using high-level software tools commonly used in geophysics research, including the Unix environment, Python, MATLAB, Seismic Analysis Code, AWK, Shell Scripts, and Generic Mapping Tools. PREREQUISITE(S): Permission of instructor.

CIVL 7127 - Signal Processing Earth Sci

(3) (Same as CERI 7106) Fundamentals of digital processing of geophysical data, both purely mathematical and applied aspects with attention to digital seismograms and gravity and magnetic data. PREREQUISITE(S): MATH 1920 or equivalent.

CIVL 7128 - Inverse Methods in Geophysics

(3) (Same as CERI 7260) Methods for parameter estimation in earth sciences, including review of linear algebra and vector spaces, introduction to probability and statistics, and solution of inverse linear and nonlinear problems; students will solve an inverse problem in their field of interest. PREREQUISITE(S): Linear Algebra (MATH 3242 or equivalent) or permission of instructor.

CIVL 7135 - Soil Dynamics

(3) Theory and measurements of dynamic properties of soils and their applications in seismic hazards assessments, earthquake engineering design, and geophysics studies.

CIVL 7136 - Prob & Earthquake Haz Anly

(3) (same as ESCI 7204, CERI 7204) Fundamentals of basic probability, seismicity analysis, ground motion attenuation and site effects, seismic hazard analysis, and uncertainty analysis; students will perform a probabilistic seismic hazard analysis for a region of their interest. PREREQUISITE(S): Permission of instructor.

CIVL 7137 - Geotechnical Earthquake

(3) Earthquake magnitude and intensity, seismic hazard evaluation using deterministic and probabilistic approaches, site response analyses and ground motion amplification, liquefaction, and response to earth structures.

CIVL 7991 - Projects

(3) Independent investigation of problem selected in consultation with instructor; report required. Nine laboratory hours per week. Grades of A-F, or IP will be given. PREREQUISITE(S): consent of instructor.

CIVL 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

At least two of the following courses:

Due to the interdisciplinary nature of the Engineering Seismology concentration, students in that concentration must include at least two of the following courses:

CIVL 7125 - Earthquake Ground Motion Simul

(3) (Same as CERI 7124). Contemporary methods in earthquake ground motion simulation, applications in seismic hazard analysis and engineering, state-of-the-art simulation software. PREREQUISITE(S): Permission of instructor.

CIVL 7126 - Data Analysis in Geophysics

(3) (Same as CERI 7104) Through project-based work, students will develop programming skills using high-level software tools commonly used in geophysics research, including the Unix environment, Python, MATLAB, Seismic Analysis Code, AWK, Shell Scripts, and Generic Mapping Tools. PREREQUISITE(S): Permission of instructor.

CIVL 7127 - Signal Processing Earth Sci

(3) (Same as CERI 7106) Fundamentals of digital processing of geophysical data, both purely mathematical and applied aspects with attention to digital seismograms and gravity and magnetic data. PREREQUISITE(S): MATH 1920 or equivalent.

CIVL 7128 - Inverse Methods in Geophysics

(3) (Same as CERI 7260) Methods for parameter estimation in earth sciences, including review of linear algebra and vector spaces, introduction to probability and statistics, and solution of inverse linear and nonlinear problems; students will solve an inverse problem in their field of interest. PREREQUISITE(S): Linear Algebra (MATH 3242 or equivalent) or permission of instructor.

CIVL 7136 - Prob & Earthquake Haz Anly

(3) (same as ESCI 7204, CERI 7204) Fundamentals of basic probability, seismicity analysis, ground motion attenuation and site effects, seismic hazard analysis, and uncertainty analysis; students will perform a probabilistic seismic hazard analysis for a region of their interest. PREREQUISITE(S): Permission of instructor.

Retention Policy

All students enrolled in the Department of Civil Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Civil Engineering.

1. Students having been unconditionally admitted to the graduate program in Civil Engineering who maintain a cumulative grade point average of 3.00 or higher will be considered to be in good standing.
2. Students must maintain a cumulative grade point average of 3.00 in all course work at The University of Memphis, in all Civil Engineering course work at The University of Memphis, and for all 7000 level course work at The University of Memphis at the end of each semester of enrollment. Any student not meeting these conditions will be placed on probation.
3. Students admitted on probation must maintain a 3.00 average at the end of each semester until 9 hours of graduate credit are earned. A student having a cumulative grade point average less than 3.00 at the end of the period described will be dismissed. A student having a cumulative grade point average of 3.00 or above will then be subject to the retention criteria listed in 2 above.
4. A student will be permitted two (2) grades of 2.00 or lower in graduate courses taken at The University of Memphis. A student will be dismissed from the program at the end of the semester in which a third grade of 2.00 or lower is earned.
5. A student who has been dropped from the graduate program in the Department of Civil Engineering will be denied permission to enroll in Civil Engineering courses in semesters subsequent to dismissal from the department.

Accelerated BS/MS Program

This program allows outstanding undergraduates to earn a bachelor's degree and master's degree in Civil Engineering in as little as five years by taking graduate-level technical electives that will count toward both degree programs. Specifically, students who are selected into this program can satisfy the undergraduate requirement of nine hours of technical electives by taking 6000-level courses that will then be counted toward their graduate degree program. However, any graduate coursework will not apply to the undergraduate GPA.

Students are encouraged to begin planning to enter the Accelerated B.S./M.S. program early in their undergraduate career in consultation with their advisor in the Department of Civil Engineering. Students with a minimum GPA of 3.25 may apply for the accelerated program once they have completed 15 credit-hours of 3000-level CIVL course work. In addition to an application form, students must have the recommendation of their undergraduate academic advisor and the concurrence of the department chair and graduate coordinator in the Department of Civil Engineering. In order to remain in the program, students must maintain a GPA of at least 3.25. To continue in the program past the B.S. degree, students must apply for full admission into the Graduate School and the Civil Engineering M.S. program.

Civil Engineering - Environmental Engineering Concentration, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean.

In addition to meeting the University minimum admission requirements, applicants must have:

1. a bachelors degree in engineering or a related science or mathematics program;
2. an undergraduate GPA that is competitive for the students' bachelors program;
3. an acceptable score on the verbal, quantitative, and analytic portions of the GRE;
4. three (3) letters of recommendation from faculty members able to objectively comment on your intellectual and professional achievements and potential.

An applicant who lacks a civil engineering bachelors degree may be required to complete undergraduate deficiency courses. If the number of deficiency courses is large, the applicant may be required to complete an undergraduate degree in civil engineering before seeking admission to the graduate program.

In addition to the above requirements, applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS). Applicants whose highest degree is from an international university may be required to have their credentials (transcripts) evaluated. The department will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Applicants are advised that the stated admission requirements are minimum requirements. Meeting the minimum requirements does not guarantee admission into the masters program.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into the graduate program. English conditional admission may be granted on a case-by-case basis. Students will need to register for an English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions). Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Program Prerequisites

Bachelor of Science Degree

Program Requirements

1. Thesis option: 30 credit hours total. Students electing the thesis option will be required to complete an independent research project culminating in a master's thesis. Upon completion of the thesis, the student must successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in Civil Engineering. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
2. Non-thesis option: 33 credit hours total. Students electing the non-thesis option must take CIVL 7001, CIVL 7012, and CIVL 7993. Upon completion of CIVL 7993, non-thesis students must make an oral presentation of their project and pass a comprehensive examination.
3. A minimum of 18 hours of Civil Engineering course work at the 7000 level will be required for all MS degree programs. No more than 9 hours of committee/advisor-approved course work below the 7000 level will be allowed in any program of study. Classes taken outside the department must be approved by the committee/advisor and must complement the student's program of study in Civil Engineering.

Environmental Engineering:

CIVL 6140 - Environmentl Engr Design

(3) Detailed design of one component of an environmental engineering system with appropriate consideration of interactions with other components; design standards, procedures, and legal constraints emphasized.

CIVL 6143 - Physical/Chem Treatment

(3) Basic physical-chemical treatment concepts, including sedimentation, filtration, adsorption, neutralization, coagulation, air stripping, dissolved air flotation, disinfection, and ion exchange, with application of basic concepts to design of water and wastewater treatment systems components. PREREQUISITE(S): CIVL 3140 or equivalent.

CIVL 6144 - Biol Wastewater Treat

(3) Basic biological treatment concepts, including kinetics, activated sludge, fixed-film systems, lagoon systems, and sludge digestion, with application of basic concepts to design of biological wastewater treatment system components. PREREQUISITE(S): CIVL 3140 or equivalent.

CIVL 7141 - Water Trt Plant Dsgn

(3) Design of a water treatment plant; application of fundamental water treatment theory; evaluation of alternatives; selection and design of optimum alternative. PREREQUISITE(S): CIVL 4143/CIVL 6143 or permission of instructor.

CIVL 7142 - Wastewater Trt Plnt Dsgn

(3) Design of a wastewater treatment plant; application of fundamental wastewater treatment theory; evaluation of alternative; selection and design of optimum alternative. PREREQUISITE(S): CIVL 4144/CIVL 6144 or permission of instructor.

CIVL 7143 - Solid Waste Mgmt

(3) Systems approach to solid waste generation, characterization, collection, transportation, and disposal; emphasizes both domestic and industrial wastes.

CIVL 7144 - Residuals Mgmt

(3) Systems approach to unique solid wastes (inflammable industrial, sewage sludge, etc.), as well as resource recovery and energy conversion as disposal practices.

CIVL 7145 - Adv Biological Treatmnt

(3) In-depth study of biokinetics applicable to waste management; model evaluations; hazardous and non-hazardous wastes. PREREQUISITE(S): CIVL 4144/CIVL 6144 or permission of instructor.

CIVL 7146 - Adv Phys/Chem Treatmnt

(3) An in-depth analysis of theory and practice of advanced water and wastewater treatment processes; emphasis on adsorption processes, ion exchange, membrane processes, chemical oxidation, land treatment, nutrient removal, and sludge treatment and disposal. PREREQUISITE(S): CIVL 4143/CIVL 6143 or permission of instructor.

CIVL 7147 - Hazardous Waste Mgmt

(3) Design of hazardous waste management systems; application of current design theories; review of regulatory requirements.

CIVL 7154 - Indust Wastewater Treat

(3) In-plant control measures and end-of-pipe treatment technologies for reducing conventional and toxic industrial pollutant discharges; emphasis on water conservation, wastewater recycle/reuse, and optimum treatment strategies for waste streams from major industries.

CIVL 7185 - Hydraul Open Channels

(3) (7148) Phenomena accompanying flow of water in open channels, uniform and varied flow, critical conditions, backwater curves or water surface profiles, hydraulic jumps, hydraulic drops, and various design applications.

CIVL 7195 - Groundwater Hydraulics

(3) (Same as ESCI 7195) Geological contributions to ground water flow; ground water contribution to water demand and conjunctive use; well hydraulics, design and construction, pump selection; determine aquifer properties via field well tests.

CIVL 7196 - Urban Drainage

(3) Flooding and pollution problems associated with urban areas; application of planning, analysis, and hydraulic design techniques for storm water and erosion control measures. PREREQUISITE(S): CIVL 7185 or permission of instructor.

CIVL 7991 - Projects

(3) Independent investigation of problem selected in consultation with instructor; report required. Nine laboratory hours per week. Grades of A-F, or IP will be given. PREREQUISITE(S): consent of instructor.

CIVL 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Retention Policy

All students enrolled in the Department of Civil Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Civil Engineering.

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3. Students admitted on probation must maintain a 3.00 average at the end of each semester until 9 hours of graduate credit are earned. A student having a cumulative grade point average less than 3.00 at the end of the period described will be dismissed. A student having a cumulative grade point average of 3.00 or above will then be subject to the retention criteria listed in 2 above.
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Accelerated BS/MS Program

This program allows outstanding undergraduates to earn a bachelor's degree and master's degree in Civil Engineering in as little as five years by taking graduate-level technical electives that will count toward both degree programs. Specifically, students who are selected into this program can satisfy the undergraduate requirement of nine hours of technical electives by taking 6000-level courses that will then be counted toward their graduate degree program. However, any graduate coursework will not apply to the undergraduate GPA.

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Civil Engineering - Geotechnical Engineering Concentration, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean.

In addition to meeting the University minimum admission requirements, applicants must have:

1. a bachelors degree in engineering or a related science or mathematics program;
2. an undergraduate GPA that is competitive for the students' bachelors program;
3. an acceptable score on the verbal, quantitative, and analytic portions of the GRE;
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Program Prerequisites

Bachelor of Science Degree

Program Requirements

1. Thesis option: 30 credit hours total. Students electing the thesis option will be required to complete an independent research project culminating in a master's thesis. Upon completion of the thesis, the student must successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in Civil Engineering. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
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3. A minimum of 18 hours of Civil Engineering course work at the 7000 level will be required for all MS degree programs. No more than 9 hours of committee/advisor-approved course work below the 7000 level will be allowed in any program of study. Classes taken outside the department must be approved by the committee/advisor and must complement the student's program of study in Civil Engineering.

Geotechnical Engineering:

CIVL 6152 - Applied Soil Mechanics

(3) Subsurface exploration, foundation types, foundation construction, selection of foundation type and basis of design, earth retaining structures, and slope stability. PREREQUISITE(S): CIVL 4151 or equivalent.

CIVL 6155 - Pavement Design and Evaluation

(3) Structural design of concrete and asphalt pavements, design of surface and subsurface pavement drainage; performance evaluation of existing pavements; pavement rehabilitation and pavement management. PREREQUISITE(S): 3137 or permission of instructor. COREQUISITE(S): CIVL 4151 or permission of instructor.

CIVL 7132 - Advanced Soil Mech

(3) Stresses in soil masses; pore-water stresses; consolidation and settlement; shear strength; applications to problem solution.

CIVL 7133 - Slopes and Embankments

(3) Analysis, design, and construction of earth dams, levees, embankments and slopes; soil stabilization; seepage, drainage, and flow nets. PREREQUISITE(S): CIVL 4152/CIVL 6152 or permission of instructor.

CIVL 7135 - Soil Dynamics

(3) Theory and measurements of dynamic properties of soils and their applications in seismic hazards assessments, earthquake engineering design, and geophysics studies.

CIVL 7136 - Prob & Earthquake Haz Anly

(3) (same as ESCI 7204, CERI 7204) Fundamentals of basic probability, seismicity analysis, ground motion attenuation and site effects, seismic hazard analysis, and uncertainty analysis; students will perform a probabilistic seismic hazard analysis for a region of their interest. PREREQUISITE(S): Permission of instructor.

CIVL 7137 - Geotechnical Earthquake

(3) Earthquake magnitude and intensity, seismic hazard evaluation using deterministic and probabilistic approaches, site response analyses and ground motion amplification, liquefaction, and response to earth structures.

CIVL 7138 - Shallow and Deep Foundations

(3) Analysis and design of footing, mat, pile, and drilled-shaft foundations. Three lecture hours a week. PREREQUISITE(S): CIVL 4152/CIVL 6152 or permission of instructor.

CIVL 7139 - Earth Retaining Structures

(3) Types of earth retaining structures. Retaining wall selection. Lateral earth pressure theories. Design of conventional, MSE, soil-nailed, and tied-back walls. Three lecture hours a week. PREREQUISITE(S): CIVL 4152/CIVL 6152 or permission of instructor.

CIVL 7166 - Design Hgwy Airpt Pvmt

(3) Design practices, materials, and testing of flexible and rigid pavements.

CIVL 7182 - Engr Sedimen & Erosion

(3) Soil erosion and sedimentation process within a watershed; emphasis on means of controlling erosion and sediment from land-disturbing activities.

CIVL 7991 - Projects

(3) Independent investigation of problem selected in consultation with instructor; report required. Nine laboratory hours per week. Grades of A-F, or IP will be given. PREREQUISITE(S): consent of instructor.

CIVL 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Retention Policy

All students enrolled in the Department of Civil Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Civil Engineering.

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Accelerated BS/MS Program

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Civil Engineering - No Concentration, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean.

In addition to meeting the University minimum admission requirements, applicants must have:

1. a bachelors degree in engineering or a related science or mathematics program;
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In addition to the above requirements, applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS). Applicants whose highest degree is from an international university may be required to have their credentials (transcripts) evaluated. The department will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

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English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into the graduate program. English conditional admission may be granted on a case-by-case basis. Students will need to register for an English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions). Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Program Prerequisites

Bachelor of Science Degree

Program Requirements

1. Thesis option: 30 credit hours total. Students electing the thesis option will be required to complete an independent research project culminating in a master's thesis. Upon completion of the thesis, the student must

successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in Civil Engineering. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

2. Non-thesis option: 33 credit hours total. Students electing the non-thesis option must take CIVL 7001, CIVL 7012, and CIVL 7993. Upon completion of CIVL 7993, non-thesis students must make an oral presentation of their project and pass a comprehensive examination.
3. A minimum of 18 hours of Civil Engineering course work at the 7000 level will be required for all MS degree programs. No more than 9 hours of committee/advisor-approved course work below the 7000 level will be allowed in any program of study. Classes taken outside the department must be approved by the committee/advisor and must complement the student's program of study in Civil Engineering.

Retention Policy

All students enrolled in the Department of Civil Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Civil Engineering.

1. Students having been unconditionally admitted to the graduate program in Civil Engineering who maintain a cumulative grade point average of 3.00 or higher will be considered to be in good standing.
2. Students must maintain a cumulative grade point average of 3.00 in all course work at The University of Memphis, in all Civil Engineering course work at The University of Memphis, and for all 7000 level course work at The University of Memphis at the end of each semester of enrollment. Any student not meeting these conditions will be placed on probation.
3. Students admitted on probation must maintain a 3.00 average at the end of each semester until 9 hours of graduate credit are earned. A student having a cumulative grade point average less than 3.00 at the end of the period described will be dismissed. A student having a cumulative grade point average of 3.00 or above will then be subject to the retention criteria listed in 2 above.
4. A student will be permitted two (2) grades of 2.00 or lower in graduate courses taken at The University of Memphis. A student will be dismissed from the program at the end of the semester in which a third grade of 2.00 or lower is earned.
5. A student who has been dropped from the graduate program in the Department of Civil Engineering will be denied permission to enroll in Civil Engineering courses in semesters subsequent to dismissal from the department.

Accelerated BS/MS Program

This program allows outstanding undergraduates to earn a bachelor's degree and master's degree in Civil Engineering in as little as five years by taking graduate-level technical electives that will count toward both degree programs. Specifically, students who are selected into this program can satisfy the undergraduate requirement of nine hours of technical electives by taking 6000-level courses that will then be counted toward their graduate degree program. However, any graduate coursework will not apply to the undergraduate GPA.

Students are encouraged to begin planning to enter the Accelerated B.S./M.S. program early in their undergraduate career in consultation with their advisor in the Department of Civil Engineering. Students with a minimum GPA of 3.25 may apply for the accelerated program once they have completed 15 credit-hours of 3000-level CIVL course work. In addition to an application form, students must have the recommendation of their undergraduate academic advisor and the concurrence of the department chair and graduate coordinator in the Department of Civil Engineering. In order to remain in the program, students must maintain a GPA of at least 3.25. To continue in the program past the B.S. degree, students must apply for full admission into the Graduate School and the Civil Engineering M.S. program.

Civil Engineering - Structural Engineering Concentration, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean.

In addition to meeting the University minimum admission requirements, applicants must have:

1. a bachelors degree in engineering or a related science or mathematics program;
2. an undergraduate GPA that is competitive for the students' bachelors program;
3. an acceptable score on the verbal, quantitative, and analytic portions of the GRE;
4. three (3) letters of recommendation from faculty members able to objectively comment on your intellectual and professional achievements and potential.

An applicant who lacks a civil engineering bachelors degree may be required to complete undergraduate deficiency courses. If the number of deficiency courses is large, the applicant may be required to complete an undergraduate degree in civil engineering before seeking admission to the graduate program.

In addition to the above requirements, applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS). Applicants whose highest degree is from an international university may be required to have their credentials (transcripts) evaluated. The department will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Applicants are advised that the stated admission requirements are minimum requirements. Meeting the minimum requirements does not guarantee admission into the masters program.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into the graduate program. English conditional admission may be granted on a case-by-case basis. Students will need to register for an English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions). Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Program Prerequisites

Bachelor of Science Degree

Program Requirements

1. Thesis option: 30 credit hours total. Students electing the thesis option will be required to complete an independent research project culminating in a master's thesis. Upon completion of the thesis, the student must successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in Civil Engineering. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
2. Non-thesis option: 33 credit hours total. Students electing the non-thesis option must take CIVL 7001, CIVL 7012, and CIVL 7993. Upon completion of CIVL 7993, non-thesis students must make an oral presentation of their project and pass a comprehensive examination.
3. A minimum of 18 hours of Civil Engineering course work at the 7000 level will be required for all MS degree programs. No more than 9 hours of committee/advisor-approved course work below the 7000 level will be allowed in any program of study. Classes taken outside the department must be approved by the committee/advisor and must complement the student's program of study in Civil Engineering.

Structural Engineering:

CIVL 6122 - Structural Analysis II

(3) Analytical and numerical solutions for statically indeterminate structures. PREREQUISITE(S): CIVL 3121, 3322 or equivalent.

CIVL 6131 - Inter Steel Design

(3) Design of plate girders and composite beams; moment connections; building design. PREREQUISITE(S): CIVL 3131 or equivalent.

CIVL 6136 - Inter Rein Concr Design

(3) Design of two-way slab systems; column design including length effects; integrated building design using current code provisions. PREREQUISITE(S): CIVL 4122, 4135 or equivalents.

CIVL 7001 - Engineering Analysis

(3) (Same as CERI 7130). Numerical integration of linear and non-linear differential equations; finite difference methods; systems of linear algebraic equations; applications to engineering problems. Grades of A-F, or IP will be given.

CIVL 7111 - Computatnl Mechncs

(3) Advanced mathematical modeling techniques using finite difference, finite element, and boundary element formulations to solve civil engineering problems.

CIVL 7112 - Plstc Dsgn Steel Strctr

(3) (7122) Plastic analysis and design of steel structures; application to multistory buildings.

CIVL 7113 - Prestressed Cncrte Dsgn

(3) (7121) Theory of prestressing; design of prestressed concrete beams, slabs, and box girders; statically determinate and indeterminate structures.

CIVL 7114 - Elastic Stability

(3) Classical theory of buckling of rods, plates, and shells.

CIVL 7115 - Plate Shell Struc

(3) (Same as MECH 7115) Analysis of rectangular and circular flat plates; large deflections of plates; variational methods; analysis of shells as surfaces of revolution under symmetric and unsymmetric loading.

CIVL 7116 - Structural Dynamics

(3) Dynamic analysis of single-degree-of-freedom structures; response to general dynamic loading; modal analysis of multistory shear buildings; introduction to nonlinear and random vibration.

CIVL 7117 - Finite Elem Struc Mech

(3) Structural idealization, stiffness properties of elements, structural analysis of element assemblage; plane stress and strain problems; applications to problems of plates and shells; computer solution of large systems.

CIVL 7119 - Earthquake Resist Design

(3) Earthquake strong motion; response spectrum analysis; seismic design of buildings.

CIVL 7991 - Projects

(3) Independent investigation of problem selected in consultation with instructor; report required. Nine laboratory hours per week. Grades of A-F, or IP will be given. PREREQUISITE(S): consent of instructor.

CIVL 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Retention Policy

All students enrolled in the Department of Civil Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Civil Engineering.

1. Students having been unconditionally admitted to the graduate program in Civil Engineering who maintain a cumulative grade point average of 3.00 or higher will be considered to be in good standing.
2. Students must maintain a cumulative grade point average of 3.00 in all course work at The University of Memphis, in all Civil Engineering course work at The University of Memphis, and for all 7000 level course work at The University of Memphis at the end of each semester of enrollment. Any student not meeting these conditions will be placed on probation.
3. Students admitted on probation must maintain a 3.00 average at the end of each semester until 9 hours of graduate credit are earned. A student having a cumulative grade point average less than 3.00 at the end of the period described will be dismissed. A student having a cumulative grade point average of 3.00 or above will then be subject to the retention criteria listed in 2 above.

4. A student will be permitted two (2) grades of 2.00 or lower in graduate courses taken at The University of Memphis. A student will be dismissed from the program at the end of the semester in which a third grade of 2.00 or lower is earned.
5. A student who has been dropped from the graduate program in the Department of Civil Engineering will be denied permission to enroll in Civil Engineering courses in semesters subsequent to dismissal from the department.

Civil Engineering - Transportation Engineering Concentration, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean.

In addition to meeting the University minimum admission requirements, applicants must have:

1. a bachelors degree in engineering or a related science or mathematics program;
2. an undergraduate GPA that is competitive for the students' bachelors program;
3. an acceptable score on the verbal, quantitative, and analytic portions of the GRE;
4. three (3) letters of recommendation from faculty members able to objectively comment on your intellectual and professional achievements and potential.

An applicant who lacks a civil engineering bachelors degree may be required to complete undergraduate deficiency courses. If the number of deficiency courses is large, the applicant may be required to complete an undergraduate degree in civil engineering before seeking admission to the graduate program.

In addition to the above requirements, applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS). Applicants whose highest degree is from an international university may be required to have their credentials (transcripts) evaluated. The department will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Applicants are advised that the stated admission requirements are minimum requirements. Meeting the minimum requirements does not guarantee admission into the masters program.

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Program Prerequisites

Bachelor of Science Degree

Program Requirements

1. Thesis option: 30 credit hours total. Students electing the thesis option will be required to complete an independent research project culminating in a master's thesis. Upon completion of the thesis, the student must successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in Civil Engineering. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
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3. A minimum of 18 hours of Civil Engineering course work at the 7000 level will be required for all MS degree programs. No more than 9 hours of committee/advisor-approved course work below the 7000 level will be allowed in any program of study. Classes taken outside the department must be approved by the committee/advisor and must complement the student's program of study in Civil Engineering.

Transportation Engineering:

CIVL 6155 - Pavement Design and Evaluation

(3) Structural design of concrete and asphalt pavements, design of surface and subsurface pavement drainage; performance evaluation of existing pavements; pavement rehabilitation and pavement management. PREREQUISITE(S): 3137 or permission of instructor. COREQUISITE(S): CIVL 4151 or permission of instructor.

CIVL 6162 - Traffic Engineering

(3) Traits and behavior patterns of road users and their vehicles, including traffic signs and signals, pavement markings, hazard delineation, capacity, accidents, and parking analysis. PREREQUISITE(S): CIVL 3103 and 3161 or equivalents.

CIVL 6163 - Airport Plnng & Design

(3) Aeronautical demand and air traffic control; airport and runway configuration; capacity and delay analysis; geometric design of runways and taxiways; airport access and parking; ground movements and baggage movements. PREREQUISITE(S): CIVL 3103 and 3161 or equivalents.

CIVL 6164 - Route Location & Design

(3) Elements of route location and design; emphasis on horizontal and vertical alignment, curvature, gradient, and sight distance. Two lecture, three laboratory hours per week. PREREQUISITE(S): CIVL 1101 and 3161 or equivalents.

CIVL 7001 - Engineering Analysis

(3) (Same as CERI 7130). Numerical integration of linear and non-linear differential equations; finite difference methods; systems of linear algebraic equations; applications to engineering problems. Grades of A-F, or IP will be given.

CIVL 7162 - Transportation Sys Eval

(3) Transportation problems, goals, and objectives; evaluation and decision-making techniques; measurement of variables and intangibles in transportation decisions, cost allocation and benefit transfer, risk and uncertainty; financing and implementation; differential impacts of transportation improvements.

CIVL 7164 - Urban Transport Engr

(3) A review of the transportation problem as it relates to development patterns in American cities. The theory and application to engineering and socioeconomic factors directed toward the formulation of models for conducting transportation studies.

CIVL 7165 - Geom Dsgn Trnsprtn Syst

(3) Design of streets and highways with emphasis on the factors and features controlling safe and efficient vehicle operation; applications of design concepts to urban and rural systems, intersections, interchanges, safety appurtenances, and parking facilities. PREREQUISITE(S): CIVL 4164/CIVL 6164 or permission of instructor.

CIVL 7166 - Design Hgwy Airpt Pvmt

(3) Design practices, materials, and testing of flexible and rigid pavements.

CIVL 7168 - Traffic Engr Operations

(3) Theory of traffic control: traffic laws and ordinances; application of traffic control devices; analysis and design of traffic signal systems, parking control and design pedestrian control; one-way and unbalanced lane operation, roadway illumination; selected operational problems. PREREQUISITE(S): CIVL 4162/CIVL 6162 or permission of instructor.

CIVL 7169 - Mass Transit Systems

(3) Operational analysis of equipment and facility design and service characteristics of urban mass transit systems; analysis of capacity, speed, accessibility, terminal operations; study of financing, decision-making, administration and marketing policies and practices, trends in future transit technology.

CIVL 7261 - Traffic Flow Theory

(3) This course will introduce to student the theories that seek to describe in a precise mathematical way the interactions between the vehicles, their operators, and the infrastructure. Different models and theories that characterize the flow of highway traffic, signalized or unsignalized intersections will be presented. A number of softwares will be introduced that are currently used in practice and in research to perform traffic impact studies using macroscopic, mesoscopic and microscopic traffic simulation. PREREQUISITE(S): CIVL 3161 or equivalent.

CIVL 7262 - Freight Demand Modeling

(3) Introduce the concepts, modeling and solution methods of freight demand modeling.

CIVL 7263 - Intro. to Num. Opt. for Eng

(3) Introduce the concepts, modeling and solution methods of unconstrained optimization and linear and integer programs. Topics include: convex analysis and polyhedral sets, unconstrained optimization methods (line search, trust region), the simplex method, duality theory, and decomposition principles.

CIVL 7264 - Simulation Modeling

(3) Simulation modeling of complex, dynamic and stochastic transportation systems, model building, input and output statistical data analysis, use of simulation for design, evaluation, and improvement of these systems, introduction to simulation software, review of case studies. Three lecture hours a week.

CIVL 7265 - Intro to Intermodal Freight

(3) An introduction to the real-world environment in which freight transportation systems are planned and operated. Emphasis is placed on the policies, methods and practices utilized in managing freight movements and intermodal transfers. Topics include the overall impact of freight transportation on the economy, individual modal operations, intermodal opportunities.

CIVL 7266 - Freight Terms and Distr Facils

(3) Introduce state of the art and state of the practice in modeling of operations and management of intermodal freight and distribution facilities. Overview of the advanced in freight terminal and distribution facilities modeling, design, and operation. Special reference to network modeling of facility location, allocation, and routing. Planning, design, and operations or rail/road intermodal terminals, trans-modal facilities, marine container terminals, intermodal logistics centers, and warehouses. PREREQUISITE(S): Permission of instructor for non-degree-seeking students.

CIVL 7267 - Maritime Economics

(3) Introduce the concepts and explain how the shipping marker is organized. Topics include: Price and freight rates, key players, bulk and liner shipping, ship financing, forecasting, market cycles. PREREQUISITE(S): permission of instructor.

CIVL 7268 - Transport Network Flows

(3) This course provides an analytical framework for network analysis. The course will discuss algorithms for finding transport network equilibrium flows and the applications that relate to these flows. Topics will include routing algorithms, transportation network design, and several solution algorithms. Mathematical rigor will be stressed and some basic programming will be expected.

CIVL 7360 - Transp Econ & Decision Making

(3) A comprehensive discussion of decision making using transportation engineering economic analysis. The course involves the use of mathematical tools required to understand the economic analysis principles to aid the transportation decision making process.

CIVL 7363 - Discr. Choice Model for Transp

(3) An in-depth study of discrete choice models, data collection, specification, estimation, statistical testing, forecasting, and application. By examining actual case studies of discrete choice methods, students will become

familiar with problems of model formulation, estimation, testing, and forecasting. PREREQUISITE(S): CIVL 3161 or equivalent.

CIVL 7991 - Projects

(3) Independent investigation of problem selected in consultation with instructor; report required. Nine laboratory hours per week. Grades of A-F, or IP will be given. PREREQUISITE(S): consent of instructor.

CIVL 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Retention Policy

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Accelerated BS/MS Program

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Civil Engineering - Water Resources Engineering Concentration, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean.

In addition to meeting the University minimum admission requirements, applicants must have:

1. a bachelors degree in engineering or a related science or mathematics program;
2. an undergraduate GPA that is competitive for the students' bachelors program;
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Program Prerequisites

Bachelor of Science Degree

Program Requirements

1. Thesis option: 30 credit hours total. Students electing the thesis option will be required to complete an independent research project culminating in a master's thesis. Upon completion of the thesis, the student must successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in Civil Engineering. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
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3. A minimum of 18 hours of Civil Engineering course work at the 7000 level will be required for all MS degree programs. No more than 9 hours of committee/advisor-approved course work below the 7000 level will be allowed in any program of study. Classes taken outside the department must be approved by the committee/advisor and must complement the student's program of study in Civil Engineering.

Water Resources Engineering:

CIVL 6180 - Adv Hydrology/Hydraulics

(3) Current methods and techniques used in hydrologic and hydraulic analysis for the design of water resources projects; watershed hydrology, groundwater hydrology, flood frequency analysis, flood plain management, hydraulic structures, hydraulic machinery, and project feasibility. PREREQUISITE(S): CIVL 3181 or equivalent.

CIVL 6190 - Water Resrc Plan/Dsgn

(3) Application of engineering principles to planning and design of multipurpose water resources projects; various physical components and appurtenances of water resources projects; and economic, financial, and social feasibility of various purposes. PREREQUISITE(S): CIVL 3181 and 4111 or permission of instructor.

CIVL 7133 - Slopes and Embankments

(3) Analysis, design, and construction of earth dams, levees, embankments and slopes; soil stabilization; seepage, drainage, and flow nets. PREREQUISITE(S): CIVL 4152/CIVL 6152 or permission of instructor.

CIVL 7170 - GW Cont Fate/Transport

(3) Elements of ground water contamination and migration; study of various contaminant transport modeling techniques; analysis of numerical dispersion and stability criteria; chemical reactions; discussion of analytical solutions.

CIVL 7173 - Environmental Geochem

(3) (Same as GEOL 7140) Inorganic and organic geochemical concepts applied to transport and fate of contaminants in surface water, ground water, and sediment. PREREQUISITE(S): ESCI 6341 and permission of instructor.

CIVL 7177 - Quantitative Hydrogeol

(3) Analysis of ground water parameters; geostatistics of aquifer properties used in ground water modeling via various techniques; salt water intrusion. PREREQUISITE(S): CIVL 7195 or permission of instructor.

CIVL 7181 - Statistical Hydrol Modl

(3) Current statistical techniques used in stochastic, deterministic, and parametric hydrologic models; emphasis on probability and frequency analysis; optimization methods; time series analysis and synthesis; sensitivity analysis; computer applications.

CIVL 7182 - Engr Sedimen & Erosion

(3) Soil erosion and sedimentation process within a watershed; emphasis on means of controlling erosion and sediment from land-disturbing activities.

CIVL 7185 - Hydraul Open Channels

(3) (7148) Phenomena accompanying flow of water in open channels, uniform and varied flow, critical conditions, backwater curves or water surface profiles, hydraulic jumps, hydraulic drops, and various design applications.

CIVL 7191 - Computer Appl Water Res

(3) Application of current computer programs used in hydrology, hydraulics, sediment transport, groundwater flow, water quality, and water resources engineering and planning.

CIVL 7192 - River Engineering

(3) River mechanics and principles governing river regulation and improvement, with emphasis on navigation and flood control structures. PREREQUISITE(S): CIVL 7185 or permission of instructor.

CIVL 7193 - Hydraul Sediment Transp

(3) River mechanics and stream morphology governing hydraulics of bed loads and sediment transport in alluvial river system; current methods for conducting sediment investigation; engineering analysis procedures for design of stable channel system.

CIVL 7194 - Comp River Hydraulics

(3) (7149) Advanced studies in computational open channel hydraulics; major emphasis on unsteady flow simulation in natural rivers, dynamic flood routing, sediment transport and transport of pollutants. PREREQUISITE(S): CIVL 7001 and CIVL 7185 or permission of instructor.

CIVL 7195 - Groundwater Hydraulics

(3) (Same as ESCI 7195) Geological contributions to ground water flow; ground water contribution to water demand and conjunctive use; well hydraulics, design and construction, pump selection; determine aquifer properties via field well tests.

CIVL 7196 - Urban Drainage

(3) Flooding and pollution problems associated with urban areas; application of planning, analysis, and hydraulic design techniques for storm water and erosion control measures. PREREQUISITE(S): CIVL 7185 or permission of instructor.

CIVL 7197 - Ground Water Qual Cntrl

(3) Analysis of ground water quality and contamination problems; study of multispecies chemical reactions and radioactive microbiological decay; techniques for monitoring, and site remediation of ground water problems. PREREQUISITE(S): CIVL 7170 or permission of instructor.

CIVL 7991 - Projects

(3) Independent investigation of problem selected in consultation with instructor; report required. Nine laboratory hours per week. Grades of A-F, or IP will be given. PREREQUISITE(S): consent of instructor.

CIVL 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Retention Policy

All students enrolled in the Department of Civil Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Civil Engineering.

1. Students having been unconditionally admitted to the graduate program in Civil Engineering who maintain a cumulative grade point average of 3.00 or higher will be considered to be in good standing.
2. Students must maintain a cumulative grade point average of 3.00 in all course work at The University of Memphis, in all Civil Engineering course work at The University of Memphis, and for all 7000 level course work at The University of Memphis at the end of each semester of enrollment. Any student not meeting these conditions will be placed on probation.
3. Students admitted on probation must maintain a 3.00 average at the end of each semester until 9 hours of graduate credit are earned. A student having a cumulative grade point average less than 3.00 at the end of the period described will be dismissed. A student having a cumulative grade point average of 3.00 or above will then be subject to the retention criteria listed in 2 above.
4. A student will be permitted two (2) grades of 2.00 or lower in graduate courses taken at The University of Memphis. A student will be dismissed from the program at the end of the semester in which a third grade of 2.00 or lower is earned.
5. A student who has been dropped from the graduate program in the Department of Civil Engineering will be denied permission to enroll in Civil Engineering courses in semesters subsequent to dismissal from the department.

Accelerated BS/MS Program

This program allows outstanding undergraduates to earn a bachelor's degree and master's degree in Civil Engineering in as little as five years by taking graduate-level technical electives that will count toward both degree programs. Specifically, students who are selected into this program can satisfy the undergraduate requirement of nine hours of technical electives by taking 6000-level courses that will then be counted toward their graduate degree program. However, any graduate coursework will not apply to the undergraduate GPA.

Students are encouraged to begin planning to enter the Accelerated B.S./M.S. program early in their undergraduate career in consultation with their advisor in the Department of Civil Engineering. Students with a minimum GPA of 3.25 may apply for the accelerated program once they have completed 15 credit-hours of 3000-level CIVL course work. In addition to an application form, students must have the recommendation of their undergraduate academic advisor and the concurrence of the department chair and graduate coordinator in the Department of Civil Engineering. In order to remain in the program, students must maintain a GPA of at least 3.25. To continue in the program past the B.S. degree, students must apply for full admission into the Graduate School and the Civil Engineering M.S. program.

Communication, (MA)

MA Program

A Master's Degree in Communication from The University of Memphis prepares students for success in the many professional opportunities in this field and success in pursuing a doctoral degree in Communication. Students have a choice of two concentrations: Communication Studies or Film and Video Production.

The Film and Video Production concentration combines technical instruction with courses in both motion picture and traditional communication studies to provide students with the tools and concepts necessary to function in the multifaceted world of audiovisual production. The approach to media practice is broad enough to address the needs of the independent artist, as well as those who seek to enter the industry.

All graduate students must comply with the general requirements of the Graduate School (see Admissions Regulations, Academic Regulations, and Minimum Degree Requirements) as well as the program requirements of the degree being pursued.

Admissions Criteria

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE scores, personal goals statement, relevant employment history, letters of recommendation, and quality of the applicant's writing sample. The number of students admitted to the MA program will depend on availability of adequate faculty supervision and other department resources. More specific admissions criteria can be found on our department website. GRE scores are required for every applicant.

See the Department of Communication website for information on applying.

Initial Graduate Advising

Before registering for courses beyond nine hours of study, the student will form an MA advisory program committee consisting of three members of the department's graduate faculty. One of these three (who must have full graduate faculty status), by request of the student and the consent of the faculty member, will serve as advisory committee chair.

Formation and Conduct of Master's Advisory Committee

Role and Duties of MA Advisory Committee Chair and Members: All decisions pertaining to a student's program must be approved by a consensus of the MA advisory committee, including meeting to approve a plan of study and approving the content of independent studies. Changes to the plan of study require advisory committee approval.

Program Requirements

1. Successful completion of a minimum of 30-33 hours of graduate courses, depending on the degree completion option a student and her/his committee agree on; 70% of the minimum must be at the 7000 level or above.
2. Completion of the degree requires one of the following options; however students in Film and Video Production must complete option C, Culminating Project:
    1. Written and oral comprehensive examination. Students must pass both a written and oral comprehensive exam during or after their last semester of course-work. The student's MA advisory committee must approve the option and is responsible for evaluating the comprehensive examination. A pass on the written examination is necessary for admission to the oral examination.

The quality of the comprehensive examination as a whole is determined at completion of the oral examination. Students who elect this option must complete a minimum of 33 hours of graduate courses.

2. Thesis and oral comprehensive examination. Students who elect this option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write. On completion of the thesis, the student must successfully complete an oral comprehensive examination, which will include an oral defense of the thesis, administered by the student's MA advisory committee. The thesis, defense, and examination must be acceptable to all members of the advisory committee and recommended to the Graduate School after a successful defense. Students who elect this option must complete a minimum of 30 hours of graduate courses, of which 3 must be COMM 7996 - Thesis. No more than 3 credits of COMM 7996 - Thesis may count toward the 30 hour minimum
3. Culminating project and oral comprehensive examination. This project must be completed under the supervision of a member of the graduate faculty. The student's MA advisory committee must approve the option, and the student must enroll in at least three credits of COMM 7994 - Culminating Project, during or after the last semester of course work. The culminating project provides an opportunity for students to demonstrate their ability to work independently, as well as their mastery of an area of concentration in an applied form approved by their advisory committee. The project may take one of several forms, including a community-based communication intervention, or in the case of FVP students, a film or video production. On completion of the culminating project, the student must successfully complete an oral comprehensive examination, which will include an oral defense of the project, administered by the student's MA advisory committee. The project, defense, and examination must be acceptable to all members of the student's MA advisory committee. Students who elect this option must complete a minimum of 30 hours of graduate courses, of which 3 must be COMM 7994 - Culminating Project.

3. All students must have competency in two of three core areas: Communication Theory, Rhetorical Theory, or Media Theory. These competencies can be satisfied academically in a variety of ways in consultation with the MA advisory committee.
4. All students with a concentration in Film and Video Production must take three credits of COMM 7892 - Film/Video Production, before beginning their final culminating project.
5. Up to nine hours outside the department may be applied to the minimum hour requirement with the approval of the student's MA advisory committee.
6. Up to six semester hours earned at another institution may be applied to the minimum hour requirement with the approval of the student's MA advisory committee.

Graduate Assistantships

1. Graduate assistantships are available and are awarded on a competitive basis within the department. Assistantships are normally renewed for one year depending upon the performance of assistantship duties and the progress being made towards a degree.
2. Further details are available on the department website.

Time Limitation

All requirements for the degree must be completed in 6 calendar years.

Retention

At the end of every academic year, the graduate faculty in the Department of Communication evaluates the progress of every MA student in the program. For a student to continue in the program, he or she must maintain satisfactory progress. The student will be judged as NOT making satisfactory progress if:

1. The student's cumulative GPA drops below 3.0 and remains there for more than one semester or nine credit hours.
2. The student has acquired more incompletes than he or she can complete during one semester of normal academic work.

Should a student fail to maintain satisfactory progress, the Graduate Committee, in conjunction with the department chair, can recommend to the CCFA Associate Dean for Graduate Affairs and the U of M Vice Provost of Graduate Programs that the student be dropped from the program. Moreover, students found by the Office of Student Conduct to have committed misconduct will be sanctioned by the University in accordance with the policies contained in the "Code of Student Rights and Responsibilities." In these cases, the Department may also recommend to the CCFA Associate Dean for Graduate Affairs and the U of M Vice Provost of Graduate Programs that the student be dropped from the program.

Departmental MA Guidelines

Additional details and information are available on the department website.

Computer Science, (MS)

Master of Science

Admission Requirements

1. GRE scores.
2. Two letters of recommendation.
3. An undergraduate degree with a minimum GPA of 2.5 on a 4.0 scale.
4. A minimum score of 550 on the paper-based TOEFL, or 79 on the internet-based TOEFL, or 6 on IELTS (for students whose native language is not English).
5. A statement of purpose.

Prerequisites

1. One year (8 credit hours) of calculus and one semester (3 credit hours) of linear algebra (Students without the calculus and/or linear algebra prerequisites may be admitted on an individual basis, but any deficiency must be corrected within their first semester.)
2. Satisfactory completion of the following courses (or their equivalents): COMP 1900, 2150, 2700, and 3410 (None of these courses may be used to fulfill degree requirements).

Program Requirements

Satisfactory completion of 33 credit hours of graduate course work and a passing grade on a comprehensive examination, both approved by the department. The course work must include the core requirements and either a Master's project or a Master's thesis. At least 27 credit hours of course work must be from the 7/8000 level and at most 6 of the hours may be from any combination of COMP 6901, COMP 6911 , COMP 7901, COMP 7980 and/or COMP 7996.

Core Requirement

Four courses must be completed within the first 27 hours of credit in the program, unless an extension is granted by the student's advisor. At least three core courses must be completed with a grade of B- or better.

COMP 7012 - Fndtns/Software Engr

(3) (Same as EECE 7012-EECE 8012) (Same as EECE 7012-8012). Covers project management; software disciplines (requirements, analysis, design, implementation, testing); software modeling notations; mapping designs to code. Students work in teams to develop a significant software system. PREREQUISITE(S): COMP 7713 or COMP 7715 or permission of instructor.

COMP 7212 - Operating/Distrib Sys

(3) Overview of operating system architecture for centralized and distributed systems; storage device and file systems; process management, scheduling, synchronization, interprocess communications and security; case studies of selected operating systems.

COMP 7612 - Foundations of Computing

(3) Review of basic models of computation and complexity; measures and modes of complexity analyses, both logical and experimental; deterministic and stochastic methods for program analysis and data compaction. PREREQUISITE(S): COMP 6601 and COMP 6030, or permission of instructor.

COMP 7712 - Algorithms/Prob Solv

(3) Covers algorithms problems, techniques, and design emphasizing problem solving and implementation skills; topics include advanced data structures, graph algorithms, string matching, network flow, dynamic programming, and randomized algorithms.

Project/Thesis

NOTE: Theses must follow the Thesis/Dissertation Preparation Guide

COMP 7996 - Thesis

(1-6)

or

COMP 7980 - Master's Project

(1-3) Research for specific projects under the supervision of a faculty member and possibly a liaison from commerce or industry. Each section of this class will be designated for a special area. Offered alternate years.

The following courses may not be used to satisfy degree requirements

COMP 6001 - Intro to Python Programming

(3) Basic concepts in computer programming. Incorporates object oriented concepts, variables, flow control statements, arrays and lists, debugging and testing. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor PREREQUISITE(S): permission of instructor; COMP 2700 recommended.

COMP 6005 - Web Design/Development

(3) Web interface development using HTML, XML, CSS, JavaScript, and AJAX ; technological issues in web page design and data visualization; web servers and their features; web services. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor PREREQUISITE(S): COMP 6040 or COMP 6041, or permission of insructor.

COMP 6014 - Intro Java Programming

(3) Java problem-solving strategies with emphasis in fundamental programming skills, primitive data types, control structures, arrays, strings, I/O, basic recursion, documentation, testing and debugging techniques; introduction to object-oriented concepts. NOTE: This course may not be used to fulfill degree requirements. NOTE: This course may not be used to fulfill degree requirements. PREREQUISITE(S): Knowledge of a programming language and descriptive statistics, or equivalent, or permission of instructor.

COMP 6030 - Desgn/Anlys Algorithms

(3) Asymptotic behavior of programs; basic paradigms in algorithm design: greedy, divide-and-conquer, dynamic programming; analysis of efficiency, and optimality of representative algorithms, including graph, pattern matching, numerical, randomized, and approximation algorithms; approaches to lower bound analysis; basic parallel algorithms. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 2150 and 3410 or permission of instructor.

COMP 6040 - Programming Languages

(3) Comparative features, syntax, and applicability of high-level programming languages such as FORTRAN, PASCAL, LISP, Scheme, ADA, C, C++, Java, PHP, JavaScript, Perl, Prolog, and FORTH data types, data structures, and dataflow; procedures, recursion, runtime environment, string manipulation, list processing, array processing, documentation, programming style. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 2150 and COMP 7212 or permission of instructor.

COMP 6270 - Operating Systems

(3) Hierarchy of storage devices, I/O buffering, interrupts, channels; processor and job scheduling, memory management: paging, segmentation, and virtual memory; interrupt procedure calls; multiprogramming, data races in shared resources, semaphores, concurrency, management of asynchronous processes and synchronization; security and recovery procedures. PREREQUISITE(S): COMP 2150 and either COMP 3410 or EECE 4278, or permission of instructor.

COMP 6601 - Models Of Computation

(3) Computer models as a basis of the understanding and analysis of programming: computation and complexity: machine models (finite-state, stack and Turing machines), linguistic models (grammars, lambda calculus, and predicate calculi); biologically-inspired models (e.g.: neural nets or genetic algorithms); unsolvability, universality, decidability, and feasibility. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 6601 or permission of instructor.

COMP 7960 - Sem Teaching/Res/Consult

(3) Non-traditional setting in which masters students develop skills in areas of teaching, research, and consulting. Required of all graduate assistants in the department. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements. PREREQUISITE(S): PSYC 7215/PSYC 8215.

COMP 8960 - Sem Teaching/Res/Consult

(3) Non-traditional setting in which masters students develop skills in areas of teaching, research, and consulting. Required of all graduate assistants in the department. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements. PREREQUISITE(S): COUN 7541 or COUN 7542, enrollment in a COUN or CPSY degree program or permission of instructor.

Retention

Students must maintain a GPA of at least a 3.0 to continue in the program.

Note

Students who are requesting credit transfer from another graduate program must submit an application during the first semester in the program. The application will be evaluated by the student's advisor and the graduate coordinator in order to determine the number of credits that can be transferred towards completion of the degree requirements. Courses from other departments may also be used to satisfy degree requirements, if relevant and approved by the academic advisor prior to enrollment in the courses. The number of credit hours transferred is limited by the Graduate School.

Counseling - Clinical Mental Health Counseling Concentration, (MS)

MS Degree Program

The Master's degree programs in Counseling prepare entry level counseling professionals with a broad knowledge base in fundamental social/behavioral science (human development, learning and cognition, personality theory, and emerging research on visible ethnic populations and gender differences), counseling and helping skills (individual and group counseling, and assessment), research and evaluation tools, and professional identity, role and function. The concentrations in Clinical Mental Health Counseling and School Counseling are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). The Rehabilitation Counseling concentration is accredited by the Council of Rehabilitation Counseling (CORE).

Program objectives are: (1) comprehension of concepts and theories underlying the profession of counseling; (2) ability to collect, analyze, and interpret individual and group data, and to generate and test hypothesis related to human behavior; (3) ability to effectively counsel in both individual and group settings: (4) ability to formulate, implement, and evaluate appropriate counseling programs and interventions; (5) ability to understand and demonstrate ethical behavior and the legal and ethical implications of that behavior; and (6) development of sensitivity and understanding of the needs of persons who are culturally different, including the ability to (a) examine attitudes and myths regarding the culturally different client and (b) the sociopolitical forces impacting the culturally different client.

Program Prerequisites

Students need 6 semester hours of course work at the upper division undergraduate or the graduate level in psychological or cultural foundations.

Program Admission

Program admission for concentrations in the Counseling program

1. Applicants must apply to the Graduate School and to the program. The Master of Science degree in Counseling is a limited access program; not all eligible candidates are admitted. To be considered for admission, applicants must provide:
    1. official undergraduate and/or graduate transcripts of all academic work completed,
    2. submit a Graduate Record Exam (GRE) score,
    3. complete a program admission application including appropriate goals essay,
    4. provide three letters of academic and/or professional reference,
    5. undergo an interview with the faculty.
2. Deadline for the completion of all admissions requirements is March 1 for the fall semester and October 1 for the spring semester. The program selection committee selects students after all application materials and the personal interview are completed. Program admissions forms are available in the department office.

All college transcripts and test score information should be sent directly to Graduate Admissions.

Program Requirements

Counseling Programs

The School Counseling and Rehabilitation Counseling programs are a minimum of 48 semester hours. Clinical Mental Health Counseling and Clinical Rehabilitation Counseling are 60-semester hour programs. All students are to maintain good standing (3.0 or better cumulative grade point average) and at least a B- in all required courses.

MS program core (18 hours):

COUN 7411 - Foundatns of Counseling

(3) Introduction to professional roles, responsibilities, and identity of counselor; counseling ethics, credentials, and sociocultural context of counseling.

COUN 7531 - Group Counseling Procss

(3) Organization and maintenance of effective groups; group participation, projects and readings to aid students in delineating their roles in various group settings. PREREQUISITE OR COREQUISITE: COUN 7411.

COUN 7541 - Theories Counsel & Pers

(3) (7581-8581) (7581-8581). Person-centered, behavioral, cognitive-behavioral, reality, rational-emotive, Gestalt, psychoanalytic, and other appropriate theories; emphasis on theoretical concepts, principles, and dynamics as applied in practice. PRE- or COREQUISITE: COUN 7411.

COUN 7551 - Assessment Techniques

(3) (7651-8651) The basic principles, test and non-test appraisal instruments, and skills of diagnosis; selection, use, and interpretation of such instruments appropriate for individual appraisal.

COUN 7571 - Clinical Techniques

(3) (7690-8690) (7690-8690). Implementation and practice of counseling theories; modeling, practice, and critique of counseling skills.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

Clinical Mental Health Counseling (42 hours):

COUN 7561 - Career Counseling

(3) (7661-8661) (7661-8661). Process of career development and planning, career and lifestyle counseling, planning, and development. PREREQUISITE OR COREQUISITE: COUN 7411. PREREQUISITE(S): Permission of the Graduate Coordinator.

COUN 7630 - Clinical Mental Health Coun

(3) Overview of skills and knowledge unique to mental health counselors; topics include but not limited to: mental health service delivery, assessment for mental disorders, psychotropic medications, the history of mental health counseling, advocacy, social justice, and preventive mental health concepts. PREREQUISITE(S): CJUS 7128.

COUN 7710 - Addiction Counseling

(3) Overview of substance use and addictive behaviors including common legal and ethical issues, prevention, assessment, diagnosis, treatment planning and interventions with an emphasis on the Transtheoretical Stages of Change model and Motivational Interviewing techniques. PREREQUISITE(S): COUN 7571 and enrollment in a COUN or CPSY degree program or consent of instructor.

COUN 7730 - Crisis Intrvntn Coun

(3) Study and practice in understanding crisis theory and crisis-induced dysfunctional behavior, recognizing crisis situations, and the application of crisis intervention methods and strategies to help people in emotional crises return to a state of cognitive, affective, and behavioral equilibrium and functional coping. PREREQUISITE(S): Student must have completed required course work or be in the last semester of required course work

COUN 7750 - Multicultural Counseling

(3) (8784) (8784). Theory and research on individual and group multicultural counseling with particular attention to ethnic and racial sectors of society in the US. Grades of S, U, or IP will be given.

COUN 7885 - Legal/Eth Issues Coun

(3) (CPSY 7785-8785) (CPSY 7785-8785). Examination of existing and needed legislation affecting counseling and psychology, review of critical court cases; ethical standards of professional counseling and psychological organizations; survey of responsibilities and liabilities.

EDPR 7117 - Life-Span Human Dev **

(3) Theories and research on the physical, psychological/emotional, social, cognitive, and cultural aspects of human development across the life span.

CPSY 7700 - Intrvntns Mntl Disordrs

(3) Covers assessment and diagnosis of mental disorders utilizing DSM-IV classification system and common counseling approaches for each of the major mental disorders; includes current understandings of the etiology, prevention, and treatment of each mental disorder; differential diagnosis using the DSM-IV manual; counseling approaches and case management; and psychopharmacology. PREREQUISITE(S): COUN 7630 and COUN 7571.

COUN 7631 - Pract Mental Health Coun

(3) (7892-8892) (7892-8892). Supervised counseling experience in a community/mental health setting with varied clientele. The student will be involved in individual and group counseling activities appropriate to the setting. 150 hours. PREREQUISITE(S): COUN 7411, COUN 7531, COUN 7541, COUN 7551, COUN 7571, COUN 7630, COUN 7710, COUN 7730, COUN 7750, AND COUN 7885; CPSY 7700; EDPR 7117; and program approval. Grades of S, U, or IP will be given.

and

COUN 7632 - Intern Cmty/Mntl Hlth

(4-9) (7698-8698) (7698-8698). Supervised counseling experience in an appropriate community/mental health setting. The student will be involved in agency services for a minimum of 300 hours (half-time, for 4 hours) or 600 hours (full-time, for 9 hours). May be repeated by half-time students for a maximum of 9 semester hours. May be repeated by half-time students for a maximum of 9 semester hours PREREQUISITE(S): Permission of Coordinator of Graduate Studies

- 6 hours elective

Other Requirements

1. All programs include clinical components, practica, and internships; each student's effectiveness will be evaluated by faculty and supervisors. Prior to contact with clients in practicum and internship, students are expected to provide evidence of good judgment and appropriate emotional functioning. Final decisions regarding student effectiveness will be predicated upon factors that include course grades, demonstrated clinical competence, personality factors, and any relevant test scores.
2. Comprehensive examination.

Counseling - Clinical Rehabilitation Counseling Concentration, (MS)

MS Degree Program

The Master's degree programs in Counseling prepare entry level counseling professionals with a broad knowledge base in fundamental social/behavioral science (human development, learning and cognition, personality theory, and emerging research on visible ethnic populations and gender differences), counseling and helping skills (individual and group counseling, and assessment), research and evaluation tools, and professional identity, role and function. The concentrations in Clinical Mental Health Counseling and School Counseling are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). The Rehabilitation Counseling concentration is accredited by the Council of Rehabilitation Counseling (CORE).

Program objectives are: (1) comprehension of concepts and theories underlying the profession of counseling; (2) ability to collect, analyze, and interpret individual and group data, and to generate and test hypothesis related to human behavior; (3) ability to effectively counsel in both individual and group settings: (4) ability to formulate, implement, and evaluate appropriate counseling programs and interventions; (5) ability to understand and demonstrate ethical behavior and the legal and ethical implications of that behavior; and (6) development of sensitivity and understanding of the needs of persons who are culturally different, including the ability to (a) examine attitudes and myths regarding the culturally different client and (b) the sociopolitical forces impacting the culturally different client.

Program Prerequisites

Students need 6 semester hours of course work at the upper division undergraduate or the graduate level in psychological or cultural foundations.

Program Admission

Program admission for concentrations in the Counseling program

1. Applicants must apply to the Graduate School and to the program. The Master of Science degree in Counseling is a limited access program; not all eligible candidates are admitted. To be considered for admission, applicants must provide:
    1. official undergraduate and/or graduate transcripts of all academic work completed,
    2. submit a Graduate Record Exam (GRE) score,
    3. complete a program admission application including appropriate goals essay,
    4. provide three letters of academic and/or professional reference,
    5. undergo an interview with the faculty.
2. Deadline for the completion of all admissions requirements is March 1 for the fall semester and October 1 for the spring semester. The program selection committee selects students after all application materials and the personal interview are completed. Program admissions forms are available in the department office.

All college transcripts and test score information should be sent directly to Graduate Admissions.

Program Requirements

Counseling Programs

The School Counseling and Rehabilitation Counseling programs are a minimum of 48 semester hours. Clinical Mental Health Counseling and Clinical Rehabilitation Counseling are 60-semester hour programs. All students are to maintain good standing (3.0 or better cumulative grade point average) and at least a B- in all required courses.

MS program core (18 hours):

COUN 7411 - Foundatns of Counseling

(3) Introduction to professional roles, responsibilities, and identity of counselor; counseling ethics, credentials, and sociocultural context of counseling.

COUN 7531 - Group Counseling Procss

(3) Organization and maintenance of effective groups; group participation, projects and readings to aid students in delineating their roles in various group settings. PREREQUISITE OR COREQUISITE: COUN 7411.

COUN 7541 - Theories Counsel & Pers

(3) (7581-8581) (7581-8581). Person-centered, behavioral, cognitive-behavioral, reality, rational-emotive, Gestalt, psychoanalytic, and other appropriate theories; emphasis on theoretical concepts, principles, and dynamics as applied in practice. PRE- or COREQUISITE: COUN 7411.

COUN 7551 - Assessment Techniques

(3) (7651-8651) The basic principles, test and non-test appraisal instruments, and skills of diagnosis; selection, use, and interpretation of such instruments appropriate for individual appraisal.

COUN 7571 - Clinical Techniques

(3) (7690-8690) (7690-8690). Implementation and practice of counseling theories; modeling, practice, and critique of counseling skills.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

Clinical Rehabilitation Counseling (42 hours):

COUN 6901 - Prin/Tech/Rehab Counsel

(3) Overview of the broad field of rehabilitation, including the philosophical, social, psychological, and legal basis of rehabilitation, professional practice, and the counselor's role and function in the rehabilitation process.

COUN 6913 - Med/Psyc Aspects/Rehab

(3) Orientation to medical profession and its relationship to rehabilitation counseling; basic medical terminology, bodily systems, and DSM diagnosis; theories, application, and research in psychological adjustment of individuals with disabilities; understanding impact of external/environmental conditions on lives of individuals with disabilities.

COUN 6921 - Vocational Dev/Occ Info

(3) Collection, evaluation, and use of occupational, educational, and related information in rehabilitation; familiarity with development of job descriptions and vocational surveys; study of labor market trends and theories of occupational choice.

COUN 7630 - Clinical Mental Health Coun

(3) Overview of skills and knowledge unique to mental health counselors; topics include but not limited to: mental health service delivery, assessment for mental disorders, psychotropic medications, the history of mental health counseling, advocacy, social justice, and preventive mental health concepts. PREREQUISITE(S): CJUS 7128.

COUN 7710 - Addiction Counseling

(3) Overview of substance use and addictive behaviors including common legal and ethical issues, prevention, assessment, diagnosis, treatment planning and interventions with an emphasis on the Transtheoretical Stages of Change model and Motivational Interviewing techniques. PREREQUISITE(S): COUN 7571 and enrollment in a COUN or CPSY degree program or consent of instructor.

COUN 7750 - Multicultural Counseling

(3) (8784) (8784). Theory and research on individual and group multicultural counseling with particular attention to ethnic and racial sectors of society in the US. Grades of S, U, or IP will be given.

COUN 7885 - Legal/Eth Issues Coun

(3) (CPSY 7785-8785) (CPSY 7785-8785). Examination of existing and needed legislation affecting counseling and psychology, review of critical court cases; ethical standards of professional counseling and psychological organizations; survey of responsibilities and liabilities.

COUN 7912 - Intro Psych Rehab Coun

(3) Psychiatric rehabilitation concepts and principles, techniques, history, treatment settings and modalities; emphasizing issues central to mental health consumers such as empowerment, the consumer movement, family intervention, cross-cultural issues, recovery and reintegration within the community.

CPSY 7700 - Intrvntns Mntl Disordrs

(3) Covers assessment and diagnosis of mental disorders utilizing DSM-IV classification system and common counseling approaches for each of the major mental disorders; includes current understandings of the etiology, prevention, and treatment of each mental disorder; differential diagnosis using the DSM-IV manual; counseling approaches and case management; and psychopharmacology. PREREQUISITE(S): COUN 7630 and COUN 7571.

COUN 7941 - Prac In Rehab Counsel

(3) Supervised counseling experiences with persons with disabilities; application of appropriate theories, principles, and practices to personal counseling.

and

COUN 7942 - Internshp Rehab Counsel

(4-9) Supervised field experiences in cooperation with the state rehabilitation agency and other human service agencies and facilities.

EDPR 7117 - Life-Span Human Dev **

(3) Theories and research on the physical, psychological/emotional, social, cognitive, and cultural aspects of human development across the life span.

Other Requirements

1. All programs include clinical components, practica, and internships; each student's effectiveness will be evaluated by faculty and supervisors. Prior to contact with clients in practicum and internship, students are expected to provide evidence of good judgment and appropriate emotional functioning. Final decisions regarding student effectiveness will be predicated upon factors that include course grades, demonstrated clinical competence, personality factors, and any relevant test scores.
2. Comprehensive examination.

Counseling - Rehabilitation Counseling Concentration, (MS)

MS Degree Program

The Master's degree programs in Counseling prepare entry level counseling professionals with a broad knowledge base in fundamental social/behavioral science (human development, learning and cognition, personality theory, and emerging research on visible ethnic populations and gender differences), counseling and helping skills (individual and group counseling, and assessment), research and evaluation tools, and professional identity, role and function. The concentrations in Clinical Mental Health Counseling and School Counseling are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). The Rehabilitation Counseling concentration is accredited by the Council of Rehabilitation Counseling (CORE).

Program objectives are: (1) comprehension of concepts and theories underlying the profession of counseling; (2) ability to collect, analyze, and interpret individual and group data, and to generate and test hypothesis related to human behavior; (3) ability to effectively counsel in both individual and group settings: (4) ability to formulate, implement, and evaluate appropriate counseling programs and interventions; (5) ability to understand and demonstrate ethical behavior and the legal and ethical implications of that behavior; and (6) development of sensitivity and understanding of the needs of persons who are culturally different, including the ability to (a) examine attitudes and myths regarding the culturally different client and (b) the sociopolitical forces impacting the culturally different client.

Program Prerequisites

Students need 6 semester hours of course work at the upper division undergraduate or the graduate level in psychological or cultural foundations.

Program Admission

Program admission for concentrations in the Counseling program

1. Applicants must apply to the Graduate School and to the program. The Master of Science degree in Counseling is a limited access program; not all eligible candidates are admitted. To be considered for admission, applicants must provide:
    1. official undergraduate and/or graduate transcripts of all academic work completed,
    2. submit a Graduate Record Exam (GRE) score,
    3. complete a program admission application including appropriate goals essay,
    4. provide three letters of academic and/or professional reference,
    5. undergo an interview with the faculty.

2. Deadline for the completion of all admissions requirements is March 1 for the fall semester and October 1 for the spring semester. The program selection committee selects students after all application materials and the personal interview are completed. Program admissions forms are available in the department office.

All college transcripts and test score information should be sent directly to Graduate Admissions.

Program Requirements

Counseling Programs

The School Counseling and Rehabilitation Counseling programs are a minimum of 48 semester hours. Clinical Mental Health Counseling and Clinical Rehabilitation Counseling are 60-semester hour programs. All students are to maintain good standing (3.0 or better cumulative grade point average) and at least a B- in all required courses.

MS program core (18 hours):

COUN 7411 - Foundatns of Counseling

(3) Introduction to professional roles, responsibilities, and identity of counselor; counseling ethics, credentials, and sociocultural context of counseling.

COUN 7531 - Group Counseling Procss

(3) Organization and maintenance of effective groups; group participation, projects and readings to aid students in delineating their roles in various group settings. PREREQUISITE OR COREQUISITE: COUN 7411.

COUN 7541 - Theories Counsel & Pers

(3) (7581-8581) (7581-8581). Person-centered, behavioral, cognitive-behavioral, reality, rational-emotive, Gestalt, psychoanalytic, and other appropriate theories; emphasis on theoretical concepts, principles, and dynamics as applied in practice. PRE- or COREQUISITE: COUN 7411.

COUN 7551 - Assessment Techniques

(3) (7651-8651) The basic principles, test and non-test appraisal instruments, and skills of diagnosis; selection, use, and interpretation of such instruments appropriate for individual appraisal.

COUN 7571 - Clinical Techniques

(3) (7690-8690) (7690-8690). Implementation and practice of counseling theories; modeling, practice, and critique of counseling skills.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

Rehabilitation Counseling (30 hours):

COUN 6901 - Prin/Tech/Rehab Counsel

(3) Overview of the broad field of rehabilitation, including the philosophical, social, psychological, and legal basis of rehabilitation, professional practice, and the counselor's role and function in the rehabilitation process.

COUN 6913 - Med/Psyc Aspects/Rehab

(3) Orientation to medical profession and its relationship to rehabilitation counseling; basic medical terminology, bodily systems, and DSM diagnosis; theories, application, and research in psychological adjustment of individuals with disabilities; understanding impact of external/environmental conditions on lives of individuals with disabilities.

COUN 6921 - Vocational Dev/Occ Info

(3) Collection, evaluation, and use of occupational, educational, and related information in rehabilitation; familiarity with development of job descriptions and vocational surveys; study of labor market trends and theories of occupational choice.

COUN 7750 - Multicultural Counseling

(3) (8784) (8784). Theory and research on individual and group multicultural counseling with particular attention to ethnic and racial sectors of society in the US. Grades of S, U, or IP will be given.

COUN 7912 - Intro Psych Rehab Coun

(3) Psychiatric rehabilitation concepts and principles, techniques, history, treatment settings and modalities; emphasizing issues central to mental health consumers such as empowerment, the consumer movement, family intervention, cross-cultural issues, recovery and reintegration within the community.

EDPR 7117 - Life-Span Human Dev **

(3) Theories and research on the physical, psychological/emotional, social, cognitive, and cultural aspects of human development across the life span.

- 3 hours of electives approved by advisor

COUN 7941 - Prac In Rehab Counsel

(3) Supervised counseling experiences with persons with disabilities; application of appropriate theories, principles, and practices to personal counseling.

and

COUN 7942 - Internshp Rehab Counsel

(4-9) Supervised field experiences in cooperation with the state rehabilitation agency and other human service agencies and facilities.

Other Requirements

1. All programs include clinical components, practica, and internships; each student's effectiveness will be evaluated by faculty and supervisors. Prior to contact with clients in practicum and internship, students are

expected to provide evidence of good judgment and appropriate emotional functioning. Final decisions regarding student effectiveness will be predicated upon factors that include course grades, demonstrated clinical competence, personality factors, and any relevant test scores.

2. Comprehensive examination.

Counseling - School Counseling Concentration, (MS)

MS Degree Program

The Master's degree programs in Counseling prepare entry level counseling professionals with a broad knowledge base in fundamental social/behavioral science (human development, learning and cognition, personality theory, and emerging research on visible ethnic populations and gender differences), counseling and helping skills (individual and group counseling, and assessment), research and evaluation tools, and professional identity, role and function. The concentrations in Clinical Mental Health Counseling and School Counseling are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). The Rehabilitation Counseling concentration is accredited by the Council of Rehabilitation Counseling (CORE).

Program objectives are: (1) comprehension of concepts and theories underlying the profession of counseling; (2) ability to collect, analyze, and interpret individual and group data, and to generate and test hypothesis related to human behavior; (3) ability to effectively counsel in both individual and group settings: (4) ability to formulate, implement, and evaluate appropriate counseling programs and interventions; (5) ability to understand and demonstrate ethical behavior and the legal and ethical implications of that behavior; and (6) development of sensitivity and understanding of the needs of persons who are culturally different, including the ability to (a) examine attitudes and myths regarding the culturally different client and (b) the sociopolitical forces impacting the culturally different client.

Program Prerequisites

Students need 6 semester hours of course work at the upper division undergraduate or the graduate level in psychological or cultural foundations.

Program Admission

Program admission for concentrations in the Counseling program

1. Applicants must apply to the Graduate School and to the program. The Master of Science degree in Counseling is a limited access program; not all eligible candidates are admitted. To be considered for admission, applicants must provide:
    1. official undergraduate and/or graduate transcripts of all academic work completed,
    2. submit a Graduate Record Exam (GRE) score,
    3. complete a program admission application including appropriate goals essay,
    4. provide three letters of academic and/or professional reference,
    5. undergo an interview with the faculty.
2. Deadline for the completion of all admissions requirements is March 1 for the fall semester and October 1 for the spring semester. The program selection committee selects students after all application materials and the personal interview are completed. Program admissions forms are available in the department office.

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Program Requirements

Counseling Programs

The School Counseling and Rehabilitation Counseling programs are a minimum of 48 semester hours. Clinical Mental Health Counseling and Clinical Rehabilitation Counseling are 60-semester hour programs. All students are to maintain good standing (3.0 or better cumulative grade point average) and at least a B- in all required courses.

MS program core (18 hours):

COUN 7411 - Foundatns of Counseling

(3) Introduction to professional roles, responsibilities, and identity of counselor; counseling ethics, credentials, and sociocultural context of counseling.

COUN 7531 - Group Counseling Procss

(3) Organization and maintenance of effective groups; group participation, projects and readings to aid students in delineating their roles in various group settings. PREREQUISITE OR COREQUISITE: COUN 7411.

COUN 7541 - Theories Counsel & Pers

(3) (7581-8581) (7581-8581). Person-centered, behavioral, cognitive-behavioral, reality, rational-emotive, Gestalt, psychoanalytic, and other appropriate theories; emphasis on theoretical concepts, principles, and dynamics as applied in practice. PRE- or COREQUISITE: COUN 7411.

COUN 7551 - Assessment Techniques

(3) (7651-8651) The basic principles, test and non-test appraisal instruments, and skills of diagnosis; selection, use, and interpretation of such instruments appropriate for individual appraisal.

COUN 7571 - Clinical Techniques

(3) (7690-8690) (7690-8690). Implementation and practice of counseling theories; modeling, practice, and critique of counseling skills.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

School Counseling (30 hours):

COUN 7542 - Child Counseling, Consultation and Intervention in Schools

(3) (7582-8582) This online course provides an introduction to counseling children and adolescents as a means of facilitating healthy development and promoting academic achievement. Through didactic and experiential learning, students in school-based helping professions will develop skills to utilize child centered communication, creative therapies, consultation, and identify and implement theoretically and developmentally informed interventions.

COUN 7640 - Principles Schl Couns

(3) Organization and administration of components of counseling services in schools, role and function of the school counselor in K-12 system.

COUN 7730 - Crisis Intrvntn Coun

(3) Study and practice in understanding crisis theory and crisis-induced dysfunctional behavior, recognizing crisis situations, and the application of crisis intervention methods and strategies to help people in emotional crises return to a state of cognitive, affective, and behavioral equilibrium and functional coping. PREREQUISITE(S): Student must have completed required course work or be in the last semester of required course work

COUN 7750 - Multicultural Counseling

(3) (8784) (8784). Theory and research on individual and group multicultural counseling with particular attention to ethnic and racial sectors of society in the US. Grades of S, U, or IP will be given.

EDPR 7117 - Life-Span Human Dev **

(3) Theories and research on the physical, psychological/emotional, social, cognitive, and cultural aspects of human development across the life span.

COUN 7561 - Career Counseling

(3) (7661-8661) (7661-8661). Process of career development and planning, career and lifestyle counseling, planning, and development. PREREQUISITE OR COREQUISITE: COUN 7411. PREREQUISITE(S): Permission of the Graduate Coordinator.

or

COUN 7825 - Special Topics in Counseling

(1-3) Study of current topics in the area of counseling. May be repeated with a change in content; see on-line class listings for topics

and

3 hours of electives approved by advisor.

Practicum

COUN 7641 - Prac Elem Sch Coun

(3) (7692-8692) (7692-8692). Supervised counseling with pre K-6 elementary age children; group discussions and individual interviews provide the student opportunities to interact with elementary children in a variety of multicultural settings; practice in appropriate techniques in interaction with elementary children. 150 hours.

or

COUN 7645 - Prac Sec School Coun

(3) (7691-8691) (7691-8691). Supervised counseling with adolescents in middle and/or high school multicultural settings; assistance with individuals and groups and practice in providing assistance in educational, occupational, and personal decision making. 150 hours.

Internships

COUN 7642 - Intern Elem Sch Coun

(3-6) (7697) (7697). Supervised counseling experience in working with pre K-6 elementary school-aged children in multicultural settings. The student will be involved in services for a minimum of 300 (or half-time for 4 hours) or 600 (or full-time for 6 hours). May be repeated by half-time students for a maximum of 6 semester hours. May be repeated by half-time students for a maximum of 6 semester hours

COUN 7644 - Intern Middle School Coun

(3-6) Supervised counseling experience in working with adolescents in middle multicultural settings. The student will be involved in services for a minimum of 300 (or half-time for 4 hours) or 600 (or full-time for 6 hours). May be repeated by half-time students for a maximum of 6 semester hours. May be repeated by half-time students for a maximum of 6 semester hours

COUN 7646 - Intern Sec Sch Coun

(3-6) (7696-8696) (7696-8696). Supervised counseling experience in working with adolescents middle and/or high school multicultural settings. The student will be involved in services for a minimum of 300 (or half-time for 4 hours) or 600 (or full-time for 6 hours). May be repeated by half-time students for a maximum of 6 semester hours. May be repeated by half-time students for a maximum of 6 semester hours

Note:

Students must have field placements at each level of PK-12 education: elementary, middle, and high school. These requirements can be accomplished through both practicum and internship experiences.

Students without undergraduate or graduate special education course must take SPED 7000. Students without one year previous school employment must take one semester hour special problems observation course COUN 7790.

Other Requirements

1. All programs include clinical components, practica, and internships; each student's effectiveness will be evaluated by faculty and supervisors. Prior to contact with clients in practicum and internship, students are expected to provide evidence of good judgment and appropriate emotional functioning. Final decisions regarding student effectiveness will be predicated upon factors that include course grades, demonstrated clinical competence, personality factors, and any relevant test scores.
2. Comprehensive examination.

Counseling, (MS)

MS Degree Program

The Master's degree programs in Counseling prepare entry level counseling professionals with a broad knowledge base in fundamental social/behavioral science (human development, learning and cognition, personality theory, and emerging research on visible ethnic populations and gender differences), counseling and helping skills (individual and group counseling, and assessment), research and evaluation tools, and professional identity, role and function. The concentrations in Clinical Mental Health Counseling and School Counseling are accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). The Rehabilitation Counseling concentration is accredited by the Council of Rehabilitation Counseling (CORE).

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Program Prerequisites

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Program Admission

Program admission for concentrations in the Counseling program

1. Applicants must apply to the Graduate School and to the program. The Master of Science degree in Counseling is a limited access program; not all eligible candidates are admitted. To be considered for admission, applicants must provide:
    1. official undergraduate and/or graduate transcripts of all academic work completed,
    2. submit a Graduate Record Exam (GRE) score,
    3. complete a program admission application including appropriate goals essay,
    4. provide three letters of academic and/or professional reference,
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2. Deadline for the completion of all admissions requirements is March 1 for the fall semester and October 1 for the spring semester. The program selection committee selects students after all application materials and the personal interview are completed. Program admissions forms are available in the department office.

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Program Requirements

Counseling Programs

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MS program core (18 hours):

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(3) Introduction to professional roles, responsibilities, and identity of counselor; counseling ethics, credentials, and sociocultural context of counseling.

COUN 7531 - Group Counseling Procss

(3) Organization and maintenance of effective groups; group participation, projects and readings to aid students in delineating their roles in various group settings. PREREQUISITE OR COREQUISITE: COUN 7411.

COUN 7541 - Theories Counsel & Pers

(3) (7581-8581) (7581-8581). Person-centered, behavioral, cognitive-behavioral, reality, rational-emotive, Gestalt, psychoanalytic, and other appropriate theories; emphasis on theoretical concepts, principles, and dynamics as applied in practice. PRE- or COREQUISITE: COUN 7411.

COUN 7551 - Assessment Techniques

(3) (7651-8651) The basic principles, test and non-test appraisal instruments, and skills of diagnosis; selection, use, and interpretation of such instruments appropriate for individual appraisal.

COUN 7571 - Clinical Techniques

(3) (7690-8690) (7690-8690). Implementation and practice of counseling theories; modeling, practice, and critique of counseling skills.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

Other Requirements

1. All programs include clinical components, practica, and internships; each student's effectiveness will be evaluated by faculty and supervisors. Prior to contact with clients in practicum and internship, students are expected to provide evidence of good judgment and appropriate emotional functioning. Final decisions regarding student effectiveness will be predicated upon factors that include course grades, demonstrated clinical competence, personality factors, and any relevant test scores.
2. Comprehensive examination.

Creative Writing, (MFA)

MFA Degree Program

The Master of Fine Arts in Creative Writing provides studies in poetry, fiction, and nonfiction, along with a variety of options for either a studio degree in Creative Writing, or a degree combining work in either the Department of English or other departments in which course work, or independent study, seems particularly pertinent to the student's creative thesis. A book-length thesis of publishable quality is required; it will be directed by a member of the MFA faculty. The MFA requires 48 graduate semester hours, with a 3.00 grade point average in all graduate courses.

Admission Requirements

1. An overall minimum grade point average of 2.75 at the undergraduate level.
2. An official undergraduate and if applicable graduate transcript sent to Graduate Admissions.
3. A portfolio of published or unpublished writing samples in the applicant's chosen genre (at least 20-25 pages of fiction, 10 poems, or 25 pages of nonfiction), demonstrating a potential for development to a professional standard of writing, should be submitted to the English Graduate Office along with two letters of recommendation and a cover letter stating the candidate's choice of genre and reasons for pursuing the degree. The writing sample will be evaluated by a committee of MFA faculty. The committee will recommend admission of those applicants with the highest demonstrated talent.
4. Students who wish to change genres after being accepted in one genre, even if they are already registered and enrolled in the program, must submit a new portfolio of work in the new genre and be approved by the MFA faculty for admission in the new genre.
5. Bachelor's degree in English or if BA is in another field, twelve (12) semester hours in upper division literature or creative writing courses with a minimum grade point average of 2.75 in these courses.
6. Graduate Record General Examination (a competitive score on the verbal section is expected).
7. Deadlines: for best consideration apply by March 1 for the following fall semester admission and October 15 for following spring semester. Applications may be considered later but prospective students applying by those dates have first priority.

MA Credit

Any applicant who holds an MA degree in English may apply up to a maximum of 24 semester hours in English earned for that degree toward the MFA degree, with the approval of the graduate coordinator. A student's advisor will insure that the combination of MA credits and courses taken in the program has appropriate breadth. Credit previously earned at another institution must be presented for evaluation not later than the end of the student's second semester of enrollment.

Program Requirements

All students must fulfill the 48-hour degree requirement from the Core Requirements in section 1 in combination with one area of specialization under the Additional Requirements in section 2: the Studio Option, the Literary Studies Option, The Creative/Professional Option, the TESL/TEFL Option, or the Cross-Disciplinary Option.

Core Requirements

Writing Workshops and Forms Courses

A total of 6 courses (18 hours) required:

Four Workshop courses, at least three of which must be in chosen genre:

ENGL 7601 - Creative Nonfiction Wkshp

(3) Emphasis on examination and discussion of creative nonfiction written by students. May be repeated 10 times for a maximum of 30 credit hours. May be repeated for a maximum of 6 credit hours when topic changes. Grades of A-F, or IP will be given.

ENGL 7602 - Fiction Workshop

(3) Emphasis on the examination and the discussion of fiction written by students. May be repeated 10 times for a maximum of 30 credit hours. PREREQUISITE(S): permission of instructor. Grades of S, U, or IP will be given.

ENGL 7603 - Poetry Workshop

(3) Emphasis on the examination and the discussion of poetry written by students. May be repeated 10 times for a maximum of 30 credit hours. PREREQUISITE(S): EDPR 7123 and ESMS 7201, or permission of instructor. Grades of A-F, or IP will be given.

One Forms course in chosen genre:

ENGL 7470 - Forms Creative Nonfict

(3) Creative nonfiction with attention to historical roots and contemporary theory and practice. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7471 - Forms Of Fiction

(3) A study of how fiction works through analyzing the short story, the novella, and the novel with attention to historical developments. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7472 - Forms Of Poetry

(3) A study of meters, forms, and types of poetry in English with attention to the principal traditions and critical ideas associated with the writing of verse in English. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator. Grades of S, U, or IP will be given.

One Cross-Genre Course:

For Poetry Students

ENGL 6610 - Creative Writing/Translation

(3) Study and practice in translating poetry, fiction, or non-fiction; use of creative writing as tool in teaching of foreign language. May be repeated for credit with change of topic or genre.

ENGL 7470 - Forms Creative Nonfict

(3) Creative nonfiction with attention to historical roots and contemporary theory and practice. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7471 - Forms Of Fiction

(3) A study of how fiction works through analyzing the short story, the novella, and the novel with attention to historical developments. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7601 - Creative Nonfiction Wkshp

(3) Emphasis on examination and discussion of creative nonfiction written by students. May be repeated 10 times for a maximum of 30 credit hours. May be repeated for a maximum of 6 credit hours when topic changes. Grades of A-F, or IP will be given.

ENGL 7602 - Fiction Workshop

(3) Emphasis on the examination and the discussion of fiction written by students. May be repeated 10 times for a maximum of 30 credit hours. PREREQUISITE(S): permission of instructor. Grades of S, U, or IP will be given.

For Fiction and Creative Nonfiction students:

ENGL 6610 - Creative Writing/Translation

(3) Study and practice in translating poetry, fiction, or non-fiction; use of creative writing as tool in teaching of foreign language. May be repeated for credit with change of topic or genre.

ENGL 7472 - Forms Of Poetry

(3) A study of meters, forms, and types of poetry in English with attention to the principal traditions and critical ideas associated with the writing of verse in English. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator. Grades of S, U, or IP will be given.

ENGL 7603 - Poetry Workshop

(3) Emphasis on the examination and the discussion of poetry written by students. May be repeated 10 times for a maximum of 30 credit hours. PREREQUISITE(S): EDPR 7123 and ESMS 7201, or permission of instructor. Grades of A-F, or IP will be given.

Cross-Genre Course

ENGL 6610 may serve as a cross-genre course if the focus was on a cross-genre, but the student must submit a portfolio of cross-genre work from the course and get written approval from the Creative Writing Coordinator.

Creative Writing Colloquium

At least two sections of ENGL 7900 must be taken (6 hours).

Thesis

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

ENGL 7996 - Thesis

(1-6) A prospectus for the thesis must be approved by the student's advisor and the department chair before the student registers for this course. The completed thesis must be approved by at least two readers. NOTE: Students in Professional Writing must pass their comprehensive examination before registering for thesis hours and have the option of writing or producing a project or portfolio. Grades of S, U, or IP will be given.

Comprehensive Exam

A Comprehensive Exam based on a reading list formed by the student and the student's thesis director.

Oral Review of Thesis

Note:

Although it is not a core requirement for the degree, all students receiving a Teaching Assistantship must take ENGL 7003 either before they become a teaching assistant or during their first semester of teaching. It is included as an alternative course in each of the options for additional requirements below.

Specialization Requirements:

Studio Option:

7 courses, 21 hours, chosen from the following:

ENGL 6610 - Creative Writing/Translation

(3) Study and practice in translating poetry, fiction, or non-fiction; use of creative writing as tool in teaching of foreign language. May be repeated for credit with change of topic or genre.

ENGL 7470 - Forms Creative Nonfict

(3) Creative nonfiction with attention to historical roots and contemporary theory and practice. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7471 - Forms Of Fiction

(3) A study of how fiction works through analyzing the short story, the novella, and the novel with attention to historical developments. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7472 - Forms Of Poetry

(3) A study of meters, forms, and types of poetry in English with attention to the principal traditions and critical ideas associated with the writing of verse in English. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator. Grades of S, U, or IP will be given.

ENGL 7475 - Literary Publishing

(3) Development of skills involved in editing, producing, and marketing a literary magazine; further training in the skills of publishing the student's own literary texts. May be repeated for a maximum of 6 credit hours with change in course content. May be repeated for a maximum of 9 credit hours. Grades of S, U, or IP will be given.

ENGL 7485 - Lit Arts Programming

(3) Development of skills involved in planning and administering community arts events and organizations; further training in the skills of author interviewing and book reviewing. May be repeated for a maximum of 6 credit hours.

ENGL 7601 - Creative Nonfiction Wkshp

(3) Emphasis on examination and discussion of creative nonfiction written by students. May be repeated 10 times for a maximum of 30 credit hours. May be repeated for a maximum of 6 credit hours when topic changes. Grades of A-F, or IP will be given.

ENGL 7602 - Fiction Workshop

(3) Emphasis on the examination and the discussion of fiction written by students. May be repeated 10 times for a maximum of 30 credit hours. PREREQUISITE(S): permission of instructor. Grades of S, U, or IP will be given.

ENGL 7603 - Poetry Workshop

(3) Emphasis on the examination and the discussion of poetry written by students. May be repeated 10 times for a maximum of 30 credit hours. PREREQUISITE(S): EDPR 7123 and ESMS 7201, or permission of instructor. Grades of A-F, or IP will be given.

ENGL 7604 - Creative Writing Wkshp

(3) Emphasis on examination and discussion of fiction, poetry, or creative nonfiction written by students. May be repeated for a maximum of 6 credit hours with change of genre. PREREQUISITE(S): EDPR 7523, EDPR 7541 or permission of instructor.

ENGL 7605 - Adv Grad Fiction Wkshp

(3) Designed for candidates in MFA program in Creative Writing who have shown particular excellence in ENGL 7602. May be repeated 10 times for a maximum of 30 credit hours. May be repeated for a maximum of 9 credit hours.

ENGL 7606 - Adv Creative Non-Fict Wkshp

(3) Designed for candidates in MFA program in Creative Writing who have shown particular excellence in ENGL 7601. May be repeated for a maximum of 9 credit hours.

ENGL 7607 - Advanced Poetry Workshop

(3) Designed for candidates in MFA program in Creative Writing who have shown particular excellence in ENGL 7603. May be repeated for a maximum of 9 credit hours.

Note:

Students may take, as an alternative to replace up to 3 of these courses, an equivalent number of other courses (of 3 hours each) from other disciplines within the Department of English (this includes ENGL 7003, which is a requirement if the student receives a Teaching Assistantship). Note: as stated in the course descriptions, ENGL 7475 and ENGL 7485 can only be counted for a maximum of 6 hours each toward the degree requirements.

Literary Studies Option:

7 courses, 21 hours, made up of the following:

At least 9 hours of Literature Courses

At least 3 hours of Theory of Writing and English Language/Linguistics Courses, selected from:

ENGL 7020 - Special Topics in English

(3)

ENGL 7029 - Special Topics in English

(3) Topics are announced in online course listings.

ENGL 7003 - Thry/Prac Tchng Comp

(3) Designed for graduate assistants teaching English 1010. Emphasis on the ways and techniques of teaching rudiments of English composition on college level. Each graduate teaching assistant in the Department of English must enroll in English 7003-8003 before or concurrent with first teaching assignment.

ENGL 7501 - History English Lang

(3) Development of English from a minor Germanic dialect to a major international language.

ENGL 7511 - Survey of Linguistics

(3) Introduction to the nature of language with emphasis on basic principles of English phonology, morphology, and syntax; emphasis on collecting and analyzing linguistic data for research purposes.

ENGL 7517 - Discourse Analysis

(3) Examination of the tools and methods used by various subdisciplines of English (linguistics, rhetoric, and literature) to analyze forms of discourse, including legal, medical, scientific, technical, business, literary, academic, and oral texts.

ENGL 7531 - Theory and History of ESL **

(3) Survey of relation of linguistic principles to second language acquisition.

ENGL 7537 - Issues in Second Language Reading

(3) Emphasis on how non-native speakers of English learn to read in English, the effect of context and culture on L2 reading, and culturally related responses to reading and literacy traditions. May be repeated for a maximum of 9 credit hours when topic changes.

ENGL 7590 - Appl/Theory Linguistics

(3) Intensive study of specialized areas in English linguistics. Maybe repeated up to 9 hours with change of topic.

ENGL 7801 - History Composition

(3) Focuses on history of composition as a discipline of its own; examines rise of teaching of composition from 18th century Scottish universities to the present and/or history of development of theoretical approaches toward teaching composition. May be repeated for a maximum of 6 credit hours with change in course content.

ENGL 7805 - Foundations of Writing Studies

(3) A multidisciplinary exploration of the purposes, technologies, and contexts for written communication.

Literary Editing

Up to 6 hours of

ENGL 7475 - Literary Publishing

(3) Development of skills involved in editing, producing, and marketing a literary magazine; further training in the skills of publishing the student's own literary texts. May be repeated for a maximum of 6 credit hours with change in course content. May be repeated for a maximum of 9 credit hours. Grades of S, U, or IP will be given.

Literary Arts Programming

Up to 6 hours of

ENGL 7485 - Lit Arts Programming

(3) Development of skills involved in planning and administering community arts events and organizations; further training in the skills of author interviewing and book reviewing. May be repeated for a maximum of 6 credit hours.

Forms Courses

Up to 9 hours of

ENGL 6610 - Creative Writing/Translation

(3) Study and practice in translating poetry, fiction, or non-fiction; use of creative writing as tool in teaching of foreign language. May be repeated for credit with change of topic or genre.

ENGL 7470 - Forms Creative Nonfict

(3) Creative nonfiction with attention to historical roots and contemporary theory and practice. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7471 - Forms Of Fiction

(3) A study of how fiction works through analyzing the short story, the novella, and the novel with attention to historical developments. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7472 - Forms Of Poetry

(3) A study of meters, forms, and types of poetry in English with attention to the principal traditions and critical ideas associated with the writing of verse in English. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator. Grades of S, U, or IP will be given.

Creative/Professional Writing Option:

7 courses, 21 hours, made up of the following:

ENGL 7003 - Thry/Prac Tchng Comp

(3) Designed for graduate assistants teaching English 1010. Emphasis on the ways and techniques of teaching rudiments of English composition on college level. Each graduate teaching assistant in the Department of English must enroll in English 7003-8003 before or concurrent with first teaching assignment.

At least 9 hours of Professional Writing Courses:

ENGL 6618 - Document Design

(3) Theories of visual and written communication, focusing on the interrelationship between visual and verbal elements; practice in effective design using layout and graphics software; working on client projects in a collaborative setting.

ENGL 6619 - Web Design/Online Writing **

(3) Principles and techniques of creating online user help for software and usable web sites; emphasis on needs of technical writers in professional development environment; task analysis, information architecture, content management, single sourcing, visual rhetoric, navigation, usability testing; technology tools intensive. Students who have received credit for ENGL 4617 cannot take this course for credit. Grades of A-F, or IP will be given.

ENGL 7013 - Wkshp Hlth Care Writing

(3) Textual and contextual analysis of the kinds of writing produced for expert audiences in the healthcare industry and the academic research community; practice in writing documents such as technical proposals, clinical research reports, FDA documentation, and papers for publication.

ENGL 7014 - Wkshp Public Hlth Care Writing

(3) Theoretical understanding and skill-based practice in communicating healthcare information (patient education materials, public health care information, patient instructions) to a generally non-expert audience; rhetorical and analytical tools for shaping the information; practical skills for managing group projects and processes; and the opportunity to develop them in a workshop setting.

ENGL 7805 - Foundations of Writing Studies

(3) A multidisciplinary exploration of the purposes, technologies, and contexts for written communication.

ENGL 7806 - Resch Meth In Writing

(3) Bibliographic techniques and an introduction to empirical methodologies for the study of the writing process and the testing of written documents. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7807 - Wksp/Govmt & Corp Wrtg

(3) Textual and contextual analysis of the kinds of writing produced most often in government, law, and business; practice in writing correspondence reports, briefs, manuals, and proposals. PREREQUISITE(S): FIR 7070 or equivalent. Grades of S, U, or IP will be given.

ENGL 7808 - Wksp/Sci & Techn Wrtg

(3) Textual and contextual analysis of the kinds of writing produced most often in industry and the academic research community; practice in writing documents such as technical proposals, reports, computer documentation, and papers for publication. May be repeated for a maximum of 6 credit hours when topic changes. PREREQUISITE(S): FIR 3410 and FIR 3720. Grades of S, U, or IP will be given.

ENGL 7809 - Technical Editing

(3) Current practices in editing and publication in the field of technical communication; topics include copy-editing, substantive editing, author-editor relations, and the production practice. May be repeated for a maximum of 6 credit hours when topic changes. PREREQUISITE(S): FIR 3710.

ENGL 7818 - Collaborative Writing

(3) Theoretical and research-based focus on managing and developing collaborative writing projects and processes. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

Internship

Note: Up to 6 hours of ENGL 7811 - Internship Prof Wrtng may be counted toward this requirement. All internships must be pre-approved by the coordinator of the Creative Writing program along with another professor in the student's primary genre.

Up to 6 hours of:

ENGL 7475 - Literary Publishing

(3) Development of skills involved in editing, producing, and marketing a literary magazine; further training in the skills of publishing the student's own literary texts. May be repeated for a maximum of 6 credit hours with change in course content. May be repeated for a maximum of 9 credit hours. Grades of S, U, or IP will be given.

Up to 6 hours of:

ENGL 7485 - Lit Arts Programming

(3) Development of skills involved in planning and administering community arts events and organizations; further training in the skills of author interviewing and book reviewing. May be repeated for a maximum of 6 credit hours.

TESL/TEFL Option:

7 courses, 21 hours, made up of the following:

1. 15 hours in the Certificate Program in Teaching English as a Second/Foreign Language (TESL/TEFL), including 12 hours in the certificate core:

ENGL 7530 - Field Experience and Practicum in ESL **

(3-6) Experience in observing and teaching, peer teaching, and work with an English as a Second Language (ESL) specialist. Grades of S, U, or IP will be given. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7531 - Theory and History of ESL **

(3) Survey of relation of linguistic principles to second language acquisition.

ENGL 7532 - Principles of Skills Assessment **

(3) Application of theories of teaching second language skills with emphasis on testing in a second language.

ENGL 7535 - ESL Grammar

(3) Grammatical systems and strategies of Modern English; analysis of English structures that tend to cause difficulty for ESL/SESD speakers.

3 elective hours selected from:

ENGL 7533 - Methods/Techniques of ESL in K-12 **

(3) Techniques and resources for working with children and adolescents for whom English is a second language. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7536 - Issues in Second Language Writing

(3) Emphasis on research in second language writing, especially the role of psychological, social, and cultural influences on learning to write in a second language. May be repeated for a maximum of 6 credit hours when topic changes. Grades of S, U, or IP will be given.

ENGL 7537 - Issues in Second Language Reading

(3) Emphasis on how non-native speakers of English learn to read in English, the effect of context and culture on L2 reading, and culturally related responses to reading and literacy traditions. May be repeated for a maximum of 9 credit hours when topic changes.

ENGL 7538 - Cultural Issues in ESL

(3) Impact of culture on non-English language background speakers as well as the particular aspects of U.S. culture and traditions needed for successful acculturation.

ENGL 6533 - ESL/EFL in Multicultural Settings

(3) Approaches to working with ESL or EFL students in multicultural settings. May be repeated for a maximum of 6 credit hours

6 hours of electives in English, Creative Writing, or Foreign Languages

Cross-Disciplinary Option:

7 courses, 21 hours, made up of the following:

1. Up to 9 hours of English courses from any discipline (includes ENGL 7003)
2. At least 12 hours of courses from another department: Art, History, Journalism, Theater, Foreign Languages, or other department in which course work, or independent study, seems particularly pertinent to the student's creative thesis.

   Up to 9 of the 21 hours may be fulfilled by independent study in another department and/or internship hours, but all cross-disciplinary courses/independent studies/internships must be pre-approved by the coordinator of the Creative Writing program along with another professor in the student's primary genre. Internships must be of a nature that will allow the student to participate in research that will form the basis of the student's thesis.

Note:

Although taking all 12 hours of the cross-disciplinary minimum in only one other department is not required, it is recommended that the student focus primarily on one area or else have a clear rationale for fulfilling the 12-hour minimum in more than one cross-disciplinary area.

Retention Requirements

Upon entering the MFA program, a student chooses an advisor in his or her concentration. The advisor will monitor the student's progress toward completion of the degree. Each semester the Graduate Studies Committee will examine the academic progress of all students for retention in the program. If a student receives either two C's, one D, or one F grade in any English graduate level course, that student will be subject to review and could be dismissed from the program. In order to remain in good standing, all graduate students must maintain a 3.0 average in all courses. Students who are on academic probation for two consecutive semesters will not be allowed to continue in the program.

Criminal Justice, (MA)

MA Degree Program

Program Admission

Admission to the program is competitive and is not automatic upon meeting minimum departmental admission requirements. Students are selected from the pool of qualified applicants for the program, and the number of students admitted to the program yearly depends on availability of financial aid and adequate faculty supervision. Applicants admitted to the program typically have at least a grade point average of 3.0 on a 4.0 scale. GRE scores (verbal, quantitative, written analytical) are taken into account in the admissions process. All application material should be received by June 1 for a candidate to be considered for the fall semester and November 1 for the spring semester. Admission for the summer session is not considered. Any student planning to pursue a Graduate Assistantship should apply by March 15 to be considered for admission in the Fall semester and October 1 for the Spring semester.

To be considered for admission, the applicant must:

1. Possess a baccalaureate degree from an accredited college or university.
2. Have earned a grade point average of at least 3.00 on a scale of 4.00 and achieved an acceptable score on the GRE. The admissions committee reserves the right to make exceptions for candidates presenting special circumstances.
3. Submit a letter of purpose for graduate study to the Coordinator of Graduate Studies in Criminology and Criminal Justice that is no more than one typed single-spaced page in length.
4. Submit two letters of recommendation.

Program Requirements

1. A total of 30 semester hours of graduate work plus the completion and defense of a thesis, or 33 semester hours of graduate work without a thesis with courses taken in both Tool and Foundation Components. NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Satisfactory completion of the following core curriculum:

Tool Component: (6 credit hours)

CJUS 7128 - Rsrch Mthds Crim Justce **

(3) Principles of social science research as applied to the study of the criminal justice system; sampling techniques and research strategies; emphasis on the development of research skills enabling the student to conduct an independent research project. PREREQUISITE(S): ESCI (GEOG) 1010 or 1020 or 1301 or 3430 or 4201, or permission of instructor.

CJUS 7129 - Advanced Stat In Cj

(3) Introduction to intermediate and advanced topics related to statistical analysis of data from the National Archive of Criminal Justice Data; emphasis on Bureau of Justice Statistics data describing principal activities of the system and on complex data sets or those showing special promise for informing theoretical issues. PREREQUISITE(S): Permission of instructor.

or

SUAP 7100 - Public Policy Statistic

(3) Introduction to processes of conducting statistical analyses of data relevant to public issues, problems, and policies in the areas of public administration, criminal justice, planning, and health administration; particular emphasis on providing an understanding of statistical concepts and techniques necessary for empirical analysis and decision-making.

Foundation Component: (9 credit hours)

CJUS 7100 - CJ Administration **

(3) Examination of the structure and interrelationship of the major components of the criminal justice system, with an emphasis on the impact of social and political forces on roles and functions of criminal justice agencies. PREREQUISITE(S): one college-level MATH course, or permission of instructor.

CJUS 7161 - Intervention Strategies **

(3) Development of intervention, prevention, and suppression strategies by criminal justice agencies; role of social and political institutions and forces on design and implementation of strategies; emphasis on how design and implementation impact communities and residents. PREREQUISITE(S): Permission of instructor.

CJUS 7541 - Crim Theory **

(3) An overview of historical, sociological, biological, and economic theories of crime causation; particular attention will be paid to critically analyzing each of the theories presented in terms of research findings. PREREQUISITE(S): ESCI 6216 or permission of instructor.

Other Requirements

1. Students not previously having successfully completed a statistics course must register for a statistics course from a list approved by the department prior to registering for CJUS 7129 - Advanced Stat In Cj.
2. A minimum of 27 hours of coursework at the 7000 level, including thesis hours.
3. Up to nine hours of coursework may be taken outside the department with prior approval of the graduate coordinator.
4. Students will be allowed no more than six hours of credit toward the degree in non-classroom courses such as internships, individual directed studies, and reading courses.
5. Satisfactory performance on a comprehensive examination covering the major areas of criminology and criminal justice.

Retention Requirements

1. All students are required to maintain a GPA of at least 3.00. Should the student's GPA fall below that mark, a period of one semester will be allowed to correct the deficiency. At the discretion of the chair, the coordinator of graduate studies, and the Assistant Vice Provost for Graduate Studies, this period may be extended one additional semester.
2. Any student receiving a grade of D or F in a required course in the core curriculum will be terminated from the program.

Early Childhood Licensure (PreK-3), (MAT)

Master of Arts in Teaching (MAT) Degree Program

MAT Program Admission

Applicants must complete admissions requirements to be admitted. **All admissions requirements must be met prior to being admitted into the MAT program.** MAT admission requirements are designed to be both competitive and selective, to be knowledge and performance-based, to be clear and consistent, to maintain diversity, and to meet or exceed undergraduate requirements and minimum state requirements.

To be admitted to the MAT program a candidate must:

1. Take and pass the Core Academics Skills for Educations (CORE) Writing. If the GRE has been taken, the student may have the CORE waived if the scores are appropriate (verbal 143, quantitative 138, writing 3.5) and are less than 5 years old.

2. Take and pass the Praxis II Content Knowledge Exam required for the teacher candidate's licensure area. Please refer to http://www.tn.gov/education/section/licensing to verify what exam should be taken.

   Submit an electronic Graduate Admissions Application and include the following:
   1. An official transcript reflecting an earned bachelor's degree with a 3.0 or higher grade point average from an accredited institution. Applicants with a successful professional career may appeal this grade point average requirement. Documentation of a "successful professional career" is necessary and may include, but is not limited to, items such as an administrators' letter of recommendation, teacher evaluations, lesson plans, teaching video, etc.
   2. Passing scores on the CORE Academic Skills for Educators: Writing (162)
   3. Passing scores on the Praxis II Content Knowledge Exam for the teacher candidate's licensure area they plan to teach.
3. Submit the ICL department MAT application (http://www.memphis.edu/icl/docs/mat-application.doc) to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152) along with copies of the CORE and Praxis II Content Knowledge scores.

Teacher Education Program (TEP) Admission

1. Students who plan to pursue a graduate program of studies leading to teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). Students are encouraged to apply for admission into TEP as soon as they enroll in any College of Education courses.
2. TEP admissions deadlines are September 15 for fall and January 31 for spring.
3. Requirements for provisional admission into TEP include:
   1. A grade point average of 3.25 at the graduate level and undergraduate grade point average of 3.0 or higher;
   2. Pass all sections of the CORE Academic Skills for Educators;
   3. Pass the Praxis II Content Knowledge Exam required by the State of Tennessee for the licensure area being pursued.
   4. TBI Background Check
   5. Completion of teacher aptitude survey
4. Requirements for full admission to TEP must be completed prior to the Clinical Teaching Semester and/or the semester candidates enroll in ICL 7993. They include:
   1. 3.25 graduate grade point average
   2. Passed Praxis II licensure exams

Passing scores on all required Praxis II Licensure Exams for Licensure and Graduation: Candidates participating in the Clinical Teaching Semester and/or ICL 7993 must submit a successful Teacher Performance Assessment (edTPA). Candidates who seek a Practitioner License must have a composite of 3.0 on the Teacher Evaluation used in their employing district.

Students must be provisionally admitted to the Teacher Education Program (TEP) before completing all Level I courses and starting Level II courses. (Level I Professional Core courses provide requisite foundations for teaching and should be completed before taking Level II Professional Specialization courses that focus on specialized strategies for teaching and learning in educational environments).

Students who do not apply to TEP or fail to maintain criteria during the program will not be allowed to continue in the program.

NOTE: MAT admission, TEP admission, and Graduate School admission are separate procedures.

Program Requirements

Students seeking licensure and the MAT degree must take a minimum of 30-46 graduate semester hours, depending on program and licensure area. Minimum hours may increase depending on licensure requirements. Students who are

employed by a school district on a Practitioner License may have the Level III (clinical teaching semester) waived if they provide the necessary documentation to verify one year of successful teaching experience in their area of licensure with a composite Teacher Evaluation Score of 3.0 or higher. Students in this category should contact the Teacher Education Office in 202 Ball Hall for specific requirements. Please note that all initial licensure candidates, including candidates who on a Job-Embedded Practitioners License, must take ICL 7993, either along with clinical teaching semester or the last semester before applying for license if working on a Practitioner License. This course serves as the culminating experience and will require successful completion of the Teacher Performance Assessment (edTPA) to be able to be recommended for licensure.

Early Childhood Licensure Program Requirements

Students seeking Early Childhood Licensure (PreK-3) and the MAT degree must complete the following requirements:

Early Childhood (PreK-3) Level I Licensure Requirements:

ECED 6510 - Erly Chld Prgms/Pr

(3) Applying professional knowledge to early childhood education values and principles, programs and practices, issues, problems, and trends; exploring early childhood teacher roles and responsibilities through observations in multicultural early childhood program settings. Field experience is required. PREREQUISITE(S): TEP admission or permission of instructor.

EDPR 7110 - Erly Chldhd Dvlpmnt

(3) Introduction to contemporary theories, research and issues in young children's physical, cognitive, social, and emotional development with an emphasis on the cultural nature of development.

ICL 7106 - Prof/Eth Prac Inclusive Class **

(3) Education policy and practice: accountability, ethics, advocacy, and social challenges. Working with families and community stakeholders is highlighted. Instructional planning includes creating individual education plans, individual family service plans and transition planning. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

IDT 7061 - Instructional Design & EdTech **

(3) Computers and technology in the instructional process, including problem solving using computer tools; technological applications for the classroom; uses for technology in different content areas.

Early Childhood Level II and III Licensure Requirements:

ECED 6520 - Pln/Fclt Scl Lrng/Dev

(3) Planning, implementing, and evaluating programs to facilitate young children's social learning from birth-age 8; socialization, social science skills, knowledge, and dispositions in context of integrating content instruction and learning. Field experience is required. PREREQUISITE(S): TEP admission or permission of instructor.

ECED 6530 - Pln/Fclt Math/Sci Lrng

(3) Provides knowledge, skills, and dispositions necessary to plan for and facilitate development and learning of physical, logico-mathematical, and social knowledge of mathematics and science for children from birth through 8 years. Field experience is required. PREREQUISITE(S): TEP admission or permission of instructor.

ECED 6540 - Pln/Fclt Infnt/Tdlr Dev

(3) Models, principles, curriculum, and practices of developmentally appropriate infant/toddler caregiving; emphasis on teacher's knowledge of child development, skills, and dispositions necessary to foster infant and toddler development in group care settings. Field experience is required. PREREQUISITE(S): ECED 6510 and TEP admission or permission of instructor.

ECED 7102 - Obs/Asmt Intsv Chld Stg

(3) Advanced level course on assessing developmental perspectives on measurement and evaluation in early childhood years. Consideration is given to standardized tests, observations, checklists, rating scales, and tests designed by teachers; their advantages and disadvantages for use with young children; and professional ethical issues regarding evaluating young children. Field experience is required. PREREQUISITE(S): EDPR 7110

LITL 7553 - Literacy Dev K-4

(3) Teaching and assessing literacy development in grades K-4 with focus on major theories and current research. Additional field hours required. Restricted to students seeking licensure. PREREQUISITE(S): TEP admission.

ICL 7804 - Erly Chldhd Stu Tchg

(3-9) Includes student teaching experiences in both Pre-Kindergarten or Kindergarten, and Primary grades 1-3. COREQUISITE: ICL 7993. Grades of S, U, or I will be given.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Students are required to complete

Students are required to complete a minimum number of structured field experiences during the day in PreK-3 settings prior to clinical teaching semester. These field experiences will be incorporated into courses required for licensure.

MAT Degree requirements

MAT Degree requirements in addition to the above: EDPR 7521 and ICL 7993 (Professional Seminar & Teacher Performance Assessment-3 Hours).

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Other Requirements

1. All students seeking teacher licensure must successfully pass clinical teaching semester or must document successful completion of professional experience in lieu of clinical teaching semester.
    1. Students who are employed by a school district on a Practitioner License issued by the State of Tennessee may have the Level III clinical teaching semester waived if they provide the necessary documentation to verify one year of successful teaching experience and composite score of 3 or higher on the Teacher Evaluation used by their employing district. They must also be successful with the Teacher Performance Assessment (edTPA) to be recommended for licensure. Students in this category should contact the Licensure Coordinator for specific requirements.
    2. Students must enroll in the appropriate clinical teaching semester course during clinical teaching semester.
    3. Applications for clinical teaching semester must be filed one semester before clinical teaching semester.
    4. Application for documenting successful completion of professional experience in lieu of clinical teaching semester must be filed at the beginning of the first month of the semester in which the candidate plans to complete the approved academic program leading to final licensure. The Teacher Performance Assessment (edTPA) must be completed during the semester the candidate on a Practitioner License plans to apply for their Professional License.
2. Licensure in Tennessee requires acceptable scores on specified Praxis II Tests of pedagogy and teaching content knowledge.
3. Validation of methods courses is not permitted.

Retention

To remain in the Master of Arts in Teaching (MAT) and the Teacher Education Program (TEP) the student must maintain a graduate grade point average of 3.25. Failure to maintain a 3.25 GPA will result in termination of a candidate's TEP status and will result in academic probation in the MAT program.

Early Childhood/Special Education (PreK-3), (MAT)

The Early Childhood/Special Education-Early Childhood PreK-3 Licensure Program is designed to prepare MAT candidates to work with all young children including children with disabilities and developmental delays (0-8 years) within inclusive, diverse settings.

Admission Requirements

1. Teacher Education Program – All students must apply for Provisional admission to TEP by the deadline of their first semester of enrollment and fulfill all TEP requirements before the end of that semester. You must have a 3.0 undergraduate gpa to be provisionally admitted to TEP. Full Admission to TEP occurs the semester before you do your clinical teaching semester and requires a 3.25 graduate GPA and all Praxis II exams passed, including the Principles of Learning and Teaching.
2. Licensure Exams- You will have multiple Praxis II exams to take to be fully licensed, check http://www.memphis.edu/tep/praxis.htm, click on Praxis and use pulldown menu to find TN required tests. Everyone must take a Principles of Learning and Teaching Praxis II Exam.
3. Capstone Degree and Licensure Requirement. All teacher candidates must complete ICL 7993 - Professional Seminar ** to be recommended for licensure and to be awarded the MAT degree. During ICL 7993 each candidate will complete a nationally scored teacher performance assessment called edTPA. Candidates must meet the minimum established score on the edTPA. Failure to do so will result in a delay in your licensure recommendation. If unsuccessful, the candidate is responsible for resubmitting his/her edTPA, including the cost. The edTPA replaces the Masters Project.
4. Candidates must complete all Level One and Level Two courses and must pass all required PRAXIS II exams including the PLT exam prior to enrolling in the ICL 7808 - Clinical Teaching Semester course and/or ICL 7993.

Program Requirements

The Early Childhood/Special Education-Early Childhood PreK-3 Licensure Program includes the following existing Early Childhood Education, Special Education, Literacy, ICL, and EDPR courses:

EDPR 7111 - Child Psyc App To Educ **

(3) (EDPS 7111-8111) Major theories of child psychology and their implications for educational practices with the preschool and elementary school child.

LITL 7553 - Literacy Dev K-4

(3) Teaching and assessing literacy development in grades K-4 with focus on major theories and current research. Additional field hours required. Restricted to students seeking licensure. PREREQUISITE(S): TEP admission.

SPED 6601 - Student Phys/Health Dis

(3) Emphasizes physical and educational modifications to facilitate learning and vocational skills; examines accessibility, movement patterns, prosthetic and augmentative communication devices, and supportive medical procedures. Includes practicum with students with physical/health impairments.

ECED 6540 - Pln/Fclt Infnt/Tdlr Dev

(3) Models, principles, curriculum, and practices of developmentally appropriate infant/toddler caregiving; emphasis on teacher's knowledge of child development, skills, and dispositions necessary to foster infant and toddler development in group care settings. Field experience is required. PREREQUISITE(S): ECED 6510 and TEP admission or permission of instructor.

ECED 7101 - Early Child Teach/Learn

(3) Incorporates knowledge of child development, early childhood curriculum models, and instructional methodologies to more effectively meet educational needs of young children in diverse environments.

SPED 7221 - Behavior Mgmt Spec Ed **

(3) Methods of changing behaviors of individuals with mild to severe disabilities in various educational settings. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

ECED 7102 - Obs/Asmt Intsv Chld Stg

(3) Advanced level course on assessing developmental perspectives on measurement and evaluation in early childhood years. Consideration is given to standardized tests, observations, checklists, rating scales, and tests designed by teachers; their advantages and disadvantages for use with young children; and professional ethical issues regarding evaluating young children. Field experience is required. PREREQUISITE(S): EDPR 7110

SPED 7121 - Ed Prog Presc Ed/Disbl

(3) Methods involved in developmental assessment and educational planning for children with disabilities in pre-school years. PREREQUISITE(S): SPED 7000 OR SPED 7101-SPED 8101

SPED 7141 - Field Exper Early Child

(3-6) Observation and supervised experience in early childhood special education settings. PREREQUISITE(S): ECED 6540 and SPED 7121-SPED 8121 Grades of S, U, or I will be given.

ICL 7808 - Clinical Teaching Semester

(3-9) Full-time clinical placement appropriate to candidate's area of licensure providing opportunities to demonstrate professional competencies associated with successful teaching and student achievement. Capstone performance assessment required for successful completion. May be repeated for maximum of 12 hours PREREQUISITE(S): Admission to TEP, and passing all required licensure exams. COREQUISITE(S): ICL 7993

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Note:

For students who have a job embedded position, 6 hrs. of Clinical Teaching are waived.

Graduation Requirements

All graduating candidates enrolled in this MAT program of study must successfully complete:

- The 39 credit hours listed in the proposed program of study (including the Clinical Teaching Semester and Professional Seminar)
- Maintain a minimum 3.25 graduate GPA

- Pass the PRAXIS II Exams (Special Education for Knowledge and Application 5354 with a qualifying score of 151; Special Education Preschool Early Childhood 5691 with a qualifying score of 159; and Teaching Reading Elementary Education 5203 with a qualifying score of 162)

Earth Sciences - Archaeology Concentration, (MS)

MS Degree Program

Program objectives are: (1) ability to solve advanced Earth Science problems involving observations and measurements in the field and the laboratory; (2) attainment of advanced knowledge of Earth Science concepts and their application in one or more subdisciplines; and (3) preparation for professional employment or for entering a doctoral program in an Earth Science or a related field.

Program Requirements

A student may be required to make up deficiencies as determined by the student's advisory committee

Completion of at least 3 semester hours of graduate seminar coursework

Thesis

Completion and successful defense of a thesis (ESCI 7996): at least 6 semester hours. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

ESCI 7996 - Thesis

(1-6) Student must research, write, and defend a thesis on a topic approved by major professor and advisory committee. Grades of S, U, or IP will be given.

Completion of

ESCI 7000 - Art Of Earth Sciences

(3) Introduction to earth science research; includes project design, abstract and proposal preparation, and presentation skills.

At Least 1 of the Following Courses:

ESCI 6515 - Geographic Info Science

(3) (GEOG 6515) (Same as PLAN 6515) (GEOG 6515; same as PLAN 6515). Introduction to theoretical and practical understanding of fundamental GIS concept, capabilities, and applications with emphasis on nature of geographic data and issues of data input, data models, database design,spatial analysis, and data output using ArcGIS software.Three lecture, two laboratory hours per week. PREREQUISITE(S): Permission of department chair.

ESCI 6521 - Quantitative Methods

(3) (GEOG 6521) (Same as PLAN 6521) (GEOG 6521; same as PLAN 6521). Introduction to quantitative methods in spatial analysis.

ESCI 7310 - Archaeol Theory/Method

(3) (ANTH 7310) (ANTH 7310). History of archaeology and development of conceptual framework for archaeological data collection and interpretation; current theories and methods including use of allied specialties.

or

ESCI 7801 - Geog Thought & Mthdlgy

(3) (GEOG 7801) (GEOG 7801). Introduces student to major philosophies of geography and to methods of geographic research.

At least 22 hours of coursework at or above the 7000-level (including thesis), as well as the preparation of an acceptable written thesis proposal and oral presentation of thesis proposal.

Successful completion of a written Comprehensive Examination

Archaeology Concentration:

1. Completion of 12 semester hours of archeology graduate coursework. It is recommended that these 12 hours include courses in archaeological theory, methods, and fieldwork.
2. Completion of elective graduate coursework, in consultation with the student's advisory committee, to obtain a minimum total of 32 semester hours.

Earth Sciences - Geography Concentration, (MS)

MS Degree Program

Program objectives are: (1) ability to solve advanced Earth Science problems involving observations and measurements in the field and the laboratory; (2) attainment of advanced knowledge of Earth Science concepts and their application in one or more subdisciplines; and (3) preparation for professional employment or for entering a doctoral program in an Earth Science or a related field.

Program Requirements

A student may be required to make up deficiencies as determined by the student's advisory committee

Completion of at least 3 semester hours of graduate seminar coursework

Thesis

Completion and successful defense of a thesis: at least 6 semester hours.

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

ESCI 7996 - Thesis

(1-6) Student must research, write, and defend a thesis on a topic approved by major professor and advisory committee. Grades of S, U, or IP will be given.

Completion of:

ESCI 7000 - Art Of Earth Sciences

(3) Introduction to earth science research; includes project design, abstract and proposal preparation, and presentation skills.

At Least 1 of the Following Courses:

ESCI 6515 - Geographic Info Science

(3) (GEOG 6515) (Same as PLAN 6515) (GEOG 6515; same as PLAN 6515). Introduction to theoretical and practical understanding of fundamental GIS concept, capabilities, and applications with emphasis on nature of geographic data and issues of data input, data models, database design,spatial analysis, and data output using ArcGIS software.Three lecture, two laboratory hours per week. PREREQUISITE(S): Permission of department chair.

ESCI 6521 - Quantitative Methods

(3) (GEOG 6521) (Same as PLAN 6521) (GEOG 6521; same as PLAN 6521). Introduction to quantitative methods in spatial analysis.

ESCI 7310 - Archaeol Theory/Method

(3) (ANTH 7310) (ANTH 7310). History of archaeology and development of conceptual framework for archaeological data collection and interpretation; current theories and methods including use of allied specialties.

ESCI 7801 - Geog Thought & Mthdlgy

(3) (GEOG 7801) (GEOG 7801). Introduces student to major philosophies of geography and to methods of geographic research.

At least 22 hours of coursework at or above the 7000-level (including thesis), as well as the preparation of an acceptable written thesis proposal and oral presentation of thesis proposal.

Successful completion of a written Comprehensive Examination

Geography Concentration:

1. Completion of 12 semester hours of geography (ESCI) graduate coursework. It is recommended that these 12 hours include courses in: environmental and earth sciences; human-economic geography, and geographic techniques. Students not submitting acceptable undergraduate credit in quantitative methods or statistics will be required to take a quantitative methods or statistics course.
2. Completion of elective graduate coursework, in consultation with the student's advisory committee, to obtain a minimum total of 32 semester hours.

Earth Sciences - Geology Concentration, (MS)

MS Degree Program

Program objectives are: (1) ability to solve advanced Earth Science problems involving observations and measurements in the field and the laboratory; (2) attainment of advanced knowledge of Earth Science concepts and their application in one or more subdisciplines; and (3) preparation for professional employment or for entering a doctoral program in an Earth Science or a related field.

Program Requirements

A student may be required to make up deficiencies as determined by the student's advisory committee

Completion of at least 3 semester hours of graduate seminar coursework

Thesis

Completion and successful defense of a thesis: at least 6 semester hours.

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

ESCI 7996 - Thesis

(1-6) Student must research, write, and defend a thesis on a topic approved by major professor and advisory committee. Grades of S, U, or IP will be given.

Completion of:

ESCI 7000 - Art Of Earth Sciences

(3) Introduction to earth science research; includes project design, abstract and proposal preparation, and presentation skills.

At Least 1 of the Following Courses:

ESCI 6515 - Geographic Info Science

(3) (GEOG 6515) (Same as PLAN 6515) (GEOG 6515; same as PLAN 6515). Introduction to theoretical and practical understanding of fundamental GIS concept, capabilities, and applications with emphasis on nature of geographic data

and issues of data input, data models, database design,spatial analysis, and data output using ArcGIS software.Three lecture, two laboratory hours per week. PREREQUISITE(S): Permission of department chair.

ESCI 6521 - Quantitative Methods

(3) (GEOG 6521) (Same as PLAN 6521) (GEOG 6521; same as PLAN 6521). Introduction to quantitative methods in spatial analysis.

At least 22 hours of coursework at or above the 7000-level (including thesis), as well as the preparation of an acceptable written thesis proposal and oral presentation of thesis proposal.

Successful completion of a written Comprehensive Examination

Geology Concentration:

1. Completion of 12 semester hours of geology (ESCI) graduate coursework
2. Completion of elective graduate coursework, in consultation with the student's advisory committee, to obtain a minimum total of 32 semester hours.

Earth Sciences - Geophysics Concentration, (MS)

MS Degree Program

Program objectives are: (1) competence in a common core of material in geophysics that provides the basis for original research; (2) experience in data acquisition and analysis methods, and oral and written presentation of research results; (3) preparation for professional employment in geophysics or for entering a doctoral program.

Program Admission and Prerequisites

Applicants must apply to both The University of Memphis Graduate School (http://apply.memphis.edu/) and CERI (http://www.memphis.edu/ceri/study/admission.php). Prospective students, in addition to meeting the requirements for admission to the Graduate School, are required to present as a prerequisite for admission, a satisfactory record of undergraduate work in geophysics or a related field such as physics, engineering, mathematics, geology, or computer science. Normally, mathematics through differential equations will be required. Please see the CERI website for specific admission instructions.

Program Requirements

Course Work Requirements

Thirty two credit hours of graduate credit are required and subject to the following restrictions:

1. No more than 9 credit hours at the 6000 level may be counted toward the degree.
2. A minimum of 12 credit hours must be in courses numbered CERI 7102 - CERI 7405
3. A minimum of one seminar selected from CERI 7701, CERI 7702 or CERI 7703
4. 6 credit hours of CERI 7996 - Thesis also the maximum that can be applied to the 32 hour total

5. No more than 6 credit hours of Independent Study (CERI 7621) can be counted toward the degree

Comprehensive Examination

A written comprehensive examination will be administered by the student's graduate committee covering course work taken within the program just before the start of the third semester of residence. If the examination is not passed, it may be taken again after one additional semester of residence.

Thesis Option

A thesis must be submitted that is acceptable to the student's graduate committee. The Thesis can be based upon work done for CERI 7996 - Thesis, for which a maximum of 6 credit hours can be applied to the degree requirement.

Non-Thesis Option

If a non-thesis program is selected, a student must replace the 6 credit hours of CERI 7996 - Thesis with two additional CERI 7000 level courses. The Thesis is replaced by submission of a paper for publication in a refereed journal, earning 3 credit hours in Independent Study (CERI 7621). Thesis credits CERI 7996 - Thesis do not count toward the non-thesis degree.

The Advisory Committee

Upon admission, the student will be assigned a temporary committee consisting of three faculty members based upon research interests expressed in the application documents. A permanent advisor and committee must be selected at the start of the first Spring Break for students entering in the fall semester and the start of the first fall semester for students entering in the spring semester.

Final Oral Examination for the Thesis Option

The student's graduate committee will administer a final oral examination based upon the student's thesis after completion of all other requirements. This examination will be held two weeks after the student has distributed the thesis to the graduate committee and must occur at least one week before the deadline for submission of material to the Graduate School for review. If the oral examination is unsatisfactory, it must be repeated within one year and may not be repeated more than once.

Retention

A student pursuing the Master's degree may be terminated for any of the following reasons:

1. Failure to maintain a grade point average of 3.0 or above. A student who has a cumulative grade point average below 3.0 will be placed on probation. The Dean of the Graduate School must approve continuation in graduate school. Any person whose continuation is denied may appeal the decision to the University Council for Graduate Studies.
2. Failure to complete the degree requirements within six years of initial enrollment in the graduate program.
3. Failure to pass the Comprehensive Examination.
4. Failure to satisfy the graduate committee on the final oral examination.

Earth Sciences - Interdisciplinary Studies Concentration, (MS)

MS Degree Program

Program objectives are: (1) ability to solve advanced Earth Science problems involving observations and measurements in the field and the laboratory; (2) attainment of advanced knowledge of Earth Science concepts and their application in one or more subdisciplines; and (3) preparation for professional employment or for entering a doctoral program in an Earth Science or a related field.

Program Requirements

A student may be required to make up deficiencies as determined by the student's advisory committee

Completion of at least 3 semester hours of graduate seminar coursework

Thesis

Completion and successful defense of a thesis (ESCI 7996): at least 6 semester hours. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

ESCI 7996 - Thesis

(1-6) Student must research, write, and defend a thesis on a topic approved by major professor and advisory committee. Grades of S, U, or IP will be given.

Completion of

ESCI 7000 - Art Of Earth Sciences

(3) Introduction to earth science research; includes project design, abstract and proposal preparation, and presentation skills.

At Least 1 of the Following Courses:

ESCI 6515 - Geographic Info Science

(3) (GEOG 6515) (Same as PLAN 6515) (GEOG 6515; same as PLAN 6515). Introduction to theoretical and practical understanding of fundamental GIS concept, capabilities, and applications with emphasis on nature of geographic data and issues of data input, data models, database design,spatial analysis, and data output using ArcGIS software.Three lecture, two laboratory hours per week. PREREQUISITE(S): Permission of department chair.

ESCI 6521 - Quantitative Methods

(3) (GEOG 6521) (Same as PLAN 6521) (GEOG 6521; same as PLAN 6521). Introduction to quantitative methods in spatial analysis.

ESCI 7310 - Archaeol Theory/Method

(3) (ANTH 7310) (ANTH 7310). History of archaeology and development of conceptual framework for archaeological data collection and interpretation; current theories and methods including use of allied specialties.

or

ESCI 7801 - Geog Thought & Mthdlgy

(3) (GEOG 7801) (GEOG 7801). Introduces student to major philosophies of geography and to methods of geographic research.

At least 22 hours of coursework at or above the 7000-level (including thesis), as well as the preparation of an acceptable written thesis proposal and oral presentation of thesis proposal.

Successful completion of a written Comprehensive Examination

Interdisciplinary Studies Concentration:

1. Completion of 12 semester hours of archaeology, geography, geology or geophysics coursework.
2. Completion of elective graduate coursework, in consultation with the student's advisory committee, to obtain a minimum total of 32 semester hours

Earth Sciences, (MA)

MA Degree Program

Program objectives are the attainment and development of depth of the Earth Sciences knowledge, and the ability to apply this knowledge to student's career development, in at least one of the following areas: (1) geography; (2) geology; (3) archaeology; (4) environmental sciences; (5) interdisciplinary studies. Students pursuing an MS degree may not apply to switch to the MA degree until their third year in the Earth Sciences program.

Program Requirements

1. Students may be required to make up deficiencies as determined by the student's advisory committee.
2. Completion of ESCI 7000, and at least one of the following: ESCI 6515, ESCI 6521, ESCI 7301, ESCI 7310, or ESCI 7801. Additionally, other courses within Earth Sciences and/or outside the department as approved by the advisory committee to total a minimum of 36 graduate credits.
3. Satisfactory completion of 3 credit hours of ESCI 6700 - Earth Science Internshp or ESCI 7990 - Research/Earth Science.
4. A minimum of 70% of the total required hours must be 7000 courses. No more than a total of 12 hours of workshop courses and independent study courses may be applied to a Master's degree.
5. Successful completion of a written Comprehensive Examination.
6. Successful completion of a public oral presentation regarding professional experience or internship as it links to the earth sciences.

Economics, (MA)

Master of Arts in Economics

The Department of Economics offers a graduate program leading to the Master of Arts degree. For program admissions, prerequisites, and degree requirements see the departmental listing in this section.

MA Degree Program

Program objectives are: (1) achievement of a solid foundation of knowledge in economic theory and economic analysis; (2) acquisition of an advanced level of knowledge in either applied economics or academic economics; (3) acquisition of the quantitative skills to effectively address research problems and the ability to make significant professional contributions as a professional economist or within a functional area of business; and (4) ability to compete effectively for professional positions in the private or public sectors

Program Admission

1. Satisfactory performance on the Graduate Record Examination or the Graduate Management Admission Test.
2. Satisfactory undergraduate grade point average.

Program Prerequisites

At minimum, all students should have successfully completed at least one semester of calculus (MATH 1830, MATH 1910 or equivalent) and at least one semester of statistics (SCMS 2710, MATH 1530 or equivalent). It is suggested that prospective students also complete: a second semester of calculus (MATH 1920 or equivalent); courses in intermediate microeconomics (ECON 3310 or equivalent) and intermediate macroeconomics (ECON 3320 or equivalent); a course in matrix or linear algebra (MATH 3242 or equivalent).

Program Requirements

Each candidate has the choice of taking a written, comprehensive examination or writing a thesis at the end of course work. Regardless of which option is chosen, 18 hours of the student's course work must be devoted to the following: ECON 6810, ECON 7300, ECON 7310, ECON 7315 , ECON 7320, and ECON 7810.

1. Examination Option: Each candidate must complete a minimum of 33 semester hours of graduate course work, exclusive of MA program prerequisite courses and MBA Essential Foundations courses. The 33 hours must include a minimum of 21 hours of approved course work in Economics. The remaining 12 hours, with approval of the department graduate advisor, may be taken in collateral courses. At least 24 hours must be in courses designated for graduate students (7000 level or above). Each candidate must pass a written examination in economic theory. A maximum of two attempts within a year of the first attempt is permitted.
2. Thesis Option: Each candidate must complete a minimum of 30 semester hours of graduate course work, exclusive of MA program prerequisite courses, MBA Essential Foundations courses, and Thesis Hours. The 30 hours must include a minimum of 18 hours of approved course work in Economics. The remaining 12 hours, with approval of the department graduate advisor, may be taken in collateral courses. At least 21 hours must be in courses designated for graduate students (7000 level or above). Each student will register for at least 3 hours (and not more than 6 hours), write and defend a thesis under the guidance of a faculty committee. A student who fails to complete the thesis after having registered for the maximum degree credit allowable must register for thesis credit each academic semester until the thesis is completed. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Educational Psychology and Research, (MS)

MS Degree Programs

The Master's degree programs in Educational Psychology and Research prepare educational leaders for scholarly expertise with a knowledge base for critical thinking in human development across the life span, cognitive processes applied to education, educational research methods and statistics.

Program objectives are: (1) ability to contribute to the professional field through research presentations and writing; (2) preparation for careers as academicians in institutions of higher education, applied researchers and/or scholarly work; (3) development of leadership skills for professional organizations and the ability to contribute to the field through professional service activities.

Program Admission

1. Applicants must submit a completed application packet, including:
    1. application to the Graduate School,
    2. application to the program,
    3. official transcripts for undergraduate and graduate studies,
    4. official report of Graduate Record Examination (GRE) scores,
    5. a 500 word statement of purpose and intended area of concentration,
    6. three letters of recommendation.
2. Applicants to the MS program are evaluated two times a year. All application information must be received by November 1 for spring semester admission, and April 1 for fall semester admission. Applications for international students are only accepted in the fall (November 1 deadline). Late submissions may be considered on an individual basis, but will normally be deferred to the following semester. The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE scores, personal goals statement, relevant employment history, and letters of recommendation. Admission forms are available in the departmental office.

Program Requirements

All programs are a minimum of 36 semester hours

MS program core (12 credits):

Research (6 credits):

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

and

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

or

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

Learning & Cognition (3 credits):

EDPR 7121 - Learning & Cognition

(3) (EDPS 7121-8121) Major theories of learning and cognition, intelligence theories, and their application to learning environments.

Human Development (3 credits):

at least one from

EDPR 7112 - Adol Psyc Appld Educ **

(3) (EDPS 7112-8112) Advanced study of theories and research on the physical, psychological, social, cognitive, and cultural aspects of adolescent development; implications for education, treatment, secondary school personnel, and others who live and work with adolescents.

EDPR 7116 - Chldhd Dvlpmnt in Digital Age

(3) Current issues, research and theories about the development of children (ages 0-12) in relation to video games, Internet use, digital literacy, digital citizenship and learning in school. The course uses a hands-on/minds-on approach through collaborative work.

EDPR 7117 - Life-Span Human Dev **

(3) Theories and research on the physical, psychological/emotional, social, cognitive, and cultural aspects of human development across the life span.

Concentration in Educational Psychology or Educational Research (15 credits):

Courses to be taken within the area of concentration will be planned with the major advisor.

Electives to be taken outside of the major (6 credits)

Research project/thesis (3-6 credits-EDPR 7000 or EDPR 7996):

Each MS student is expected to complete an independent research project or thesis (available to on-campus students only) as a culminating experience during their final semester. Students choosing either option should meet with their advisor to select the topic and timeline for their project/thesis. Student choosing the thesis option are required to complete an Oral Examination.

NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

EDPR 7000 - Research Project

(1-6) Research project that is designed and completed under direction of student's advisor; capstone experience for Master's degree program. Grades of S, U, or IP will be given. May be repeated for a maximum of 6 credit hours

or

EDPR 7996 - Thesis

(1-6) Prospectus must be approved by the faculty committee directing this research study. Application for writing thesis must be filed with the Director of Graduate Studies. Grades of S, U, or IP will be given. PREREQUISITE(S): Permission of instructor.

MS Comprehensive Examination

Upon completion of the program each MS degree student will complete a comprehensive examination. Students choosing the research project option will have an examination unifying knowledge across the courses taken in the program. This examination may be written or oral. Students choosing the thesis option will have their oral defense serve as the comprehensive examination

Electrical and Computer Engineering - Computer Engineering Concentration, (MS)

MS Degree Program

Admission Requirements

The Herff College of Engineering has established uniform admission criteria for all graduate programs. More information can be found on the department website (http://www.memphis.edu/eece).

Program Requirements

1. Students pursuing the Master of Science in Electrical and Computer Engineering must take EECE 7001, either EECE 7100 or EECE 7251, and elect to pursue either a computer engineering or an electrical engineering concentration (multiple concentrations are not permitted). A student can count a maximum of 6 hours of credit for EECE 7991 and EECE 7992.

EECE 7001 - Professional Develpmnt

(3) Electrical and computer engineering research methods, development issues and ethics in academia and engineering practice. Students learn how to conduct literature search, write progress reports, publications and prepare and give presentations. PREREQUISITE(S): Permission of instructor.

EECE 7100 - Linear Sys Analysis

(3) Systems concepts and mathematical tools including Z-transforms; analysis of systems, both continuous and discrete, in the time domain and frequency domain. PREREQUISITE(S): Permission of instructor. Grades of A-F, or IP will be given.

or

EECE 7251 - Random Signals & Noise

(3) Statistical methods for describing and analyzing random signals and noise; auto-correlation, cross-correlation, and spectral density functions; optimal linear filter theory. PREREQUISITE(S): ENGL 6618, or permission of instructor.

EECE 7991 - Independent Study I

(1-3) Independent investigation of a problem selected in consultation with instructor; report required. Repeatable by permission. Grades of A-F, or IP will be given. Repeatable by permission

EECE 7992 - Independent Study II

(1-3) Independent investigation of a problem selected in consultation with instructor; report required. Repeatable by permission. Grades of A-F, or IP will be given. Repeatable by permission

Computer Engineering Concentration:

9 hours selected from the following courses:

EECE 7012 - Fndtns/Software Engr

(3) (Same as COMP 7012-COMP 8012) (Same as COMP 7012-8012). Project management; Unified Process; software disciplines (requirements, analysis, design, implementation, testing); Unified Modeling Language; design patterns; mapping designs to code. Students work in teams to develop a significant software system. PREREQUISITE(S): Permission of instructor.

EECE 7214 - Image Processing

(3) Theory and applications of digital image processing, sampling, quantization, enhancement and restoration of images; use of segmentation, descriptors, and pattern recognition; architectures for image processing. PREREQUISITE(S): Written proposal and permission of instructor

EECE 7216 - Computer Vision

(3) Principles and applications of computer vision, advanced image processing techniques as applied to computer vision, shape analysis, and object recognition.

EECE 7217 - Multimedia Info Process

(3) Multimedia information retrieval models, advanced processing techniques, multimedia content analysis, pattern mining for information retrieval, query formation, intelligent query processing, and high dimensional data visualization.

EECE 7252 - Information Theory

(3) Introduction to entropy and channel capacity, group codes, block codes, cyclic codes; application of coding techniques to improve system reliability; error correcting codes.

EECE 7261 - Arch & Design Dig Comp

(3) Advanced logical design of hardware and organization structure of digital computers; architectural properties and control strategies; processor and memory organizations, addressing and interrupt structures, and I/O controllers; hardware and software trade-offs, and speed considerations.

EECE 7262 - Logicl Fndtns Artf Intl

(3) (Same as COMP 7750-8750) (Same as COMP 7750-8750)Logical foundations of artificial intelligence, predicate calculus, declarative knowledge, inference, resolution strategies, non-monotonic reasoning, induction, probabilistic logic, belief, state and change, and intelligent-agent architecture.

EECE 7266 - Prolog Proc/Intel Syst

(3) The engineering of intelligent systems using the PROLOG language for implementation; advanced PROLOG processing, hardware, and software architecture for PROLOG-based machines.

EECE 7267 - Artfcl Intel In Lisp

(3) Fundamentals of LISP programming, symbolic processing, searching, goal reduction, matching, problems and problem spaces, problem solving methods, and AI applications.

EECE 7268 - Obj Oriented Data Engr

(3) Design of hardware and software from a perspective of interacting objects that combine data and behavior; engineering data models, analysis and design processes, implementation, large engineering system issues, and reverse engineering; object-oriented database design for CASE, CAD/CAM, and related engineering database environments.

EECE 7273 - Modern Microprocessors

(3) Introduction to capabilities of state-of-the-art microprocessors and their supporting components.

EECE 7720 - Artificial Intelligence

(3) (Same as COMP 7720-COMP 8720) (Same as COMP 7720-8720). Central issues of artificial intelligence, including game playing, planning, machine learning, common-sense reasoning, perception and action; implementations in LISP.

EECE 7740 - Neural Networks

(3) (Same as COMP 7740-COMP 8740) (Same as COMP 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, back-propagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

or

- Approved computer engineering special topics courses

Other Requirements

1. Thesis option: 30 semester hours, including a thesis (6 semester hours). An average grade of 3.00 must be maintained in all Electrical and Computer Engineering graduate coursework. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
    1. No more than 9 semester hours may be taken outside the department. Advisor's approval is required.
    2. At least 21 hours at the 7000 level are required, of which at least 18 hours must be in Electrical and Computer Engineering.
2. Non-thesis option: 33 semester hours. An average grade of 3.00 must be maintained in all Electrical and Computer Engineering graduate coursework.
    1. No more than 9 semester hours may be taken outside the department. Advisor's approval is required.
    2. Each student will be required to complete EECE 7993.
    3. At least 23 semester hours at the 7000 level required, of which at least 18 hours must be in Electrical and Computer Engineering.
3. All students are required to pass a comprehensive exam during their last semester.

Retention Requirements

All students enrolled in the Department of Electrical and Computer Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Electrical Engineering.

1. Students who maintain a cumulative grade point average of 3.00 ("B") or higher will be considered to be in good standing if no more than 7 hours of "C-," "C" or "C+" or lower have been earned. (See item 3 below and grading system here).
2. Students must maintain a cumulative grade point average of 3.00 at the end of each semester of enrollment in all course work at The University of Memphis, including all Electrical and Computer Engineering course work and all 7000 level course work. Any student not meeting these conditions will be placed on probation by the department.
3. A student will be permitted no more than 7 hours of "C-," "C" or "C+" or lower in graduate courses taken at The University of Memphis. A student will be dismissed at the end of the semester in which a third grade of "C-," "C" or "C+" or lower is earned.
4. Courses applied to the MS degree program requirements must have the advisor's approval.

Electrical and Computer Engineering - Electrical Engineering Concentration, (MS)

MS Degree Program

Admission Requirements

The Herff College of Engineering has established uniform admission criteria for all graduate programs. More information can be found on the department website (http://www.memphis.edu/eece).

Program Requirements

1. Students pursuing the Master of Science in Electrical and Computer Engineering must take EECE 7001, either EECE 7100 or EECE 7251, and elect to pursue either a computer engineering or an electrical engineering concentration (multiple concentrations are not permitted). A student can count a maximum of 6 hours of credit for EECE 7991 and EECE 7992.

EECE 7001 - Professional Develpmnt

(3) Electrical and computer engineering research methods, development issues and ethics in academia and engineering practice. Students learn how to conduct literature search, write progress reports, publications and prepare and give presentations. PREREQUISITE(S): Permission of instructor.

EECE 7100 - Linear Sys Analysis

(3) Systems concepts and mathematical tools including Z-transforms; analysis of systems, both continuous and discrete, in the time domain and frequency domain. PREREQUISITE(S): Permission of instructor. Grades of A-F, or IP will be given.

or

EECE 7251 - Random Signals & Noise

(3) Statistical methods for describing and analyzing random signals and noise; auto-correlation, cross-correlation, and spectral density functions; optimal linear filter theory. PREREQUISITE(S): ENGL 6618, or permission of instructor.

EECE 7991 - Independent Study I

(1-3) Independent investigation of a problem selected in consultation with instructor; report required. Repeatable by permission. Grades of A-F, or IP will be given. Repeatable by permission

EECE 7992 - Independent Study II

(1-3) Independent investigation of a problem selected in consultation with instructor; report required. Repeatable by permission. Grades of A-F, or IP will be given. Repeatable by permission

Electrical Engineering Concentration:

must take 9 hours selected from the following courses:

EECE 7211 - Adv Elctrmgntc Field

(3) Advanced studies in electromagnetic fields, radiation, and propagation of energy. PREREQUISITE(S): Permission of instructor.

EECE 7215 - Digital Signal Proc

(3) Application of discrete transform theory to spectral analysis, digital filters, random signal analysis. PREREQUISITE(S): Written proposal and permission of instructor

EECE 7230 - Solid State Devices

(3) Internal function, limitations, and applications of unique components found in modern telecommunication designs; electro-optic devices, detectors, resonators, antenna, and negative resistance components.

EECE 7231 - Communicatn Electronics

(3) Analysis and design of small and large signal amplifiers; multistage amplifiers; analysis and design of oscillators; feedback and stability in amplifier design.

EECE 7232 - Analog Comm Circ Dsgn

(3) Design and applications of analog communication systems; transmitter and receiver technologies.

EECE 7233 - Power Electronics

(3) Power semiconductor switches, rectifiers, phase-controlled rectifiers, and other power control devices; power control applications.

EECE 7243 - Fourier Optics

(3) Analysis of two-dimensional linear systems, scalar diffraction theory, Fresnel and Fraunhofer diffraction; Fourier transforming properties of lenses, spatial frequency analysis of optical systems, optical information processing and holography. PREREQUISITE(S): permission of instructor.

EECE 7245 - Statistical Optics

(3) Techniques for describing random processes applied to generation, propagation, imaging, and detection of light; statistical properties of light, coherence, imaging with inhomogeneous media, statistics of photoelectric detection of light. PREREQUISITE(S): ENGL 3601 or permission of instructor.

EECE 7253 - Wireless Telecommunictn

(3) Principles of wireless telecommunication systems with emphasis on cellular telephony and on wireless data communication; requirements and standards along with physical layer properties and multiple access techniques including spread spectrum techniques (CDMA).

EECE 7254 - Modern Telecom

(3) Implementation and standards for communications systems; cellular telephony standards and/or wireless data standards utilizing CDMA techniques.

EECE 7255 - Digital Communications

(3) Source coding, signal representations, optimum receivers for A WGN channels, channel capacity issues, block codes, and convolution codes.

EECE 7521 - Adv Control Syst Engr

(3) Cascade and feedback compensation; analysis and control of nonlinear systems; introduction to optimal techniques.

EECE 7522 - Stoch/Adapt Cntrl Thry

(3) Principles and applications of deterministic and statistical design; random processes in automatic control.

EECE 7523 - Thry Optical Cntrol Sys

(3) State variable description of systems, maximum principle of Pontryagin, optimization of linear systems with quadratic performance measures, time and field optimal systems.

EECE 7524 - Parameter Est & Cntrls

(3) Principles of parameter estimation and application to systems engineering.

EECE 7269 - Machine Learning & Applicatns

(3) Data representation; similarity measures, linear and non-linear data projection; discriminate analysis; classifier design; supervised and unsupervised learning; evolutionary computing; and machine learning and applications.

or

- Approved electrical engineering special topics courses

Other Requirements

1. Thesis option: 30 semester hours, including a thesis (6 semester hours). An average grade of 3.00 must be maintained in all Electrical and Computer Engineering graduate coursework. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
    1. No more than 9 semester hours may be taken outside the department. Advisor's approval is required.
    2. At least 21 hours at the 7000 level are required, of which at least 18 hours must be in Electrical and Computer Engineering.
2. Non-thesis option: 33 semester hours. An average grade of 3.00 must be maintained in all Electrical and Computer Engineering graduate coursework.
    1. No more than 9 semester hours may be taken outside the department. Advisor's approval is required.
    2. Each student will be required to complete EECE 7993.
    3. At least 23 semester hours at the 7000 level required, of which at least 18 hours must be in Electrical and Computer Engineering.
3. All students are required to pass a comprehensive exam during their last semester.

Retention Requirements

All students enrolled in the Department of Electrical and Computer Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Electrical Engineering.

1. Students who maintain a cumulative grade point average of 3.00 ("B") or higher will be considered to be in good standing if no more than 7 hours of "C-," "C" or "C+" or lower have been earned. (See item 3 below and grading system here).

2. Students must maintain a cumulative grade point average of 3.00 at the end of each semester of enrollment in all course work at The University of Memphis, including all Electrical and Computer Engineering course work and all 7000 level course work. Any student not meeting these conditions will be placed on probation by the department.
3. A student will be permitted no more than 7 hours of "C-," "C" or "C+" or lower in graduate courses taken at The University of Memphis. A student will be dismissed at the end of the semester in which a third grade of "C-," "C" or "C+" or lower is earned.
4. Courses applied to the MS degree program requirements must have the advisor's approval.

Electrical and Computer Engineering – No Concentration, (MS)

MS Degree Program

Admission Requirements

The Herff College of Engineering has established uniform admission criteria for all graduate programs. More information can be found on the department website (http://www.memphis.edu/eece).

Program Requirements

Students pursuing the Master of Science in Electrical and Computer Engineering must take EECE 7001 and either EECE 7100 or EECE 7251. A student can count a maximum of 6 hours of credit for EECE 7991 and EECE 7992.

EECE 7001 - Professional Develpmnt

(3) Electrical and computer engineering research methods, development issues and ethics in academia and engineering practice. Students learn how to conduct literature search, write progress reports, publications and prepare and give presentations. PREREQUISITE(S): Permission of instructor.

EECE 7100 - Linear Sys Analysis

(3) Systems concepts and mathematical tools including Z-transforms; analysis of systems, both continuous and discrete, in the time domain and frequency domain. PREREQUISITE(S): Permission of instructor. Grades of A-F, or IP will be given.

or

EECE 7251 - Random Signals & Noise

(3) Statistical methods for describing and analyzing random signals and noise; auto-correlation, cross-correlation, and spectral density functions; optimal linear filter theory. PREREQUISITE(S): ENGL 6618, or permission of instructor.

EECE 7991 - Independent Study I

(1-3) Independent investigation of a problem selected in consultation with instructor; report required. Repeatable by permission. Grades of A-F, or IP will be given. Repeatable by permission

EECE 7992 - Independent Study II

(1-3) Independent investigation of a problem selected in consultation with instructor; report required. Repeatable by permission. Grades of A-F, or IP will be given. Repeatable by permission

Other Requirements

1. Thesis option: 30 semester hours, including a thesis (6 semester hours). An average grade of 3.00 must be maintained in all Electrical and Computer Engineering graduate coursework. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
    1. No more than 9 semester hours may be taken outside the department. Advisor's approval is required.
    2. At least 21 hours at the 7000 level are required, of which at least 18 hours must be in Electrical and Computer Engineering.
2. Non-thesis option: 33 semester hours. An average grade of 3.00 must be maintained in all Electrical and Computer Engineering graduate coursework.
    1. No more than 9 semester hours may be taken outside the department. Advisor's approval is required.
    2. Each student will be required to complete EECE 7993.
    3. At least 23 semester hours at the 7000 level required, of which at least 18 hours must be in Electrical and Computer Engineering.
3. All students are required to pass a comprehensive exam during their last semester.

Retention Requirements

All students enrolled in the Department of Electrical and Computer Engineering are expected to attain high academic achievement in all courses taken. The criteria listed below will be used to determine retention status of students enrolled in the program leading to a Master of Science degree in Electrical Engineering.

1. Students who maintain a cumulative grade point average of 3.00 ("B") or higher will be considered to be in good standing if no more than 7 hours of "C-," "C" or "C+" or lower have been earned. (See item 3 below and grading system here).
2. Students must maintain a cumulative grade point average of 3.00 at the end of each semester of enrollment in all course work at The University of Memphis, including all Electrical and Computer Engineering course work and all 7000 level course work. Any student not meeting these conditions will be placed on probation by the department.
3. A student will be permitted no more than 7 hours of "C-," "C" or "C+" or lower in graduate courses taken at The University of Memphis. A student will be dismissed at the end of the semester in which a third grade of "C-," "C" or "C+" or lower is earned.
4. Courses applied to the MS degree program requirements must have the advisor's approval.

Elementary Licensure (K-5), (MAT)

Master of Arts in Teaching (MAT) Degree Program

MAT Program Admission

Applicants must complete admissions requirements to be admitted. **All admissions requirements must be met prior to being admitted into the MAT program.** MAT admission requirements are designed to be both competitive and selective, to be knowledge and performance-based, to be clear and consistent, to maintain diversity, and to meet or exceed undergraduate requirements and minimum state requirements.

To be admitted to the MAT program a candidate must:

1. Take and pass the Core Academics Skills for Educations (CORE) Writing. If the GRE has been taken, the student may have the CORE waived if the scores are appropriate (verbal 143, quantitative 138, writing 3.5) and are less than 5 years old.
2. Take and pass the Praxis II Content Knowledge Exam required for the teacher candidate's licensure area. Please refer to http://www.tn.gov/education/section/licensing to verify what exam should be taken.

   Submit an electronic Graduate Admissions Application and include the following:
   1. An official transcript reflecting an earned bachelor's degree with a 3.0 or higher grade point average from an accredited institution. Applicants with a successful professional career may appeal this grade point average requirement. Documentation of a "successful professional career" is necessary and may include, but is not limited to, items such as an administrators' letter of recommendation, teacher evaluations, lesson plans, teaching video, etc.
   2. Passing scores on the CORE Academic Skills for Educators: Writing (162)
   3. Passing scores on the Praxis II Content Knowledge Exam for the teacher candidate's licensure area they plan to teach.
3. Submit the ICL department MAT application (http://www.memphis.edu/icl/docs/mat-application.doc) to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152) along with copies of the CORE and Praxis II Content Knowledge scores.

Teacher Education Program (TEP) Admission

1. Students who plan to pursue a graduate program of studies leading to teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). Students are encouraged to apply for admission into TEP as soon as they enroll in any College of Education courses.
2. TEP admissions deadlines are September 15 for fall and January 31 for spring.
3. Requirements for provisional admission into TEP include:
   1. A grade point average of 3.25 at the graduate level and undergraduate grade point average of 3.0 or higher;
   2. Pass all sections of the CORE Academic Skills for Educators;
   3. Pass the Praxis II Content Knowledge Exam required by the State of Tennessee for the licensure area being pursued.
   4. TBI Background Check
   5. Completion of teacher aptitude survey
4. Requirements for full admission to TEP must be completed prior to the Clinical Teaching Semester and/or the semester candidates enroll in ICL 7993. They include:
   1. 3.25 graduate grade point average
   2. Passed Praxis II licensure exams

Passing scores on all required Praxis II Licensure Exams for Licensure and Graduation: Candidates participating in the Clinical Teaching Semester and/or ICL 7993 must submit a successful Teacher Performance Assessment (edTPA). Candidates who seek a Practitioner License must have a composite of 3.0 on the Teacher Evaluation used in their employing district.

Students must be provisionally admitted to the Teacher Education Program (TEP) before completing all Level I courses and starting Level II courses. (Level I Professional Core courses provide requisite foundations for teaching and should be completed before taking Level II Professional Specialization courses that focus on specialized strategies for teaching and learning in educational environments).

Students who do not apply to TEP or fail to maintain criteria during the program will not be allowed to continue in the program.

NOTE: MAT admission, TEP admission, and Graduate School admission are separate procedures.

Program Requirements

Students seeking licensure and the MAT degree must take a minimum of 30-46 graduate semester hours, depending on program and licensure area. Minimum hours may increase depending on licensure requirements. Students who are employed by a school district on a Practitioner License may have the Level III (clinical teaching semester) waived if they provide the necessary documentation to verify one year of successful teaching experience in their area of licensure with a composite Teacher Evaluation Score of 3.0 or higher. Students in this category should contact the Teacher Education Office in 202 Ball Hall for specific requirements. Please note that all initial licensure candidates, including candidates who on a Job-Embedded Practitioners License, must take ICL 7993, either along with clinical teaching semester or the last semester before applying for license if working on a Practitioner License. This course serves as the culminating experience and will require successful completion of the Teacher Performance Assessment (edTPA) to be able to be recommended for licensure.

Elementary Licensure Program Requirements

Students seeking Elementary Licensure (K-5) and the MAT degree must complete the following requirements:

Elementary (K-5) Level I Licensure Requirements:

ICL 7059 - Models of Instruction **

(3) Theory and research for instructional planning and assessing of selected models of instruction.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

EDPR 7111 - Child Psyc App To Educ **

(3) (EDPS 7111-8111) Major theories of child psychology and their implications for educational practices with the preschool and elementary school child.

IDT 7061 - Instructional Design & EdTech **

(3) Computers and technology in the instructional process, including problem solving using computer tools; technological applications for the classroom; uses for technology in different content areas.

Elementary Early Grades Level II and III Licensure Requirements:

ICL 7504 - Methods Math Elem

(3) Instructional techniques, curriculum, and materials for teaching mathematics to elementary school students. Field Experience: 10 hours. PREREQUISITE(S): Admission to TEP

ICL 7605 - Methods Elem Science

(3) Instruction techniques, curriculum, and materials for teaching science to elementary school students. Field experience: 10 hours. PREREQUISITE(S): Admission to TEP

ICL 7654 - Methods Elem Soc Studies

(3) Instruction techniques, curriculum, and materials for teaching social studies to elementary school students. Field experience: 10 hours. PREREQUISITE(S): Admission to TEP

ICL 7709 - Urban Lrng Environment

(3) Use of appropriate knowledge and skills for managing the total learning environment in school settings; emphasis on developing knowledge and skills that facilitate effective teaching through appropriate management techniques that are sensitive to the individual needs of students within culturally and economically diverse populations, and that encourage the involvement of parents and community leaders.

LITL 7553 - Literacy Dev K-4

(3) Teaching and assessing literacy development in grades K-4 with focus on major theories and current research. Additional field hours required. Restricted to students seeking licensure. PREREQUISITE(S): TEP admission.

LITL 7554 - Literacy Dev 5-8

(3) Furthering literacy development in grades 5-8 with emphasis on teaching and assessment grounded in current research and theory. Additional field hours required. Restricted to students seeking licensure. PREREQUISITE(S): TEP admission

ICL 7806 - Elem Student Tchg

(3-9) Includes student teaching, supervised practicum, and other similarly organized professional experiences; designed to complement on-campus course study with actual on-site professional experience. COREQUISITE: ICL 7993. Grades of S, U, or I will be given.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Elementary Early Grades students are required

Elementary Early Grades students are required to complete a minimum number of structured field experiences during the day in elementary school settings prior to clinical teaching semester. These field experiences will be incorporated into courses required for licensure.

MAT Degree requirements

MAT Degree requirements in addition to the above: EDPR 7521 and ICL 7993 (Professional Seminar & Teacher Performance Assessment-3 Hours).

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Other Requirements

1. All students seeking teacher licensure must successfully pass clinical teaching semester or must document successful completion of professional experience in lieu of clinical teaching semester.
    1. Students who are employed by a school district on a Practitioner License issued by the State of Tennessee may have the Level III clinical teaching semester waived if they provide the necessary documentation to verify one year of successful teaching experience and composite score of 3 or higher on the Teacher Evaluation used by their employing district. They must also be successful with the Teacher Performance Assessment (edTPA) to be recommended for licensure. Students in this category should contact the Licensure Coordinator for specific requirements.
    2. Students must enroll in the appropriate clinical teaching semester course during clinical teaching semester.
    3. Applications for clinical teaching semester must be filed one semester before clinical teaching semester.
    4. Application for documenting successful completion of professional experience in lieu of clinical teaching semester must be filed at the beginning of the first month of the semester in which the candidate plans to complete the approved academic program leading to final licensure. The Teacher Performance Assessment (edTPA) must be completed during the semester the candidate on a Practitioner License plans to apply for their Professional License.
2. Licensure in Tennessee requires acceptable scores on specified Praxis II Tests of pedagogy and teaching content knowledge.
3. Validation of methods courses is not permitted.

Retention

To remain in the Master of Arts in Teaching (MAT) and the Teacher Education Program (TEP) the student must maintain a graduate grade point average of 3.25. Failure to maintain a 3.25 GPA will result in termination of a candidate's TEP status and will result in academic probation in the MAT program.

Engineering Technology - Computer Emphasis, (MS)

MS Degree Program

Program Admissions

Admission requirements of the College.

Program Prerequisites

Applicants must have a bachelor's degree, preferably in an appropriate area of Engineering or Engineering Technology. However, a bachelor's degree in an analytical field with professional experience in a related area is also acceptable.

Candidates with deficiencies in their undergraduate work may be required to pass appropriate undergraduate courses with a C or better to supplement their body of knowledge. Basic competencies are reflected as prerequisites for courses, but may be waived with appropriate professional experience. All programs emphasize technical and analytical aspects that require strong command of math and science. Key competencies that are needed depend on the student's academic goals and possible emphasis areas. Emphasis areas are not required, just used as a guideline. Examples include:

Computer Engineering Technology courses expect students to already have competency in modern programming as well as basic electronics. Deficiencies may require additional preparation and course work. Modern programming using Java can be taken as a graduate course, TECH 6262, which can count toward the MS degree requirements. Basic electronics, however, may require preparation that includes completion of undergraduate course work that cannot be applied toward the MS semester hour requirement.

Similarly, if desiring an emphasis in Electronics Engineering Technology expects a familiarity with fundamentals of electronics prior to enrollment in graduate classes.

Manufacturing Engineering Technology graduate courses expect a familiarity with industrial practices and operations. Course prerequisites are important, but may be fulfilled through experience or completion of appropriate 6000 level courses which may be applied to the MS semester hour requirement.

No more than 9 semester hours of 6000 level course work can be applied toward the MS degree semester-hour requirement.

Program Requirements

Non-thesis (Project) option:

A minimum of 33 semester hours. Students selecting the non-thesis option must complete TECH 7991, Projects I, which is included in the 33 semester hour minimum. Projects require a proposal before permits can be issued. Proposals are to provide insight into the scope, depth, and extent of work and how the project relates to coursework that has been completed. Permits must be provided by a graduate faculty member for a section they agree to administer.

TECH 7991 - Projects I

(1-3) Independent investigation of a problem selected in consultation with instructor; report required.Proposal required for attaining a permit.

Thesis option:

A minimum of 30 semester hours plus a minimum of 6 semester hours of thesis. Students must complete TECH 7996, Thesis, for six semester hours credit. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

TECH 7996 - Thesis

(1-6) Writing of the thesis with emphasis on adequate setup of the problem, collection of data, their use, and conclusions. Students must present in writing a proposal acceptable to the graduate committee under whose direction the thesis is to be written. Grades of S, U, or IP will be given.

Each student must complete the following core courses:

Statistics:

TECH 7015 - App Stat Meth Industry

(3) Application of statistical concepts to production processes and data gathering in industry including frequency, distribution, location and dispersion, probability distributions, confidence limits, significance tests, hypothesis testing and industrial sampling.

Technical writing:

TECH 7020 - Techn Research Writing

(3) Investigations into the development and writing of technical research, technical reporting, review of technical specification format, proposal writing, and preparation of technical paper for international conferences. Written and oral presentations will be stressed in the course. PREREQUISITE(S): Permission of instructor.

Leadership:

TECH 7105 - Project Plan & Scheduling **

(3) Contemporary methods used in project planning and scheduling; emphasis on critical path method (CPM) with computer application; solution of actual problems stressed. Deep dive through the Project Management Body of Knowledge (PMBOK) is accomplished along with a progression of project management scenarios to analyze.

A minimum of 21 semester hours must be completed from graduate level courses in the Department of Engineering Technology

Courses taken in other colleges/departments, including those that may be substituted for core courses, cannot apply toward this specified minimum.

Area of Emphasis

Students may elect to establish an area of emphasis, but this is optional. Courses in each of the three traditional emphasis areas include courses from more than one focal area. Suggested courses in each of the emphasis areas include but are not limited to:

Computer:

TECH 6242 - Client Application Technolgy

(3) (CETH) Hypertext Markup Language (HTML), XML, and script languages. Three lecture hours per week.

TECH 6262 - Modern Programming

(3) (CETH) Application of Java and Java Script programming languages to problems from selected area of engineering technology; data collecting, modeling techniques, constraints, program development and validation. Three lecture hours per week.

TECH 6263 - Server Application Technology

(4) (CETH) Java exception handling, multithreading, files and streams; JDBC, Servlets, JSP, and JavaBeans server-side software. Team projects include written reports. Three lecture hours, three laboratory hours per week. Grades of A-F, or IP will be given.

TECH 6272 - Operating Systems

(4) Operating system structure, memory management (physical, virtual memory), process management (processes, threads, scheduling, synchronization, deadlocks), device management (driver, buffers, queues), file management (implementation, abstraction), installation and configuration of services within UNIX/LINUX operating system, and performance. Three lecture hours, three laboratory hours per week.

TECH 6281 - Computer Network Technology

(4) (CETH) Local area networks; covering the bottom four layers of the OSI mode; physical, datalink, network and transportation and application. Extensive laboratory coverage of the installation, configuration and administration of routers, switches and other networking devices. Three lecture hours, three laboratory hours per week.

TECH 7263 - Adv Dgitl Circuit/Appl

(3) Pragmatic treatment of analysis, synthesis, and applications of digital integrated circuits and systems. Two lecture, three laboratory hours per week.

TECH 7273 - Adv Microproc Arch

(3) Structure of the microprocessor, Bit-slice and monolithic systems; ALU design, data transfer and storage registers, and control unit logic; microprogramming techniques. Three lecture hours per week.

TECH 7283 - Adv Data Acquisition

(3) Use of digital and analog circuits to accomplish the computer analysis of empirical data; transducers, digital and analog conversions, linear and operational amplifiers, interfacing techniques; data scaling and manipulation. Two lecture, three laboratory hours per week.

TECH 7801 - Advanced Instrumentation

(3) Review of basic analog and digital instruments, applications of advanced communication equipment, such as digital spectrum analyzer, TDR, computer aided measurement, and industrial instruments. Course concludes with virtual instrumentation. Two lecture, three laboratory hours per week.

TECH 7831 - Adv Int Circuits Tech

(3) Theory and applications of integrated circuits and systems, emphasizing linear integrated circuits; characteristics, power requirements, and applications to amplifiers, oscillators, demodulators, wave shaping circuits, active filters, converters, and troubleshooting techniques. Two lecture, three laboratory hours per week.

TECH 7841 - Fiber Optics in Comm

(3) Implementation and analysis of fiber optics; comparison of coax and fiber, bandwidth and rate of data transmission using fiber; emphasis on single and multimode fiber.

Other Requirements

Cross-Disciplinary Academic Experience

Students are encouraged to develop a plan that includes courses outside the department for a more cross-functional academic experience. While prior permission is required, electives can be selected from other departments in Herff College of Engineering and the Fogelman College of Business and Economics or the Department of Computer Science. Acceptable courses depend upon student-selected emphasis area as well as relevance to the student's academic and professional interest. Examples include the following courses by areas of emphasis:

Computer Engineering Technology:

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

COMP 7120 - Cryptgrphy/Data Securty

(3) (Same as MIS 7670-MIS 8670) (Same as MIS 7670-8670). Ancient and modern cryptology and ciphers; security problems in computing; basic encryption and decryption; public-key cryptography, notions of security in computing environments; encryption, protocols; security for programs, OSs, data bases, PCs, networks and communication; legal, ethical and human factors in computer security.

COMP 7125 - Computer Forensics

(3) Societal and legal impact of computer activity: computer crime, intellectual property, privacy issues, legal codes; risks, vulnerabilities, and countermeasures; methods and standards for extraction, preservation, and deposition of legal evidence in a court of law.

COMP 7150 - Fundamentals of Data Science **

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

Manufacturing Engineering Technology:

ACCT 7110 - Acct for Decision Making

(3) (7010) (7010). Financial reporting from a decision-maker's perspective, managerial use of accounting information; includes case studies and research projects. NOTE: Not open to students who have received credit for ACCT 3310 or a similar course.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

SCMS 7310 - Sem Prod Operatns Mgt

(3) (ISDS 7/8310) Problems and issues encountered in productions and operations management environment; master planning, capacity management, resources planning, and shop floor management; managerial decision-making process for improving productivity and better utilization of scarce resources; implementation problems and solutions; manufacturing and service operations.

Restrictions

No more than 9 semester hours of 6000-level courses will count toward the degree. Students cannot receive credit towards graduation for a 6000 level course if they had completed the 4000 cognate of that same course. E.g.: You cannot use TECH 6381 Supervision if you have already completed TECH 4381.

Candidates for the degree must average a 3.0 in all Technology courses

Candidates for the degree must pass a comprehensive examination

1. Comprehensive examinations may be taken by students in good standing during the term in which core and concentration course work are completed. Exams are not given for TECH 7991, TECH 7992, or TECH 7993.
2. The comprehensive written examination will be administered Monday of the tenth week of classes during the fall and spring semesters.
3. A follow-up oral examination is optional with the examining committee.

Graduate Assistantships

Graduate assistantships will not be awarded to students enrolled in TECH 7993 - Internship In Engr Tech, unless the combined hours of student work is fewer than 20 hours per week.

TECH 7993 - Internship In Engr Tech

(1-3) Practical experience in engineering technology; students are placed with governmental or private organizations; project must be approved and supervised by department faculty; academic credit granted on certification of cooperating agency and acceptance by the supervising faculty of written report. Proposal required for attaining a permit. NOTE: May be repeated for total of 6 semester hours credit, but no more than 3 credit hours may be applied as an elective. Number of credit hours to enroll depends on number of hours worked per week: 10-15 hours=1 credit hour; 16-30 hours=2 credit hours; 31-40 hours=3 credit hours. Work done as an intern can not be used to fulfill project requirements in TECH 7991 or TECH 7992

Engineering Technology - Electronics Emphasis, (MS)

MS Degree Program

Program Admissions

Admission requirements of the College.

Program Prerequisites

Applicants must have a bachelor's degree, preferably in an appropriate area of Engineering or Engineering Technology. However, a bachelor's degree in an analytical field with professional experience in a related area is also acceptable.

Candidates with deficiencies in their undergraduate work may be required to pass appropriate undergraduate courses with a C or better to supplement their body of knowledge. Basic competencies are reflected as prerequisites for courses, but may be waived with appropriate professional experience. All programs emphasize technical and analytical aspects that require strong command of math and science. Key competencies that are needed depend on the student's academic goals and possible emphasis areas. Emphasis areas are not required, just used as a guideline. Examples include:

Computer Engineering Technology courses expect students to already have competency in modern programming as well as basic electronics. Deficiencies may require additional preparation and course work. Modern programming using Java can be taken as a graduate course, TECH 6262, which can count toward the MS degree requirements. Basic electronics, however, may require preparation that includes completion of undergraduate course work that cannot be applied toward the MS semester hour requirement.

Similarly, if desiring an emphasis in Electronics Engineering Technology expects a familiarity with fundamentals of electronics prior to enrollment in graduate classes.

Manufacturing Engineering Technology graduate courses expect a familiarity with industrial practices and operations. Course prerequisites are important, but may be fulfilled through experience or completion of appropriate 6000 level courses which may be applied to the MS semester hour requirement.

No more than 9 semester hours of 6000 level course work can be applied toward the MS degree semester-hour requirement.

Program Requirements

Non-thesis (Project) option:

A minimum of 33 semester hours. Students selecting the non-thesis option must complete TECH 7991, Projects I, which is included in the 33 semester hour minimum. Projects require a proposal before permits can be issued. Proposals

are to provide insight into the scope, depth, and extent of work and how the project relates to coursework that has been completed. Permits must be provided by a graduate faculty member for a section they agree to administer.

TECH 7991 - Projects I

(1-3) Independent investigation of a problem selected in consultation with instructor; report required.Proposal required for attaining a permit.

Thesis option:

A minimum of 30 semester hours plus a minimum of 6 semester hours of thesis. Students must complete TECH 7996, Thesis, for six semester hours credit. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

TECH 7996 - Thesis

(1-6) Writing of the thesis with emphasis on adequate setup of the problem, collection of data, their use, and conclusions. Students must present in writing a proposal acceptable to the graduate committee under whose direction the thesis is to be written. Grades of S, U, or IP will be given.

Each student must complete the following core courses:

Statistics:

TECH 7015 - App Stat Meth Industry

(3) Application of statistical concepts to production processes and data gathering in industry including frequency, distribution, location and dispersion, probability distributions, confidence limits, significance tests, hypothesis testing and industrial sampling.

Technical writing:

TECH 7020 - Techn Research Writing

(3) Investigations into the development and writing of technical research, technical reporting, review of technical specification format, proposal writing, and preparation of technical paper for international conferences. Written and oral presentations will be stressed in the course. PREREQUISITE(S): Permission of instructor.

Leadership:

TECH 7105 - Project Plan & Scheduling **

(3) Contemporary methods used in project planning and scheduling; emphasis on critical path method (CPM) with computer application; solution of actual problems stressed. Deep dive through the Project Management Body of Knowledge (PMBOK) is accomplished along with a progression of project management scenarios to analyze.

A minimum of 21 semester hours must be completed from graduate level courses in the Department of Engineering Technology

Courses taken in other colleges/departments, including those that may be substituted for core courses, cannot apply toward this specified minimum.

Area of Emphasis

Students may elect to establish an area of emphasis, but this is optional. Courses in each of the three traditional emphasis areas include courses from more than one focal area. Suggested courses in each of the emphasis areas include but are not limited to:

Electronics:

TECH 6281 - Computer Network Technology

(4) (CETH) Local area networks; covering the bottom four layers of the OSI mode; physical, datalink, network and transportation and application. Extensive laboratory coverage of the installation, configuration and administration of routers, switches and other networking devices. Three lecture hours, three laboratory hours per week.

TECH 6823 - Adv Programmable Logic Control

(3) (EETH) Advanced applications of programmable logic controllers, including analog I/O techniques and computer interfacing. Team project including written report. Two lecture hours, three laboratory hours per week.

TECH 7263 - Adv Dgitl Circuit/Appl

(3) Pragmatic treatment of analysis, synthesis, and applications of digital integrated circuits and systems. Two lecture, three laboratory hours per week.

TECH 7273 - Adv Microproc Arch

(3) Structure of the microprocessor, Bit-slice and monolithic systems; ALU design, data transfer and storage registers, and control unit logic; microprogramming techniques. Three lecture hours per week.

TECH 7801 - Advanced Instrumentation

(3) Review of basic analog and digital instruments, applications of advanced communication equipment, such as digital spectrum analyzer, TDR, computer aided measurement, and industrial instruments. Course concludes with virtual instrumentation. Two lecture, three laboratory hours per week.

TECH 7822 - Ind Press Control Syst

(3) Simulation and pragmatic analysis of closed loop industrial control systems using programmable logic controllers; practical considerations of control loop quality and stability; applications of digital computer for direct and supervisory control and on-line analysis. Two lecture, three laboratory hours per week.

TECH 7831 - Adv Int Circuits Tech

(3) Theory and applications of integrated circuits and systems, emphasizing linear integrated circuits; characteristics, power requirements, and applications to amplifiers, oscillators, demodulators, wave shaping circuits, active filters, converters, and troubleshooting techniques. Two lecture, three laboratory hours per week.

TECH 7841 - Fiber Optics in Comm

(3) Implementation and analysis of fiber optics; comparison of coax and fiber, bandwidth and rate of data transmission using fiber; emphasis on single and multimode fiber.

Other Requirements

Cross-Disciplinary Academic Experience

Students are encouraged to develop a plan that includes courses outside the department for a more cross-functional academic experience. While prior permission is required, electives can be selected from other departments in Herff College of Engineering and the Fogelman College of Business and Economics or the Department of Computer Science. Acceptable courses depend upon student-selected emphasis area as well as relevance to the student's academic and professional interest. Examples include the following courses by areas of emphasis:

Computer Engineering Technology:

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

COMP 7120 - Cryptgrphy/Data Securty

(3) (Same as MIS 7670-MIS 8670) (Same as MIS 7670-8670). Ancient and modern cryptology and ciphers; security problems in computing; basic encryption and decryption; public-key cryptography, notions of security in computing environments; encryption, protocols; security for programs, OSs, data bases, PCs, networks and communication; legal, ethical and human factors in computer security.

COMP 7125 - Computer Forensics

(3) Societal and legal impact of computer activity: computer crime, intellectual property, privacy issues, legal codes; risks, vulnerabilities, and countermeasures; methods and standards for extraction, preservation, and deposition of legal evidence in a court of law.

COMP 7150 - Fundamentals of Data Science **

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

Manufacturing Engineering Technology:

ACCT 7110 - Acct for Decision Making

(3) (7010) (7010). Financial reporting from a decision-maker's perspective, managerial use of accounting information; includes case studies and research projects. NOTE: Not open to students who have received credit for ACCT 3310 or a similar course.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

SCMS 7310 - Sem Prod Operatns Mgt

(3) (ISDS 7/8310) Problems and issues encountered in productions and operations management environment; master planning, capacity management, resources planning, and shop floor management; managerial decision-making process for improving productivity and better utilization of scarce resources; implementation problems and solutions; manufacturing and service operations.

Restrictions

No more than 9 semester hours of 6000-level courses will count toward the degree. Students cannot receive credit towards graduation for a 6000 level course if they had completed the 4000 cognate of that same course. E.g.: You cannot use TECH 6381 Supervision if you have already completed TECH 4381.

Candidates for the degree must average a 3.0 in all Technology courses

Candidates for the degree must pass a comprehensive examination

1. Comprehensive examinations may be taken by students in good standing during the term in which core and concentration course work are completed. Exams are not given for TECH 7991, TECH 7992, or TECH 7993.
2. The comprehensive written examination will be administered Monday of the tenth week of classes during the fall and spring semesters.
3. A follow-up oral examination is optional with the examining committee.

Graduate Assistantships

Graduate assistantships will not be awarded to students enrolled in TECH 7993 - Internship In Engr Tech, unless the combined hours of student work is fewer than 20 hours per week.

TECH 7993 - Internship In Engr Tech

(1-3) Practical experience in engineering technology; students are placed with governmental or private organizations; project must be approved and supervised by department faculty; academic credit granted on certification of cooperating agency and acceptance by the supervising faculty of written report. Proposal required for attaining a permit. NOTE: May be repeated for total of 6 semester hours credit, but no more than 3 credit hours may be applied as an elective. Number of credit hours to enroll depends on number of hours worked per week: 10-15 hours=1 credit hour; 16-30 hours=2 credit hours; 31-40 hours=3 credit hours. Work done as an intern can not be used to fulfill project requirements in TECH 7991 or TECH 7992

Engineering Technology, (MS)

MS Degree Program

Program Admissions

Admission requirements of the College.

Program Prerequisites

Applicants must have a bachelor's degree, preferably in an appropriate area of Engineering or Engineering Technology. However, a bachelor's degree in an analytical field with professional experience in a related area is also acceptable.

Candidates with deficiencies in their undergraduate work may be required to pass appropriate undergraduate courses with a C or better to supplement their body of knowledge. Basic competencies are reflected as prerequisites for courses, but may be waived with appropriate professional experience. All programs emphasize technical and analytical aspects that require strong command of math and science. Key competencies that are needed depend on the student's academic goals and possible emphasis areas. Emphasis areas are not required, just used as a guideline. Examples include:

Computer Engineering Technology courses expect students to already have competency in modern programming as well as basic electronics. Deficiencies may require additional preparation and course work. Modern programming using Java can be taken as a graduate course, TECH 6262, which can count toward the MS degree requirements. Basic electronics, however, may require preparation that includes completion of undergraduate course work that cannot be applied toward the MS semester hour requirement.

Similarly, if desiring an emphasis in Electronics Engineering Technology expects a familiarity with fundamentals of electronics prior to enrollment in graduate classes.

Manufacturing Engineering Technology graduate courses expect a familiarity with industrial practices and operations. Course prerequisites are important, but may be fulfilled through experience or completion of appropriate 6000 level courses which may be applied to the MS semester hour requirement.

No more than 9 semester hours of 6000 level course work can be applied toward the MS degree semester-hour requirement.

Program Requirements

Non-thesis (Project) option:

A minimum of 33 semester hours. Students selecting the non-thesis option must complete TECH 7991, Projects I, which is included in the 33 semester hour minimum. Projects require a proposal before permits can be issued. Proposals are to provide insight into the scope, depth, and extent of work and how the project relates to coursework that has been completed. Permits must be provided by a graduate faculty member for a section they agree to administer.

TECH 7991 - Projects I

(1-3) Independent investigation of a problem selected in consultation with instructor; report required.Proposal required for attaining a permit.

Thesis option:

A minimum of 30 semester hours plus a minimum of 6 semester hours of thesis. Students must complete TECH 7996, Thesis, for six semester hours credit. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

TECH 7996 - Thesis

(1-6) Writing of the thesis with emphasis on adequate setup of the problem, collection of data, their use, and conclusions. Students must present in writing a proposal acceptable to the graduate committee under whose direction the thesis is to be written. Grades of S, U, or IP will be given.

Each student must complete the following core courses:

Statistics:

TECH 7015 - App Stat Meth Industry

(3) Application of statistical concepts to production processes and data gathering in industry including frequency, distribution, location and dispersion, probability distributions, confidence limits, significance tests, hypothesis testing and industrial sampling.

Technical writing:

TECH 7020 - Techn Research Writing

(3) Investigations into the development and writing of technical research, technical reporting, review of technical specification format, proposal writing, and preparation of technical paper for international conferences. Written and oral presentations will be stressed in the course. PREREQUISITE(S): Permission of instructor.

Leadership:

TECH 7105 - Project Plan & Scheduling **

(3) Contemporary methods used in project planning and scheduling; emphasis on critical path method (CPM) with computer application; solution of actual problems stressed. Deep dive through the Project Management Body of Knowledge (PMBOK) is accomplished along with a progression of project management scenarios to analyze.

A minimum of 21 semester hours must be completed from graduate level courses in the Department of Engineering Technology

Courses taken in other colleges/departments, including those that may be substituted for core courses, cannot apply toward this specified minimum.

Area of Emphasis

Students may elect to establish an area of emphasis, but this is optional. Courses in each of the three traditional emphasis areas include courses from more than one focal area. Suggested courses in each of the emphasis areas include but are not limited to:

TECH 6381 - Principles of Supervision

(3) (METH) Practical approach to supervisory management including functions of planning, organization, staffing, employee motivation; coverage of contemporary issues including legal aspect of supervision as well as other regulatory concerns, such as occupational safety, health and labor relations.

TECH 6460 - Work Design/Improvement

(3) (METH) Analytical techniques and concepts for work methods improvement, lean operation for production and distribution; performance measurement and evaluation; continuous improvement; fundamentals of human factors and ergonomics; work measurement using time study, predetermined time study systems, work sampling and development of standard data.

TECH 6462 - Quality improvement

(3) (METH) Statistical methods for quality analysis and improvement; control charts for variables and attributes, industrial sampling; defect prevention using the Poka-Yoke System; reliability; acceptance sampling; Quality standards, continuous improvement; use of computer software for data analysis and presentation.Two lecture hours, three laboratory hours per week.

TECH 6464 - Production Control Systems

(3) (METH) Functions of planning and controlling production and distribution operations; concepts of JIT, MRP, MRPII, ERP, and Japanese manufacturing techniques; analytical techniques and concepts for line balancing, production and process control, demand management and project management. PREREQUISITE(S): Permission of instructor. COREQUISITE(S): TECH 4460, or permission of instructor.

TECH 6466 - Facility Design

(3) (METH) (METH). Integrated approach to design and layout for production and distribution facilities with respect to workstation design, material handling, project and resource planning, production control; use of Computer Aided Design, scheduling and analytical software. Team projects, written reports and oral presentations. PREREQUISITE(S): Permission of instructor.

TECH 6472 - Computer Aided Design

(3) (METH) Overview of CAD technology, hardware and software options; parametric solid modeling principles; applications to produce computer generated models, assemblies, photo-realistic renderings and working drawings. Two lecture hours, three laboratory hours per week. PREREQUISITE(S): permission of instructor.

TECH 6474 - Automation and Robotics

(3) (METH) Concepts of automation applied to production, distribution, machine vision and industrial robotics. Team projects including written reports. Two lecture hours, three laboratory hours per week. PREREQUISITE(S): TECH 1811, TECH 3440 and PHYS 2010.

TECH 6476 - Computer Aided Manufacturing

(3) (METH) Computer numerical control programming by manual data input and distributed numerical control by computer assistance; system assessment of CNC machines; components, controls, and tooling for integrated

manufacturing environment. Two lecture hours, three laboratory hours per week. PREREQUISITE(S): TECH 4472/TECH 6472

TECH 7401 - Lean Fundamentals **

(3) Basic concepts and terminology of Lean, including review of published seminal works and case studies. Concepts covered include: kanban, visual factory & 5S, kaizen, standard work, takt time, flow, poke-yoke, PDCA, SMED and other tools & techniques of Lean.

TECH 7402 - Adv Quality Control

(3) Methods for improved process and product design; cost of quality, measurement systems analysis, process capability, design of experiments and analysis, continuous improvement and review of quality standards. Grades of A-F, or IP will be given.

TECH 7404 - Wrld/Clas Manfct Concpt **

(3) World-class manufacturing and Lean concepts including Value Stream Mapping, Training Within Industry (TWI), Standard Work, 5S tools, Ergonomics, Human factors and Cellular Manufacturing. COREQUISITE: TECH 7401

TECH 7406 - Material Handling/Auto

(3) Analysis, design, and evaluation of traditional and contemporary approaches to materials handling; analytical and computer procedures for designing handling systems. Grades of A-F, or IP will be given.

TECH 7408 - Production Processes

(3) A coordinated study of manufacturing processes and equipment, operation sequence planning, economic aspects of equipment selection, tooling and processing a product from product design to final assembly for quantity production.

TECH 7414 - Manuf Strat/Syst Design

(3) Manufacturing strategy and systems design, including concepts of value stream mapping, theory of constraints, lean and six sigma (TLS) combined use, implementing and sustaining change and overcoming resistance, executive alignment and strategy. COREQUISITE(S): TECH 7401

TECH 7801 - Advanced Instrumentation

(3) Review of basic analog and digital instruments, applications of advanced communication equipment, such as digital spectrum analyzer, TDR, computer aided measurement, and industrial instruments. Course concludes with virtual instrumentation. Two lecture, three laboratory hours per week.

TECH 7822 - Ind Press Control Syst

(3) Simulation and pragmatic analysis of closed loop industrial control systems using programmable logic controllers; practical considerations of control loop quality and stability; applications of digital computer for direct and supervisory control and on-line analysis. Two lecture, three laboratory hours per week.

Other Requirements

Cross-Disciplinary Academic Experience

Students are encouraged to develop a plan that includes courses outside the department for a more cross-functional academic experience. While prior permission is required, electives can be selected from other departments in Herff College of Engineering and the Fogelman College of Business and Economics or the Department of Computer Science. Acceptable courses depend upon student-selected emphasis area as well as relevance to the student's academic and professional interest. Examples include the following courses by areas of emphasis:

Computer Engineering Technology:

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

COMP 7120 - Cryptgrphy/Data Securty

(3) (Same as MIS 7670-MIS 8670) (Same as MIS 7670-8670). Ancient and modern cryptology and ciphers; security problems in computing; basic encryption and decryption; public-key cryptography, notions of security in computing environments; encryption, protocols; security for programs, OSs, data bases, PCs, networks and communication; legal, ethical and human factors in computer security.

COMP 7125 - Computer Forensics

(3) Societal and legal impact of computer activity: computer crime, intellectual property, privacy issues, legal codes; risks, vulnerabilities, and countermeasures; methods and standards for extraction, preservation, and deposition of legal evidence in a court of law.

COMP 7150 - Fundamentals of Data Science **

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

Manufacturing Engineering Technology:

ACCT 7110 - Acct for Decision Making

(3) (7010) (7010). Financial reporting from a decision-maker's perspective, managerial use of accounting information; includes case studies and research projects. NOTE: Not open to students who have received credit for ACCT 3310 or a similar course.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

SCMS 7310 - Sem Prod Operatns Mgt

(3) (ISDS 7/8310) Problems and issues encountered in productions and operations management environment; master planning, capacity management, resources planning, and shop floor management; managerial decision-making process for improving productivity and better utilization of scarce resources; implementation problems and solutions; manufacturing and service operations.

Restrictions

No more than 9 semester hours of 6000-level courses will count toward the degree. Students cannot receive credit towards graduation for a 6000 level course if they had completed the 4000 cognate of that same course. E.g.: You cannot use TECH 6381 Supervision if you have already completed TECH 4381.

Candidates for the degree must average a 3.0 in all Technology courses

Candidates for the degree must pass a comprehensive examination

1. Comprehensive examinations may be taken by students in good standing during the term in which core and concentration course work are completed. Exams are not given for TECH 7991, TECH 7992, or TECH 7993.
2. The comprehensive written examination will be administered Monday of the tenth week of classes during the fall and spring semesters.
3. A follow-up oral examination is optional with the examining committee.

Graduate Assistantships

Graduate assistantships will not be awarded to students enrolled in TECH 7993 - Internship In Engr Tech, unless the combined hours of student work is fewer than 20 hours per week.

TECH 7993 - Internship In Engr Tech

(1-3) Practical experience in engineering technology; students are placed with governmental or private organizations; project must be approved and supervised by department faculty; academic credit granted on certification of cooperating agency and acceptance by the supervising faculty of written report. Proposal required for attaining a permit. NOTE: May be repeated for total of 6 semester hours credit, but no more than 3 credit hours may be applied as an elective. Number of credit hours to enroll depends on number of hours worked per week: 10-15 hours=1 credit hour; 16-30 hours=2 credit hours; 31-40 hours=3 credit hours. Work done as an intern can not be used to fulfill project requirements in TECH 7991 or TECH 7992

English, (MA)

MA in English Degree Program

Admission Requirements

An overall minimum grade point average of 3.00 at the undergraduate level is expected.

A competitive score on the Graduate Record Examination.

An official undergraduate and if applicable graduate transcript to Graduate Admissions.

A statement of purpose outlining the student's proposed course of study and career goals

Two letters of recommendation, preferably from college/university professors of English or comparable disciplines.

Program Prerequisites

An undergraduate degree with a major in English. A student who does not have an undergraduate major in English or appropriate background may be required to complete a maximum of 12 upper division hours in English with a grade of B or higher in each course.

Program Requirements

1. All students must complete a total of 30 semester hours of course work plus a 3-hour thesis or portfolio, or a total of 33 semester hours of course work. All students must complete a four-hour comprehensive written examination.
2. Each graduate teaching assistant in the Department of English must enroll in ENGL 7003/ENGL 8003 before or concurrent with first teaching assignment.

Concentration Requirements

Composition Studies

Students in Composition Studies must complete 30 hours of course work plus a 3-hour thesis or portfolio. Degree requirements include:

ENGL 7001 - Acad Genre and Sch Pub

(3) Study and application of interpretive strategies to texts pertinent to professional writing and composition studies.

ENGL 7003 - Thry/Prac Tchng Comp

(3) Designed for graduate assistants teaching English 1010. Emphasis on the ways and techniques of teaching rudiments of English composition on college level. Each graduate teaching assistant in the Department of English must enroll in English 7003-8003 before or concurrent with first teaching assignment.

ENGL 7805 - Foundations of Writing Studies

(3) A multidisciplinary exploration of the purposes, technologies, and contexts for written communication.

ENGL 7806 - Resch Meth In Writing

(3) Bibliographic techniques and an introduction to empirical methodologies for the study of the writing process and the testing of written documents. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7822 - Cont Comp Theory

(3) Examines relationship between rhetorical and composition theory and contemporary philosophy, especially poststructuralism, neo-pragmatism, and hermeneutics. May be repeated for a maximum of 6 credit hours.

And one course from the following

ENGL 7350 - Rhetorical Theory

(3) (Same as COMM 7350-COMM 8350) (Same as COMM 7350-8350). History of rhetoric from the sophists through the present; includes readings from Isocrates, Plato, Aristotle, Cicero, Augustine, Erasmus, Ramus, Campbell, Blair, John Q. Adams, and others.

ENGL 7801 - History Composition

(3) Focuses on history of composition as a discipline of its own; examines rise of teaching of composition from 18th century Scottish universities to the present and/or history of development of theoretical approaches toward teaching composition. May be repeated for a maximum of 6 credit hours with change in course content.

ENGL 7804 - Af Am Issues in Composition

(3) Focuses on current scholarship and research that address the marginalized voices of race in the teaching of composition. Closely examines the theories and research of this issue, and studies pedagogical strategies. May be repeated for a maximum of 6 credit hours with change in course content.

ENGL 7811 - Internship Prof Wrtng

(3) Assigned on the basis of qualifications and availability, student does a semester's work in technical, scientific, legal, government, or business writing and provides an extensive report and analysis. NOTE: Students who are on academic probation will not be allowed to register for this course. NOTE: Students who are on academic probation will not be allowed to register for this course PREREQUISITE(S): FIR 3710. Grades of S, U, or IP will be given.

ENGL 7812 - Mphs Urban Wrtng Ins I

(3) (Same as ICL 7304-8304) (Same as ICL 7304-8304). Intensive study of writing research, current writing practices, and issues and trends related to K-12 writing instruction. English majors may not use this course to fulfill degree requirements.

ENGL 7813 - Mphs Urban Wrtng Ins II

(3) (Same as ICL 7305-8305) (Same as ICL 7305-8305). Prepares K-12 teachers to improve their own writing practices and assume a leadership role in writing instruction in their schools. English majors may not use this course to fulfill degree requirements.

ENGL 7815 - Sem History Rhetoric

(3) Examines different periods and issues of rhetorical history each semester. One semester will consider Greek rhetoric (beginnings throught the New Testament); another will consider Latin rhetoric (Cicero through the Renaissance); a third will cover Scottish, British, and American rhetoric. May be repeated for a maximum of 9 credit hours when topic changes. May be repeated for a maximum of 9 credit hours when topic changes.

ENGL 7818 - Collaborative Writing

(3) Theoretical and research-based focus on managing and developing collaborative writing projects and processes. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7820 - Topics In Rhetoric

(3) (Same as COMM 7820-COMM 8820) (Same as COMM 7820-8820). Topical seminar devoted to an important aspect of the history, theory, or criticism of rhetoric. May be repeated for a maximum of 9 credit hours when topics change. May be repeated for a maximum of 6 credit hours with change in course content

ENGL 7823 - Topics In Composition

(3) Topics can include invention, the writing process, writing assessment, style, and writing program administration. May be repeated for a maximum of 9 credit hours when topics change. May be repeated for a maximum of 6 credit hours

Composition Studies - Additional Requirements

1. Two graduate courses (6 hours) in a concentration outside Composition Studies.
2. A thesis or professional portfolio (3 hours).
3. Two graduate elective courses (6 hours).
4. A written comprehensive exam.

Professional Writing

Students in Professional Writing must complete 30 hours of course work plus a 3-hour thesis, project, or portfolio. Degree requirements include an 18 hour core consisting of:

ENGL 7001 - Acad Genre and Sch Pub

(3) Study and application of interpretive strategies to texts pertinent to professional writing and composition studies.

ENGL 7805 - Foundations of Writing Studies

(3) A multidisciplinary exploration of the purposes, technologies, and contexts for written communication.

ENGL 7806 - Resch Meth In Writing

(3) Bibliographic techniques and an introduction to empirical methodologies for the study of the writing process and the testing of written documents. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7809 - Technical Editing

(3) Current practices in editing and publication in the field of technical communication; topics include copy-editing, substantive editing, author-editor relations, and the production practice. May be repeated for a maximum of 6 credit hours when topic changes. PREREQUISITE(S): FIR 3710.

and two courses from the following:

ENGL 6618 - Document Design

(3) Theories of visual and written communication, focusing on the interrelationship between visual and verbal elements; practice in effective design using layout and graphics software; working on client projects in a collaborative setting.

ENGL 6619 - Web Design/Online Writing **

(3) Principles and techniques of creating online user help for software and usable web sites; emphasis on needs of technical writers in professional development environment; task analysis, information architecture, content management, single sourcing, visual rhetoric, navigation, usability testing; technology tools intensive. Students who have received credit for ENGL 4617 cannot take this course for credit. Grades of A-F, or IP will be given.

ENGL 7013 - Wkshp Hlth Care Writing

(3) Textual and contextual analysis of the kinds of writing produced for expert audiences in the healthcare industry and the academic research community; practice in writing documents such as technical proposals, clinical research reports, FDA documentation, and papers for publication.

ENGL 7014 - Wkshp Public Hlth Care Writing

(3) Theoretical understanding and skill-based practice in communicating healthcare information (patient education materials, public health care information, patient instructions) to a generally non-expert audience; rhetorical and analytical tools for shaping the information; practical skills for managing group projects and processes; and the opportunity to develop them in a workshop setting.

ENGL 7807 - Wksp/Govmt & Corp Wrtg

(3) Textual and contextual analysis of the kinds of writing produced most often in government, law, and business; practice in writing correspondence reports, briefs, manuals, and proposals. PREREQUISITE(S): FIR 7070 or equivalent. Grades of S, U, or IP will be given.

ENGL 7808 - Wksp/Sci & Techn Wrtg

(3) Textual and contextual analysis of the kinds of writing produced most often in industry and the academic research community; practice in writing documents such as technical proposals, reports, computer documentation, and papers for publication. May be repeated for a maximum of 6 credit hours when topic changes. PREREQUISITE(S): FIR 3410 and FIR 3720. Grades of S, U, or IP will be given.

ENGL 7818 - Collaborative Writing

(3) Theoretical and research-based focus on managing and developing collaborative writing projects and processes. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

Professional Writing - Additional Requirements

1. Two graduate courses (6 hours) in a concentration outside Professional Writing.
2. A thesis, project, or professional portfolio (3 hours).
3. Two graduate elective courses (6 hours).
4. A written comprehensive exam that must be passed before the student can register for thesis, project, or portfolio hours.

English as a Second Language (ESL)

Students in ESL must complete 30 hours of course work plus a 3-hour thesis, or 33 hours of course work. Degree requirements include:

1. At least 18 hours of ESL courses, including ENGL 7531
2. Two graduate courses (6 hours) in a concentration outside ESL.
3. Two graduate elective courses (6 hours) and a thesis (3 hours); or three graduate elective courses (9 hours).
4. A written comprehensive exam.

Linguistics

Students in Linguistics must complete 30 hours of course work plus a 3-hour thesis, or 33 hours of course work. Degree requirements include:

1. At least 18 hours of Linguistics courses, including ENGL 7511 or equivalent graduate introduction to linguistics approved by student's advisor.
2. Two graduate courses (6 hours) in a concentration outside Linguistics.
3. Two graduate elective courses (6 hours) and a thesis (3 hours); or three graduate elective courses (9 hours).
4. A written comprehensive exam.
5. Reading knowledge of a foreign language, which may be demonstrated in a variety of ways (inquire in English Graduate Office for options).

Literature

Students in Literature must complete 30 hours of course work plus a 3-hour thesis, or 33 hours of course work. Degree requirements include:

1. At least 18 hours of Literature courses including ENGL 7000, which should be taken in the first year of graduate study. Students must take at least one literature course from before 1800 and one literature course from after 1800, and at least one Literary Theory class, which may be chosen from any designated theory class, including ENGL 7336/ENGL 8336, ENGL 7701/ENGL 8701, ENGL 7702/ENGL 8702 , and ENGL 7480/ENGL 8480.
2. Four graduate elective courses (12 hours) and a thesis (3 hours); or five graduate elective courses (15 hours).
3. A written comprehensive exam.

Note:

Reading Knowledge of a Foreign Language

Reading knowledge of a foreign language, which may be demonstrated in a variety of ways (inquire in English Graduate Office for options). Students intending to pursue a PhD are advised to develop a reading competency in at least one of the following: French, German, Latin, or Greek.

Retention Requirements

1. Students who are on academic probation for two consecutive semesters will not be allowed to continue in the program.
2. Upon entering the MA program, a student chooses an advisor in his or her concentration. The advisor will monitor the student's progress toward completion of the degree. Each semester the Graduate Studies Committee will examine the academic progress of all students for retention in the program.

3. If a student receives either two C's, one D, or one F grade in any English graduate level course, that student will be subject to review and could be dismissed from the program. In order to remain in good standing, all graduate students must maintain a 3.0 average in English Department courses.

General Psychology, (MS)

Masters Degree in General Psychology (MSGP)

Program Admission and Prerequisites

All application information must have been received by May 1 for a candidate to be considered for admission to the MS degree program in General Psychology. The following items are required for consideration for admission:

1. An undergraduate grade point average of at least 2.5/4.0 is required for admission without special permission.
2. GRE scores (Verbal, Quantitative, and Written Analytical).
3. Letters of recommendation from at least three persons familiar with the applicant's academic background and aptitude for graduate work in Psychology.
4. Applicants must have at least 12 undergraduate hours in psychology, including a course in statistics.
5. Applications to the MS in General Psychology program are considered once a year, to make decisions about enrollment for the following fall semester.

Program Requirements

Admission to the MS in General Psychology program does not require a student to take any minimum number of credits per semester. The only constraint upon the pace at which the student pursues the degree is that credits more than six years old may not be counted toward the degree.

All students in the MS in General Psychology program

All students in the MS in General Psychology program must be in good academic standing at the end of 15 credit hours of graduate work in order to continue in the program.

PSYC 7301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 7302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

At least two of the following:

PSYC 7000 - History/System Psyc

(3) Seminar of basic issues in contemporary psychology within their historical context with extensive examination of their implications for theoretical and professional applications.

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 7217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

PSYC 7222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 7407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 7412 - Psychopathology

(3) Survey of the manifestations of abnormal behavior and psychological processes; detailed analysis of clinical and experimental literature concerning psychological and psychiatric disorders and their etiology. Historical principles are emphasized. Restricted by Program or by Permit.

PSYC 7416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

PSYC 7440 - Behavioral Medicine I

(3) Overview of behavioral medicine and examination of psychologists' roles in healthcare settings; psychological and interpersonal factors that affect healthcare delivery will be examined, such as physician-patient communication, gender, and ethnic diversity; differences in ethical underpinnings between medicine and psychology will be explored. Restricted by Program or by Permit.

PSYC 7701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 7705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

Other Requirements

1. During the first year in the program, it is expected that the student will, in consultation with the program director or major professor, have decided on goals and objectives for the remainder of the course of study. Courses that fit these goals and objectives may be in Psychology or other departments in the university. Students who are not in good academic standing at this time must institute an appeal with supporting letters to the program director and the MS in General Psychology committee for consideration of continuance in the program. Such cases will be considered on an individual basis. Also, for both semesters in the first year, all MS in General Psychology students must attend weekly colloquium series to acquaint them with issues of research and professional ethics and professional opportunities in the department and in the discipline.
2. A total approved program of 33 credit hours if the student elects to do a thesis, or 36 credit hours with a Specialty Review Paper. Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Students electing to write a specialty review paper should familiarize themselves with the guidelines for this paper, available in the Psychology graduate handbook.
3. For students not conducting a thesis, a specialty review paper covering the student's area(s) of focus will be completed during the last semester in the program.

Health Studies - Exercise, Sport and Movement Sciences Concentration, (MS)

MS Degree Program

Program objectives are: (1) to recognize the diverse nature of subject matter embodied in the respective program disciplines; (2) to understand the research findings and theoretical constructs undergirding the corresponding

disciplines within the health studies umbrella, including the development of specialized skills needed for systematic inquiry; (3) to understand the critical role of diversity in delivering inclusive health studies services; (4) to develop effective leadership skills; and (5) to understand and embrace ethical standards of the respective disciplines.

Admission Requirements

1. Prospective students must apply to both the Graduate School and the School of Health Studies. In both cases, the applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an official report of Graduate Record Examination (GRE) scores must be submitted except:
    1. Health Promotion (HPRO): An applicant seeking admission to the HPRO concentration is not required to submit GRE scores. However, official GRE or other standardized test scores may be requested or submitted to support an application.
    2. Physical Education Teacher Education (PETE): An applicant seeking admission to the PETE concentration may opt to submit official scores of the PRAXIS II exams in lieu of the GRE.
2. An applicant must also submit the following to the School: 1) SHS Graduate Admission Application Form, 2) two letters of recommendation, and 3) a 300-500 word statement of goals including identification of the intended area of concentration. (Contact the school's academic services coordinator for application forms. School of Health Studies application forms are also available on-line at www.memphis.edu/shs/students/grad_admission.php.
3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5.
4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses:
    1. Exercise, Sport and Movement Sciences: anatomy and physiology, health sciences, exercise physiology, anatomic kinesiology, biomechanics, and motor learning
    2. Health Promotion: science-oriented courses such as, but not limited to, nutrition, biology, biochemistry, health sciences, chemistry, and psychology
    3. Physical Education Teacher Education: anatomic kinesiology, anatomy and physiology, biology, exercise physiology, health sciences, motor learning, nutrition, and sport psychology
5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.
6. Student admissions to the respective programs within the Health Studies (HS) major are differentially restricted to enable Graduate Faculty within each concentration to closely mentor their students. To ensure maximum consideration for admission into a specific SHS concentration, the following dates are provided: May 1 for summer and fall and November 1 for the spring semester. The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE/PRAXIS II scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

A minimum of 30 hours is required for the major although respective concentrations may require additional credit hours.

Program Research Core (6 hours):

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

and

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

or

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

Concentration Requirements:

Exercise, Sport and Movement Sciences (18 hours):

ESMS 7020 - Pub/Prop in Health & Biomed

(3) (EXSS 7020). Steps involved in preparing external funding proposals and manuscripts for publication. Particular attention given to the following: organizing document components, effective writing techniques, documentation issues, interpretation of findings, sentence structure, and reference citing. Identification of appropriate journals for publication consideration as well as common and novel funding sources (federal, state, local, and private) for supporting research work.

ESMS 7123 - Mech Analysis Mtr Skill

(3) (PHED 7123)(EXSS 7123) Experiences that will enhance the understanding and practical application of the laws of mechanical physics to the fundamental techniques utilized in the performance of physical activities.

ESMS 7163 - Advanced Motor Learning

(3) (PHED 7163)(EXSS 7163) Analysis of research evidence related to motor skill learning and performance; emphasis on feedback mechanisms, practice variables, and retention and transfer of skills.

ESMS 7201 - Phys Exer Musculoskltl

(3) (EXSS 7201) An analysis of the physiological bases of musculoskeletal performance as well as specific adaptations that occur consequent to various regimens of exercise; discussion of selected techniques for assessing musculoskeletal function and structure.

ESMS 7202 - Phys Ex Mtbolc/Cardresp

(3) (EXSS 7202) An analysis of the acute and chronic metabolic/cardiorespiratory bases of human performance and fitness under various internal and external environmental conditions; discussion of selected techniques for assessing metabolic/cardiorespiratory function and structure.

EDPR 7542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8542 or permission of instructor. Grades of S, U, or IP will be given.

or

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

Guided electives selected with approval of the advisor:

Exercise, Sport and Movement Sciences (6 hours)

Culminating Experience (3-9 hours)

(Consult Graduate School Calendar for submission deadlines -):

Exercise and Sport Science:

ESMS 7850 - Research Lab Residency in ESMS

(1-6) (EXSS 7850) Capstone experience focused on the development and/or application of research evidence to professional practice in ESMS. Involves 40 contact hours per credit hour and is typically undertaken in one of the ESMS Human Performance Laboratories, although other UM campus sites focused on evidenced-based practice may be considered for approval. PREREQUISITE(S): Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of Major Professor, ESMS Program Coordinator, and Director of the laboratory at which the residency is to be performed.

or

ESMS 7950 - Applied Project in ESMS

(1-6) (EXSS 7950) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee. PREREQUISITE(S): Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of instructor. Grades of S, U, or IP will be given.

or

HMSE 7996 - Thesis

(1-6) (FITW/HLTH/PHED /RECR 7996) Application for writing a thesis must be filled out on an approved form after consultation with the major professor and filed with the Director of Graduate Programs. Grades of S, U, or IP will be given.

Note:

* Must be under the tutelage of a Graduate Faculty member with Full status at either one of the ESMS Human Performance Laboratories or at another site on campus, and involves 40 contact hours per credit hour. In order for residency arrangements to be formalized, they must first receive written or electronic approval by the student's Major Professor, the ESMS Program Coordinator, and the Director of the laboratory in which training is to occur.

** Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Other Requirements

1. Successful completion of an oral or written comprehensive examination (successful defense of the Research Laboratory Residency in ESMS, Applied Project, or Thesis may serve this purpose). (Consult Graduate School Calendar for submission deadlines)
2. Consult Graduate School Calendar for *Apply to Graduate* submission deadlines

Program Retention Policy

All MS degree students are regularly monitored for completion of any entry-level deficiencies by graduate faculty.

Program retention committees, comprised of selected graduate faculty within the corresponding programs of study, monitor the academic progress of all MS degree candidates in the respective programs. Each committee determines whether or not the student is making sufficient progress and, in case of deficiencies, may recommend additional work or the dismissal of the student from the program. For any student recommended for dismissal, an appeals process is available.

Health Studies - Health Promotion Concentration, (MS)

MS Degree Program

Program objectives are: (1) to recognize the diverse nature of subject matter embodied in the respective program disciplines; (2) to understand the research findings and theoretical constructs undergirding the corresponding disciplines within the health studies umbrella, including the development of specialized skills needed for systematic inquiry; (3) to understand the critical role of diversity in delivering inclusive health studies services; (4) to develop effective leadership skills; and (5) to understand and embrace ethical standards of the respective disciplines.

Admission Requirements

1. Prospective students must apply to both the Graduate School and the School of Health Studies. In both cases, the applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an official report of Graduate Record Examination (GRE) scores must be submitted except:
    1. Health Promotion (HPRO): An applicant seeking admission to the HPRO concentration is not required to submit GRE scores. However, official GRE or other standardized test scores may be requested or submitted to support an application.
    2. Physical Education Teacher Education (PETE): An applicant seeking admission to the PETE concentration may opt to submit official scores of the PRAXIS II exams in lieu of the GRE.
2. An applicant must also submit the following to the School: 1) SHS Graduate Admission Application Form, 2) two letters of recommendation, and 3) a 300-500 word statement of goals including identification of the intended area of concentration. (Contact the school's academic services coordinator for application forms.

School of Health Studies application forms are also available on-line at www.memphis.edu/shs/students/grad_admission.php.

3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5.
4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses:
    1. Exercise, Sport and Movement Sciences: anatomy and physiology, health sciences, exercise physiology, anatomic kinesiology, biomechanics, and motor learning
    2. Health Promotion: science-oriented courses such as, but not limited to, nutrition, biology, biochemistry, health sciences, chemistry, and psychology
    3. Physical Education Teacher Education: anatomic kinesiology, anatomy and physiology, biology, exercise physiology, health sciences, motor learning, nutrition, and sport psychology
5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.
6. Student admissions to the respective programs within the Health Studies (HS) major are differentially restricted to enable Graduate Faculty within each concentration to closely mentor their students. To ensure maximum consideration for admission into a specific SHS concentration, the following dates are provided: May 1 for summer and fall and November 1 for the spring semester. The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE/PRAXIS II scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

A minimum of 30 hours is required for the major although respective concentrations may require additional credit hours.

Program Research Core (6 hours):

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

and

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

or

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

Concentration requirements:

Health Promotion (24 hours):

HPRO 7182 - Health Promotion **

(3) (FITW 7182) Introduction to broad and challenging academic discipline and profession of health promotion; explores theories of behavior and change, ethical and professional considerations, as well as fundamentals of program planning, implementation, and evaluation.

HPRO 7183 - Lifestyle/Wellness/Disease **

(3) Effect of physical activity, physical fitness, and other lifestyle behaviors on health and prevention or delay of selected chronic diseases.

HPRO 7710 - Prog/Event Planning for HPRO **

(3) Introduction to program promotion techniques and event planning strategies; focuses on techniques and requirements for planning and conducting health promotion campaigns and special events such as meetings, corporate events, professional conferences, community functions, state/national initiatives, and sponsorships.

HPRO 7712 - Epidemiology **

(3) (HLTH 7712) Introduction to selected diseases of special concern in public health practice with emphasis on epidemiologic models and methods.

HPRO 7722 - Hlth Intrvntn Thry/Apps **

(3) (HLTH 7722) Examines an array of health theories and their applications to relevant health problems and prevention-intervention programs; these theoretical frameworks will be critiqued in some depth.

HPRO 7780 - Health Counseling **

(3) Introduces clinical counseling techniques focusing on the development and application of basic health counseling and lifestyle coaching skills. Self-evaluation, giving and receiving feedback and reflection upon the development of clinical skills and ethical tendencies is an essential part of this course.

HPRO 7790 - Program Management in HPRO

(3) Concepts and practice of the structure and functions of health promotion programs. Provides a foundation for various project direction skills, including planning, implementation, leadership, management (time, risk, and financial), quality assurance, evaluation, dissemination, and maintenance of health programs.

PUBH 7132 - Health Program Evaluation **

(3) This graduate seminar provides qualitative and quantitative perspectives on health program evaluation. The course examines various models, theories, methods, and processes in evaluating community and public health programs. It is a practice-oriented course and facilitates students developing applied skills in the field of health program evaluation.

or

EDPR 7551 - Intro To Eval Systems

(3) (EDRS 7551-8551) Examines procedures and problems in utilization of evaluation and in identifying its purposes; treats the functions and methods of evaluation especially as affected by organizational behavior and political influences; evaluation methodology includes but is not limited to design considerations, data utilization, and concepts and methods of needs assessment. PREREQUISITE(S): EDPR 7521 and EDPR 7542/EDPR 8542 or permission of instructor.

Guided electives selected with approval of the advisor:

Health Promotion (no electives)

Culminating Experience (3-9 hours)

(Consult Graduate School Calendar for submission deadlines -):

Health Promotion:

HPRO 7950 - Applied Project in HPRO **

(1-6) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee. PREREQUISITE(S): Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of instructor. S,U, or IP will be given.

Other Requirements

1. Successful completion of an oral or written comprehensive examination (successful defense of the Research Laboratory Residency in ESMS, Applied Project, or Thesis may serve this purpose). (Consult Graduate School Calendar for submission deadlines)
2. Consult Graduate School Calendar for *Apply to Graduate* submission deadlines

Program Retention Policy

All MS degree students are regularly monitored for completion of any entry-level deficiencies by graduate faculty.

Program retention committees, comprised of selected graduate faculty within the corresponding programs of study, monitor the academic progress of all MS degree candidates in the respective programs. Each committee determines whether or not the student is making sufficient progress and, in case of deficiencies, may recommend additional work or the dismissal of the student from the program. For any student recommended for dismissal, an appeals process is available.

Health Studies - Physical Education Teacher Education Concentration, (MS)

MS Degree Program

Program objectives are: (1) to recognize the diverse nature of subject matter embodied in the respective program disciplines; (2) to understand the research findings and theoretical constructs undergirding the corresponding

disciplines within the health studies umbrella, including the development of specialized skills needed for systematic inquiry; (3) to understand the critical role of diversity in delivering inclusive health studies services; (4) to develop effective leadership skills; and (5) to understand and embrace ethical standards of the respective disciplines.

Admission Requirements

1. Prospective students must apply to both the Graduate School and the School of Health Studies. In both cases, the applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an official report of Graduate Record Examination (GRE) scores must be submitted except:
    1. Health Promotion (HPRO): An applicant seeking admission to the HPRO concentration is not required to submit GRE scores. However, official GRE or other standardized test scores may be requested or submitted to support an application.
    2. Physical Education Teacher Education (PETE): An applicant seeking admission to the PETE concentration may opt to submit official scores of the PRAXIS II exams in lieu of the GRE.
2. An applicant must also submit the following to the School: 1) SHS Graduate Admission Application Form, 2) two letters of recommendation, and 3) a 300-500 word statement of goals including identification of the intended area of concentration. (Contact the school's academic services coordinator for application forms. School of Health Studies application forms are also available on-line at www.memphis.edu/shs/students/grad_admission.php.
3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5.
4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses:
    1. Exercise, Sport and Movement Sciences: anatomy and physiology, health sciences, exercise physiology, anatomic kinesiology, biomechanics, and motor learning
    2. Health Promotion: science-oriented courses such as, but not limited to, nutrition, biology, biochemistry, health sciences, chemistry, and psychology
    3. Physical Education Teacher Education: anatomic kinesiology, anatomy and physiology, biology, exercise physiology, health sciences, motor learning, nutrition, and sport psychology
5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.
6. Student admissions to the respective programs within the Health Studies (HS) major are differentially restricted to enable Graduate Faculty within each concentration to closely mentor their students. To ensure maximum consideration for admission into a specific SHS concentration, the following dates are provided: May 1 for summer and fall and November 1 for the spring semester. The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE/PRAXIS II scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

A minimum of 30 hours is required for the major although respective concentrations may require additional credit hours.

Program Research Core (6 hours):

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

and

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

or

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

Concentration requirements:

Physical Education Teacher Education (18 hours):

PETE 7201 - Instructional Models/PETE

(3) Study and reflection on models of instruction unique to physical education: large class sizes, open indoor and outdoor settings, and greater diversity of students and learning styles; emphasis on reading, discussion, and application based on understanding instructional strategies and various instructional models for physical education.

PETE 7202 - Curr & Instr Model in PETE

(3) Study of and reflection on curriculum/models of instruction in school-based physical education and other physical activity programs. Study of the general field of curriculum and instructional models in physical education that reflect appropriate curricular decisions and instructional interventions.

PETE 7203 - Assessment & Eval in PETE **

(3) Study and reflection on learner, program, and teacher assessment/evaluation strategies to provide teachers and researchers with knowledge and skills necessary to conduct both formative and summative evaluations for physical education.

PETE 7204 - Instructional Supv/PETE

(3) Study and reflection on models of instructional supervision in physical education, including systematic supervision, rationale, models, research, and clinical supervision and evaluation of teachers, to provide an empirical base for the development of the physical education systematic supervision model.

PETE 7205 - Issues In Urban PETE

(3) Considers the complex problems and unique possibilities that face physical education teachers and students in culturally diverse urban settings, examining different theoretical perspectives and practical approaches and their relationship to the success of children and youth in urban schools. Restricted to Program or by Permit.

PETE 7501 - Organizatn/Analys PETE

(3) The teaching-learning process in physical education, focusing on teacher behaviors, student behaviors, academic learning time, teacher effectiveness as documented in both short and long term process-product studies, functional curriculum in the schools, descriptive analysis of coaches and athletes, and case study approaches.

Guided electives selected with approval of the advisor:

Physical Education Teacher Education (6 hours)

Culminating Experience (3-9 hours)

(Consult Graduate School Calendar for submission deadlines -):

Physical Education Teacher Education:

HMSE 7996 - Thesis

(1-6) (FITW/HLTH/PHED /RECR 7996) Application for writing a thesis must be filled out on an approved form after consultation with the major professor and filed with the Director of Graduate Programs. Grades of S, U, or IP will be given.

or

PETE 7950 - Applied Project in PETE

(1-6) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee.

- or two advisor-approved graduate courses

Other Requirements

1. Successful completion of an oral or written comprehensive examination (successful defense of the Research Laboratory Residency in ESMS, Applied Project, or Thesis may serve this purpose). (Consult Graduate School Calendar for submission deadlines)
2. Consult Graduate School Calendar for *Apply to Graduate* submission deadlines

Program Retention Policy

All MS degree students are regularly monitored for completion of any entry-level deficiencies by graduate faculty.

Program retention committees, comprised of selected graduate faculty within the corresponding programs of study, monitor the academic progress of all MS degree candidates in the respective programs. Each committee determines whether or not the student is making sufficient progress and, in case of deficiencies, may recommend additional work or the dismissal of the student from the program. For any student recommended for dismissal, an appeals process is available.

History - Ancient Egyptian History Concentration, (MA)

MA Degree Program

The MA program of study in history is a flexible one that prepares students for a variety of careers. We expect full-time students to complete the degree in two academic years. Students who regard the MA as a terminal degree normally elect to fulfill its requirements by 33 hours of course enrollment without writing a thesis. Most of these students go on to teaching positions on the secondary and community college level; a smaller number enter government service at all levels; and some secure specialized positions in business, industry, and journalism. Those students preparing for teaching on the university level or related careers in research and writing should look upon the MA program as preparation for advanced graduate study. We thus urge them to write a thesis.

Program Admission

In making our decisions on admission we consider multiple factors, including transcripts and GPA, the nature of your coursework, recommendations, your writing sample and statement, your MAT or GRE scores (particularly the GRE Verbal and Analytical Writing sections), and the compatibility of our program and faculty with your interests.

In most cases, you will need 18 hours in history from an accredited institution with at least a 3.0 PGA (on a 4.0 scale) in all undergraduate history courses, although we may also consider coursework in related fields.

In addition to submitting your application and all transcripts to the Graduate School, you should submit the following, the first to the Graduate School and the rest to the History Department:

1. Official scores from the MAT or from the GRE (which should include the Analytical Writing section).
2. Two letters of recommendation evaluating your academic ability.
3. A writing sample, such as a paper from a course, that demonstrates your ability to write and think about history.
4. A letter from you explaining your major field(s) of interest in history (chosen from the list of PhD fields below), any particular interests, and your reasons for seeking the MA degree.

Program Requirements

1. A total of 33 hours. For the student electing to write a thesis, this includes 9 hours of thesis credit. No more than 9 hours of thesis credit may count toward the degree.
2. Only 6 hours of coursework at the 6000 level may count toward the degree, although we may accept 9 hours in special circumstances by petition to the Coordinator of Graduate Studies.
3. At least one 7000-level historiography course in any field and at least one HIST 7070.
4. Only 3 hours can be HIST 7012, although we may accept 6 hours in special circumstances by petition to the Coordinator of Graduate Studies. HIST 7991 does not count toward the degree.
5. No more than 6 hours may be taken, with the approval of the Coordinator of Graduate Studies, in a field outside history. Under special circumstances students may petition for up to an additional 6 hours.
6. No more than 24 hours may be taken in United States History, European History, or any one field of history, such as Ancient History.
7. A student who makes a grade of C+ or lower in six credits or more hours of course work will be dropped from the MA program, except under exceptional circumstances. No grade of C+ or lower may count toward the required number of credits.
8. An oral Comprehensive Examination over course work given by a committee chosen by the Graduate Advisor and the student. Online only students take a written exam instead.
9. For those who elect to write a thesis, approval by a department committee headed by the faculty member who directed the thesis. All theses are based upon primary research and are typically between 16,000 and 25,000 words in length. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Concentration in Ancient Egyptian History

(**Note**: "Concentration" refers to a specific program in this area. It does not imply that this is our only area of specialization.)

Beyond the core requirements, students choosing this concentration must take 18 hours of MA level courses with a focus on ancient Egypt; this includes 9 hours of thesis credit for those writing a thesis. As part of the 18 credits, students must take two semesters of basic Middle Egyptian (ARTH 7115 and ARTH 7116), plus two more semesters of readings from ancient Egyptian texts. Courses in ancient art, archaeology, and language (taught in the Art, Earth Sciences, and/or Foreign Language departments) may count as being in field(s) separate from the field of ancient history. Admission into the graduate program in history does not automatically ensure admission into this concentration. The approval of the department's Egyptologists is also necessary, so students should contact them directly.

The Online M.A. Program

The History Department also offers an online MA degree program in which all the degree requirements may be completed online. Admission requirements are the same as for the on-campus MA program, but you must specify in your application and the required letter discussing your interests that you are applying for the online MA degree. Requirements for the online MA degree are also the same as for the on-campus MA with the following exceptions for those who take all their credits online: a) the thesis option is not always available to online students; b) online students may apply up to 9 hours of 6000-level history courses to the degree; and c) online students take a written exam comprehensive exam.

History, (MA)

MA Degree Program

The MA program of study in history is a flexible one that prepares students for a variety of careers. We expect full-time students to complete the degree in two academic years. Students who regard the MA as a terminal degree normally elect to fulfill its requirements by 33 hours of course enrollment without writing a thesis. Most of these students go on to teaching positions on the secondary and community college level; a smaller number enter government service at all levels; and some secure specialized positions in business, industry, and journalism. Those students preparing for teaching on the university level or related careers in research and writing should look upon the MA program as preparation for advanced graduate study. We thus urge them to write a thesis.

Program Admission

In making our decisions on admission we consider multiple factors, including transcripts and GPA, the nature of your coursework, recommendations, your writing sample and statement, your MAT or GRE scores (particularly the GRE Verbal and Analytical Writing sections), and the compatibility of our program and faculty with your interests.

In most cases, you will need 18 hours in history from an accredited institution with at least a 3.0 PGA (on a 4.0 scale) in all undergraduate history courses, although we may also consider coursework in related fields.

In addition to submitting your application and all transcripts to the Graduate School, you should submit the following, the first to the Graduate School and the rest to the History Department:

1. Official scores from the MAT or from the GRE (which should include the Analytical Writing section).
2. Two letters of recommendation evaluating your academic ability.
3. A writing sample, such as a paper from a course, that demonstrates your ability to write and think about history.

4. A letter from you explaining your major field(s) of interest in history (chosen from the list of PhD fields below), any particular interests, and your reasons for seeking the MA degree.

Program Requirements

1. A total of 33 hours. For the student electing to write a thesis, this includes 9 hours of thesis credit. No more than 9 hours of thesis credit may count toward the degree.
2. Only 6 hours of coursework at the 6000 level may count toward the degree, although we may accept 9 hours in special circumstances by petition to the Coordinator of Graduate Studies.
3. At least one 7000-level historiography course in any field and at least one HIST 7070.
4. Only 3 hours can be HIST 7012, although we may accept 6 hours in special circumstances by petition to the Coordinator of Graduate Studies. HIST 7991 does not count toward the degree.
5. No more than 6 hours may be taken, with the approval of the Coordinator of Graduate Studies, in a field outside history. Under special circumstances students may petition for up to an additional 6 hours.
6. No more than 24 hours may be taken in United States History, European History, or any one field of history, such as Ancient History.
7. A student who makes a grade of C+ or lower in six credits or more hours of course work will be dropped from the MA program, except under exceptional circumstances. No grade of C+ or lower may count toward the required number of credits.
8. An oral Comprehensive Examination over course work given by a committee chosen by the Graduate Advisor and the student. Online only students take a written exam instead.
9. For those who elect to write a thesis, approval by a department committee headed by the faculty member who directed the thesis. All theses are based upon primary research and are typically between 16,000 and 25,000 words in length. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

The Online M.A. Program

The History Department also offers an online MA degree program in which all the degree requirements may be completed online. Admission requirements are the same as for the on-campus MA program, but you must specify in your application and the required letter discussing your interests that you are applying for the online MA degree. Requirements for the online MA degree are also the same as for the on-campus MA with the following exceptions for those who take all their credits online: a) the thesis option is not always available to online students; b) online students may apply up to 9 hours of 6000-level history courses to the degree; and c) online students take a written exam comprehensive exam.

Information Systems, (MS)

MS in Information Systems

Program Admission

1. Satisfactory performance on the Graduate Management Admissions Test (GMAT) or Graduate Record Exam (GRE).
2. Satisfactory undergraduate grade point average as evidenced by an official transcript (evaluated by an agency such as WES if an international student).
3. Submit an application to the Graduate Admissions Office.
4. International Students must submit scores on the TOEFL exam.

Program Requirements

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

MIS 7700 - Fundamentals of Data Analytics

(3) Descriptive States; correlation; regression; data pre-processing and visualization; probability including conditional probability and Bayesian theorems, Probability Distributions - PDF, CDF (both discrete and continuous), Hypothesis testing, Kernel Functions, Estimations - Lest Squares and Confidence Intervals

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

MIS 7610 - Sys Analysis & Design **

(3) Comprehensive structured approach to application system development process; emphasis on requirements analysis, logical specifications, structured design, and implementation of information systems.

MIS 7620 - Business Machine Learning I

(3) Business Intelligence is the study of computerized support for management decision making. Topics include data mining, artificial neural networks, text and web mining, data warehousing, expert systems, and knowledge management.

MIS 7640 - Inform Sys Mgmt/Plan

(3) Information systems planning and management for the corporate executive and information systems manager; emphasis on information as a critical resource and its role in policy and long-range planning. PREREQUISITE(S): MIS 7605. COREQUISITE(S): MIS 7610.

Five Elective courses approved by departmental advisor. Any electives that are not listed here must be approved by advisor in advance.

MIS 6160 - Mobile Application Development

(3) Intermediate level business application program development using languages and techniques widely employed in business environment. PREREQUISITE(S): MIS 2845 or equivalent.

MIS 7170 - Global Info Tech Mgmt

(3) Information technology's impact on globalization of businesses; international IT environment; models and issues in international IS; planning and managing global systems; case studies and applications. PREREQUISITE(S): Permission of instructor.

MIS 7190 - Programing For Business

(3) Fundamentals of programming for business projects, including Internet-based business applications and object-oriented programming languages. PREREQUISITE(S): permission of instructor.

MIS 7435 - Web Site Devel

(3) Focuses on Internet, intranets, and other online technologies to develop and maintain the enterprise web site in a business environment; web mastering techniques include coverage of web site creation, design, programming, planning, enhancement, and maintenance.

MIS 7455 - Cyber Ethics in IT

(3) Business ethics and computer ethics issues and concepts in an online environment, including relevant topics such as privacy, freedom of expression, intellectual property, software development and testing, and related IT management decisions. PREREQUISITE(S): 9 hours of graduate credit or permission of instructor.

MIS 7615 - Enterprise Network & Security

(3) Introduction to concepts and terminology of data communication, network design, and distributed information systems; topics include equipment protocols and architectures, transmission alternatives, the communications environment, regulatory issues, and network pricing and management.

MIS 7621 - Business Machine Learning II

(3) This advanced course in business analytics goes into depth in techniques and methods applied to real world problems and data. Techniques covered include: artificial neural networks, decision trees, nearest neighbor approaches, predictive modeling, and genetic algorithms. The emphasis will be on application in business. The course will provide guidance on building the business case and the model including problem definition and data evaluation, and evaluation of the modal. Hands-on exercises will be required using analytics packages/languages as Tableau, Rapid Miner, IBM Modeler, Microsoft SQL, R. PREREQUISITE(S) or COREQUISITE(S): MIS 7620 or instructor permission.

MIS 7630 - Informatn Systms Proj

(3) Development or evaluation or both of specialized software product; field studies to collect and analyze data pertinent to significant information systems issues. PREREQUISITE(S): MIS 7610. Grades of A-F, or IP will be given.

MIS 7655 - Adv Systems Analysis

(3) Advanced concepts in information systems planning and development with focus on current information technologies and systems development practices that lead to timely delivery of effective information systems solutions; special attention on communication and interpersonal skills required for today's systems development activities. PREREQUISITE(S): MIS 7610.

MIS 7660 - Advanced Data Management

(3) Advanced concepts in data management and in the strategic use of data. Topics will be selected from data strategy, business intelligence, data mining and the strategic use of data warehouses, data quality, the business value of data, unstructured data, modern data administration, master data management, data management in cloud computing, data issues in agile development, and other contemporary data topics.

MIS 7665 - Adv Business Compt Envn

(3) Technical aspects and managerial implications of several state-of-the-art technologies with potential effects on competitive advantage, probability and cost, and personnel resources. PREREQUISITE(S): MIS 7605, MIS 7610, and MIS 7615; or permission of the instructor.

MIS 7670 - Information Security Mgmt

(3) Comprehensive survey of technical and managerial aspects of computer and network security in the business environment. Emphasis is on managerial issues and decisions related to selecting and managing all aspects of information security.

MIS 7671 - Project/Change Mgmt

(3) Overview of theoretical and practical concepts in management of IT projects; explores unique and particular challenges resulting from rapid technological change and dynamic business environments; difficulty of managing changes in organizations resulting from introducing or revising information systems, emphasizing change management role of the IS specialist. PREREQUISITE or COREQUISITE: MIS 7610 or equivalent PREREQUISITE(S) or COREQUISITE(S): PSYC 7610 or equivalent

MIS 6672 - Project Mgmt Tools/Lead

(3) Computer-based project management tools and project management leadership roles and techniques.

MIS 6681 - Fundamental/Software Testing

(3) Software testing objectives, planning, techniques, and organizational options. Manual and automated software testing techniques and test case generation methodologies.

MIS 6682 - Advanced Software Testing

(3) Topics include advanced software testing methods, the roles of software testers and users at all stages of software development, walkthroughs, inspections, and reviews, testing in standard versus agile developments environments. PREREQUISITE(S): MIS 6681.

MIS 7910 - Prob Mgmt Info Syst

(1-6) Directed independent research projects in an area selected by the student with approval of supervising faculty member and Faculty Director. Proposed plan of study must be approved prior to enrollment. Grades of A-F, or IP will be given. Grades of A-F, or IP will be given.

MIS 7470 - Special Topics: Fundamentals in Data Science

(3) This course introduces the basics of data science. We cover the foundations of analytical methods, data visualization and unstructured data. Students will get exposure to a variety of mathematical techniques, data visualization and manipulation tools. You will be using real world data sets from a variety of websites to perform analytics.

Experiential Learning Credit

Students enrolled in the MS in IS program will be allowed to request a maximum of six credit hours of experiential learning credit for the purposes of meeting their degree requirements (the six credit hours will apply toward the required credit hours needed to complete a concentration).This six credit hours of experiential learning credit will be granted only for students who have qualified, exceptional experience that can be related to one or more courses in the degree program.

In order to request consideration for the credit hours, students must submit a portfolio for review by following the guidelines of the Center for Teaching and Learning. For more information about their guidelines, refer to the Center for Teaching and Learning's Experiential Learning Credit website: (http://www.memphis.edu/innovation/elc/portfoliodevelopment.php).

Instruction and Curriculum Leadership - Early Childhood Education Concentration, (MS)

MS Degree Program

This program is designed for students who are seeking advanced study and professional development in education focusing on Instruction and Curriculum, Instructional Design and Technology, Literacy, Early Childhood Education, or Special Education. Specific program requirements for the listed concentrations are found on the ICL website. An option for students seeking the MS degree with a concentration in Instruction and Curriculum is to complete program requirements that prepare students to apply for a Tennessee Library Information Specialist Endorsement.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions materials before the application will be reviewed:

1. An application to the Graduate School that includes:
    1. Official transcripts of undergraduate and graduate study;
2. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
3. Submit the ICL Department MS Application along with two letters of recommendation on letterhead, preferably one from a college/university professor to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152). All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for spring semesters.
4. The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for advanced master's level studies.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point averages, scores of the submitted tests, and letters of recommendation.

Program Requirements

1. A minimum of 30 graduate semester hours is required.
2. The major will consist of 12 semester hours including courses identified by the concentration and ICL 7992 - Master's Project ** or IDT 7095 - Dev Intractve Lrng Envirnmt II ** or SPED 7900 - Advanced Practicum/Capstone.
3. EDPR 7521 - Intro to Educ Research ** or EDPR 7581 - Behav Anlys/Case Dsgn

4. Fifteen (15) semester hours of electives are required. Courses taken depend on the undergraduate background, previous experiences of the student, and the nature of the major area of concentration. These courses must be approved by the assigned advisor and support the major area of study.

Instruction and Curriculum Leadership - Instruction and Curriculum Concentration, (MS)

MS Degree Program

This program is designed for students who are seeking advanced study and professional development in education focusing on Instruction and Curriculum, Instructional Design and Technology, Literacy, Early Childhood Education, or Special Education. Specific program requirements for the listed concentrations are found on the ICL website. An option for students seeking the MS degree with a concentration in Instruction and Curriculum is to complete program requirements that prepare students to apply for a Tennessee Library Information Specialist Endorsement.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions materials before the application will be reviewed:

1. An application to the Graduate School that includes:
    1. Official transcripts of undergraduate and graduate study;
2. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
3. Submit the ICL Department MS Application along with two letters of recommendation on letterhead, preferably one from a college/university professor to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152). All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for spring semesters.
4. The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for advanced master's level studies.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point averages, scores of the submitted tests, and letters of recommendation.

Program Requirements

1. A minimum of 30 graduate semester hours is required.
2. The major will consist of 12 semester hours including courses identified by the concentration and ICL 7992 - Master's Project ** or IDT 7095 - Dev Intractve Lrng Envirnmt II ** or SPED 7900 - Advanced Practicum/Capstone.
3. EDPR 7521 - Intro to Educ Research ** or EDPR 7581 - Behav Anlys/Case Dsgn
4. Fifteen (15) semester hours of electives are required. Courses taken depend on the undergraduate background, previous experiences of the student, and the nature of the major area of concentration. These courses must be approved by the assigned advisor and support the major area of study.

Instruction and Curriculum Leadership - Instructional Design and Technology Concentration, (MS)

MS Degree Program

This program is designed for students who are seeking advanced study and professional development in education focusing on Instruction and Curriculum, Instructional Design and Technology, Literacy, Early Childhood Education, or Special Education. Specific program requirements for the listed concentrations are found on the ICL website. An option for students seeking the MS degree with a concentration in Instruction and Curriculum is to complete program requirements that prepare students to apply for a Tennessee Library Information Specialist Endorsement.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions materials before the application will be reviewed:

1. An application to the Graduate School that includes:
    1. Official transcripts of undergraduate and graduate study;
2. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
3. Submit the ICL Department MS Application along with two letters of recommendation on letterhead, preferably one from a college/university professor to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152). All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for spring semesters.
4. The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for advanced master's level studies.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point averages, scores of the submitted tests, and letters of recommendation.

Program Requirements

1. A minimum of 30 graduate semester hours is required.
2. The major will consist of 12 semester hours including courses identified by the concentration and ICL 7992 - Master's Project ** or IDT 7095 - Dev Intractve Lrng Envirnmt II ** or SPED 7900 - Advanced Practicum/Capstone.
3. EDPR 7521 - Intro to Educ Research ** or EDPR 7581 - Behav Anlys/Case Dsgn
4. Fifteen (15) semester hours of electives are required. Courses taken depend on the undergraduate background, previous experiences of the student, and the nature of the major area of concentration. These courses must be approved by the assigned advisor and support the major area of study.

Instruction and Curriculum Leadership - Literacy Education Concentration, (MS)

MS Degree Program

This program is designed for students who are seeking advanced study and professional development in education focusing on Instruction and Curriculum, Instructional Design and Technology, Literacy, Early Childhood Education, or Special Education. Specific program requirements for the listed concentrations are found on the ICL website. An option for students seeking the MS degree with a concentration in Instruction and Curriculum is to complete program requirements that prepare students to apply for a Tennessee Library Information Specialist Endorsement.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions materials before the application will be reviewed:

1. An application to the Graduate School that includes:
    1. Official transcripts of undergraduate and graduate study;
2. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
3. Submit the ICL Department MS Application along with two letters of recommendation on letterhead, preferably one from a college/university professor to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152). All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for spring semesters.
4. The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for advanced master's level studies.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point averages, scores of the submitted tests, and letters of recommendation.

Program Requirements

1. A minimum of 30 graduate semester hours is required.
2. The major will consist of 12 semester hours including courses identified by the concentration and ICL 7992 - Master's Project ** or IDT 7095 - Dev Intractve Lrng Envirnmt II ** or SPED 7900 - Advanced Practicum/Capstone.
3. EDPR 7521 - Intro to Educ Research ** or EDPR 7581 - Behav Anlys/Case Dsgn
4. Fifteen (15) semester hours of electives are required. Courses taken depend on the undergraduate background, previous experiences of the student, and the nature of the major area of concentration. These courses must be approved by the assigned advisor and support the major area of study.

Instruction and Curriculum Leadership - Special Education Concentration, (MS)

MS Degree Program

This program is designed for students who are seeking advanced study and professional development in education focusing on Instruction and Curriculum, Instructional Design and Technology, Literacy, Early Childhood Education, or Special Education. Specific program requirements for the listed concentrations are found on the ICL website. An option for students seeking the MS degree with a concentration in Instruction and Curriculum is to complete program requirements that prepare students to apply for a Tennessee Library Information Specialist Endorsement.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions materials before the application will be reviewed:

1. An application to the Graduate School that includes:
    1. Official transcripts of undergraduate and graduate study;

2. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
3. Submit the ICL Department MS Application along with two letters of recommendation on letterhead, preferably one from a college/university professor to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152). All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for spring semesters.
4. The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for advanced master's level studies.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point averages, scores of the submitted tests, and letters of recommendation.

Program Requirements

1. A minimum of 30 graduate semester hours is required.
2. The major will consist of 12 semester hours including courses identified by the concentration and ICL 7992 - Master's Project ** or IDT 7095 - Dev Intractve Lrng Envirnmt II ** or SPED 7900 - Advanced Practicum/Capstone.
3. EDPR 7521 - Intro to Educ Research ** or EDPR 7581 - Behav Anlys/Case Dsgn
4. Fifteen (15) semester hours of electives are required. Courses taken depend on the undergraduate background, previous experiences of the student, and the nature of the major area of concentration. These courses must be approved by the assigned advisor and support the major area of study.

International, (IMBA)

The International MBA is designed to assist students in meeting their goal of acquiring knowledge of international business, even if they do not have a traditional business background or a second language. The International MBA is open to graduates of business, foreign language, or liberal arts programs. It is a full-time, lock-step program (including one summer), with a minimum of 36 credit hours of required coursework.

Coursework for the International MBA degree includes 30 hours of business core coursework, identical to the other MBA programs in the Fogelman College of Business and Economics. The IMBA includes an additional 6 credit hours, 3 of which are devoted to an international experience (study abroad and internship abroad). Students secure an appropriate internship (with some assistance from the IMBA program, but ultimate responsibility for obtaining the internship lies with the student), which must be approved by the IMBA program before academic credit may be awarded.

Program objectives are: (1) An understanding of the general context of business in society including: ethical and global issues; influence of the political, legal, social, and technological environment; the impact of demographic diversity on organizations; and knowledge of the essential foundations of the functional areas of business. (2) Acquisition of a professional-level knowledge of: financial reporting and analysis; managing organizations; strategic use of science and technology; and creating value in the global arena. (3) Competence in business communication in a foreign language (except in the World Regions Track). (4) Building knowledge and skill in the operation of one or more international businesses. (5) Ability to compete effectively for jobs in the profit and not-for-profit sector.

Program Admission:

Applicants must have:

1. An undergraduate degree from an accredited college or university.
2. A Graduate School application for admission and have paid the appropriate fee.

3. An official transcript from each college or university attended with course by course credential evaluations (from a credential evaluation organization that is a member of the NACES) for degrees earned from accredited foreign educational institutions.
4. Satisfactory performance on undergraduate course work and a recent (5 years or less) GMAT or GRE examination score.
5. Acceptable TOEFL score for international applicants.

All applicants to the International MBA program must also submit a current resume, personal statement, three letters of recommendation, and an IMBA Applicant Profile form. Students must also pay the $500 seat fee (which is subsequently applied to their first annual program fee). Qualified applicants enter the program during the Fall Semester only. The program website is www.memphis.edu/internationalmba.

Program Requirements:

Language and Culture Options

The International MBA Program offers three (3) Business Track options. Students must choose from one of the following:

- Regional Business Track: for U.S. students with three years (six semesters) of foreign language proficiency. Students in this track will concentrate on the business practices, culture and language of the students' preferred region of the world.
- World Region Business Track: for U.S. students who wish to specialize in the practice of business in geographical regions where English is the accepted business language.
- U.S. Business Track: for international students who have English as their second language. This track provides in-depth exposure to U.S. business practices and culture.

Coursework

Core Knowledge and Skills (30 hours)

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

ACCT 7080 - Financial/Managerial Acct Mgrs **

(3) Use of accounting information by an organization's investors, creditors, regulatory authorities and managers; develops financial credit analysis skills useful in business decision making; analysis of accounting information useful for monitoring efficiency, quality, and timeliness of an operation; pricing and costing of products and services; planning and performance measurement.

ECON 7100 - Econ for Global Executive **

(3) Essential economic theory and its application to business and economic issues. Consumer behavior, managerial economics and strategy, market structure in a global context.

MKTG 7555 - Creativity and Innovation **

(2) Focused analysis and discussion of imaginative, creative processes used for innovation in business contexts; explores theoretical underpinnings of creativity and innovation, with special attention to environmental effects on individual and group creativity; creativity knowledge is applied in areas of ideation, innovation management, and product design. May be repeated for a maximum of 6 credit hours when topics change

MGMT 7135 - Seminar in Leadership **

(2) Theoretical and practical consideration of leadership in high performing business organizations; detailed analysis of relevant organizational behavior concepts; particular focus on theories of motivation, styles of leadership, and emotional intelligence.

ACCT 7050 - Corp Governance/Bus Ethics **

(2) Detailed analysis of the role of corporate governance in the free enterprise system and capital markets; focused consideration of moral principles, ethical standards, and corporate code of business ethics.

SCMS 7313 - Global Operations Mgmt **

(3) (ISDS 7/8313) Acquisition, transformation, and distribution of goods and services within the global supply chain; covers concepts, tools, and strategies to design and manage operations, such as strategic implications, performance measurement, process management, sourcing, operations design, quality, inventory, logistics, enabling information systems and technology, and global issues among other topics.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

MKTG 7140 - Global Strategic Marketing **

(3) Marketing strategy and in-depth analysis of issues impacting global management of marketing, including: interrelationships among global business environments and strategies, analysis value creating global strategies, competitive intelligence gathering, customer segment analysis, integrated marketing technologies, customer relationship management.

MGMT 7160 - Global Strategic Mgmt **

(3) (7410) Decisions and actions for the development and implementation of long-term plans that determine organizational performance; role of top management decision making in establishing the firm's mission; focus on strategic analysis of alternative actions; evaluation of environmental conditions, industry characteristics, and organizational capabilities in determining strategy in a global context.

International MBA Program Requirements (6 hours)

BA 7800 - Internship In Business

(1) Internship in business organization to gain on-the-job experience in actual management environment; project to be approved by College Internship Director and supervised by graduate faculty. PREREQUISITE(S): 15 semester hours of graduate credit and minimum GPA 3.25.

BA 7703 - Special Topics in Business Administration

(3) Special study of problems in business and economics. Topic areas change each semester as determined by new developments in business. PREREQUISITE(S): PREREQUISITE: Permission of associate dean for academic programs.

Business Language (differs by track) (3 hours)

Study Abroad Academic Requirements and Fees

Grades for classes undertaken during a study abroad experience at one of the University of Memphis' partner institutions overseas will be transferred back to the University of Memphis and are subject to the university's policy on graduate transfer credit. Credit toward a degree does not transfer automatically; however, the program is designed for students who study abroad so every reasonable effort is made to transfer credit from partner institutions. Grades earned at another institution will not be computed in the university cumulative grade point average, nor will they be accepted for transfer, unless they are "B" (3.0) or better. No credit will be transferred unless it meets with the approval of the International MBA advisor or program graduate coordinator. Transferred courses from overseas partner institutions will appear on student transcripts as BA 7920 with a "Satisfactory" (S) grade. Students will need to obtain an evaluation of their overseas transcript by a professional credential evaluation firm (for a list of such firms, please visit www.naces.org). The evaluation firm must receive the transcript directly from the overseas university and submit a course by course evaluation directly to the IMBA Program advisor. Evaluations or transcripts issued to the student cannot be used in the transfer credit process. Fees charged to the student for such services vary by evaluating agency and is the responsibility of the student.

International MBA students are required to pay any fees required by the University of Memphis International Programs Office related to study abroad. Students are also responsible for round-trip airfare, passport fees, books, medical insurance, and any other expenses related to studying and interning abroad.

IMBA Graduate Assistantships

Graduate assistantships are available to students enrolled in the International MBA program. Graduate assistantships are competitive and are awarded only to highly qualified applicants. Graduate assistantships require students to supply 20 hours of service to the University of Memphis per week. Graduate assistants who work at least 10 hours per week are classified as in-state students for fee-paying purposes for the term of their appointment, only. In-state graduate assistants working at least 10 hours per week receive a waiver of ONE HALF of tuition and fees during the academic year. Graduate assistants who work 20 hours per week receive full waiver of tuition and fees during the academic year. (Tuition and fee benefits do not apply to study abroad or the summer semester.) University supported graduate assistants are expected to carry at least a 9-credit-hour load each semester of the academic year. Graduate assistants must maintain a 3.0 GPA to retain their assistantships.

Journalism and Strategic Media, (MA)

MA Degree Program

Students in the MA program may take courses in advertising, news, new and emerging media, public relations, and visual communication in keeping with their needs and interests. The curriculum is designed for undergraduates interested in advanced study, practicing professionals looking to deepen their knowledge and sharpen their skills, workers changing careers, and those who anticipate going into teaching. Students should consult with the coordinator of graduate studies and with faculty advisors in designing individual course plans.

Program objectives are: (1) understanding and application of First Amendment principles and the law appropriate to professional practice, the history and role of professionals and institutions in shaping communications, and the diversity of groups in relationship to communications; (2) understanding the concepts and being able to apply theories in the use and presentation of images and information; (3) developing the ability to work ethically in pursuit of truth, accuracy, fairness and diversity; (4) developing the ability to conduct research and evaluate information by methods appropriate to the communications professions in which they work; and (5) cultivating the ability to write correctly and clearly in forms and styles appropriate for the communications professions, their audiences, and the purposes they serve.

Program Admission and Prerequisites

Applicants to the program are evaluated on a monthly basis. Students may be admitted for the fall or spring semesters or for the summer session. Admission to the journalism program is competitive. Multiple criteria are considered and include official GRE or MAT scores, cumulative grade point averages, relevant employment history in the form of a resume, and a personal goal statement.

Applicants whose highest degree is from a foreign university must have their credentials evaluated. The university will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org).

Program Requirements

1. Courses and credit hours. Students will complete their degrees with a minimum of 33 hours of graduate credit. All courses taken for graduate credit must be approved by the graduate faculty of the department. Student work must be completed at a level of performance satisfactory to the graduate faculty. Students must complete all journalism courses with a grade point average of 3.0 or better. Course work taken outside the department must be approved by the student's advisor. No more than 9 credit hours of coursework may be taken at the 6000-level.

   Students with graduate credit earned at another institution may petition to have it applied toward their degree requirements at the University of Memphis. Such credit is not transferred automatically and must be approved by the graduate faculty. A maximum of 12 semester hours earned at another regionally accredited university may be applied toward the master's degree requirements at the University of Memphis.
2. Students will choose one of four emphasis areas: Integrated Strategic Media (21 hours), Visual Media (21 hours), News and Storytelling (21 hours), or Mass Media Research (21 hours, which includes a six-hour thesis). Students choosing the research emphasis are not required to do the Graduate Media Practicum.
3. Required Courses. All students are required to complete a 12-hour core consisting of Pro Seminar, Media Portfolio, Mass Communication Theory, Mass Communication Research Methods, and (except for students doing the research track) the Graduate Media Practicum. Students must complete Pro Seminar by the end of their first semester.

   Students are encouraged to prioritize the core courses, and complete them as soon as possible. No more than three hours in either JRSM 7700 or JRSM 7800, but not both, may be applied to the degree. No more than three hours in either JRSM 7600 or JRSM 7650, but not both, may be applied to the degree. All requirements for the degree must be completed in eight years. Courses older than eight years will not be allowed as credit toward the master's degree. Additionally, students who entered the program without an undergraduate degree in journalism and mass communication or a similar field are required to take JRSM 6700, JRSM 6702 and JRSM 7000.

4. Master's Thesis (JRSM 7996 - Thesis **). Students who anticipate continuing with doctoral study or who are interested in academic research or in college teaching should complete an independent research project culminating in a master's thesis. A thesis uses the academic research method to examine a phenomenon in mass communication, or to consider a legal, historical, or visual issue related to journalism and mass communication. It must collect original data and analyze it, and discuss how the research fits in with established knowledge. A thesis might use content analysis, survey, experiment, focus groups, in-depth interviews, document analysis, ethnography, legal analysis, historical analysis, or visual analysis.

   On completion of a thesis, a student will take an oral examination with a three-person faculty committee that assesses the thesis and the student's broader awareness of theoretical and empirical issues in his or her field. The student must defend both the thesis proposal as well as the final document. He or she is responsible for assembling a committee, which should consist of at least 3 faculty members (a minimum of 2 from Journalism).

   Students must take 6 credit hours of thesis credit, and cannot count more than 6 toward graduation, but may take more if needed. Graduate assistants on the thesis path may take only 6 hours of thesis credit in their final semester and remain on their assistantship.

   A thesis might need approval from the Institutional Review Board, depending on the type of research.

   Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the thesis.
5. Professional Project (JRSM 7998 - Professional Project **). Students seeking master's degrees to enhance career progress may complete a professional project under the direction of a faculty committee. In a project, students create an original work that can be used by a professional outlet. The way a project is completed depends on the type of work being done. Students are expected to complete a project that would be useful in their careers.

   A professional project can take many forms. It might be a marketing plan, business startup, a communications plan for a nonprofit organization, a series of research-based journalism articles, or a visual creative project. Students will determine the expectations and guidelines for the project with the committee chair. The quality of work in a project is expected to be equal to a thesis.

   On completion of a professional project, a student will take an oral examination that assesses the project and the student's broader awareness of theoretical and empirical issues in his or her field. The student must defend both the project proposal as well as the final document. He or she is responsible for assembling a committee, which should consist of at least 2 Journalism faculty; additional outside members are welcome at the students' choice.

   Students must take 3 credit hours of project credit, and cannot count more than 3 toward graduation, but may take more if needed.

   A project might need approval from the Institutional Review Board, depending on the type of research.

Leadership and Policy Studies - Leadership Concentration, (MS)

Master of Science (MS)

The Department of Leadership offers the Master of Science degree in Leadership and Policy Studies with a concentrations in Leadership.

Program Admission

1. Each applicant must submit a completed application packet to the University of Memphis Graduate School that includes:
    - A completed admissions application
    - An official report of the Graduate Record Examination (GRE) score. GRE is required for master's degree even in cases where applicant already has one master's degree.
    - Official transcripts for all prior undergraduate and graduate courses.
2. In addition to the University Graduate School application packet above, each applicant must submit:
    - Letter of application
    - Professional resume
    - Three letters of professional recommendation
    - Brief statement of professional goals

The admission decision will be based on a holistic profile that includes, but is not limited to, information contained in the completed application packet described above. Interested applicants are required to contact the departmental office to obtain admission forms and a more complete statement of admission guidelines.

Deadline for submission of all application material for M.S. Leadership concentration and M.S. Student Personnel concentration is February 15 for summer and fall semesters, and October 1 for spring semester.

Students completing the MS in Leadership and Policy Studies will: (1) have developed their skills in leadership, change, policy formulation, the student's program and stewardship of a vision of effectiveness that is shared by others in the organization; (2) have had opportunities to analyze data and its relationship to organizational effectiveness; (3) have concentrated their studies in Leadership; and (4) have concentrated their studies in an area of specialization.

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements for Graduate Academic Programs) as well as the program requirements of the degree being pursued.

Program Requirements

1. A minimum of 36 semester hours is required of all students to obtain the master's degree
2. Students will take 9 hours of the departmental core: LEAD 7000, LEAD 7100 and EDPR 7521; and 27 other hours of approved courses in their concentration.
3. The following policies in the Department of Leadership are exceptions to the policies of the Graduate School:
    1. A maximum of six (6) hours of transfer credit can be counted toward the concentration in School Administration and Supervision.
    2. A maximum of six (6) hours of course work can be validated in the concentration in School Administration and Supervision.

Leadership Concentration:

A minimum of 27 semester hours, including LEAD 7500, LEAD 7100, 5 additional departmental courses, and a portfolio. A minimum of B must be earned in all courses on the program of study.

LEAD 7500 - Adult Lrng/Leadership **

(3) (HIAD 7255-8255) Characteristics of adult learners; factors that affect learning, achievement, and motivation throughout the adult life-cycle; implications for educational leaders and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

LEAD 7100 - Education & Community **

(3) (EDAS 7000) Educational processes and policies in formal and non-formal community settings; inter-relationships among such settings; field-based, students will assess particular educational policy and its implications within the community. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

Leadership and Policy Studies - School Administration and Supervision Concentration, (MS)

Master of Science (MS)

The Department offers the Master of Science degree in Leadership and Policy Studies with a concentration in School Administration and Supervision, a Scholars II Program in Instructional Leadership—a program leading to licensure as a school leader.

Program Admission

1. Each applicant must submit a completed application packet to the University Graduate School that includes:
    - A completed admissions application
    - Official transcripts for all prior undergraduate and graduate courses.
2. In addition to the University Graduate School application packet above, each applicant to the M.S. School Administration and Supervision (SAS) concentration must submit a portfolio to the Department of Leadership that includes:
    - Letter of application
    - Professional resume
    - Three letters of professional recommendation on letterhead
    - A brief statement of professional goals
    - Evidence of current teacher certification and examples of students' work
    - A personal interview preceded by a writing sample will be scheduled with each applicant and an admission decision will be made following the personal interview. The decision will be based on a holistic profile that includes, but is not limited to, information contained in the completed application packet described above and obtained during the personal interview. Interested applicants are required to contact the departmental office to obtain admission forms and a more complete statement of admission guidelines and requirements for a Tennessee administrative license. All students seeking licensure must take the appropriate state-required examination at the

conclusion of their program. The deadline for submission of all application material is the 3rd Friday in February for the summer semester, the 3rd Friday in June for the fall semester, and the 3rd Friday in September for the spring semester.

Students completing the MS in Leadership and Policy Studies will: (1) have developed their skills in leadership, change, policy formulation, the student's program and stewardship of a vision of effectiveness that is shared by others in the organization; (2) have had opportunities to analyze data and its relationship to organizational effectiveness; (3) have concentrated their studies in School Administration and Supervision; and (4) have concentrated their studies in an area of specialization.

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements for Graduate Academic Programs) as well as the program requirements of the degree being pursued.

Program Requirements

1. A minimum of 36 semester hours is required of all students to obtain the master's degree.
2. Students will take 9 hours of the departmental core: LEAD 7000, LEAD 7100, and EDPR 7521; and 27 other hours of approved courses in their concentration.
3. The following policies in the Department of Leadership are exceptions to the policies of the Graduate School:
4. A maximum of six (6) hours of transfer credit can be counted toward the concentration in School Administration and Supervision.
5. A maximum of six (6) hours of course work can be validated in the concentration in School Administration and Supervision.

School Administration and Supervision Concentration:

A minimum of 27 semester hours and a portfolio are required for the School Administration and Supervision (SAS) Concentration. A minimum of a "B" grade must be earned in all courses on the program of study. The following courses are required for the MS in SAS Concentration:

LDPS 7110 - Leadership Explr Sem

(3) (EDAS 7400) Study of theories informing organization behavior, structure, problems, and issues occurring in organizations; discussion of processes used by organizational leaders; students will explore personal beliefs and values, comparing them to theories and best practices to develop in depth understanding of self and personal perspective as educational leader.

LDPS 7120 - Supervisory Process

(1-6) (EDAS 7050) Theory and methodology of educational supervision, with emphasis on instructional leadership; differences in roles for various supervisory personnel; project based.

LDPS 7131 - School Business Mgmt

(1-3) (EDAS 7130-8130) Business affairs of schools in accordance with laws and policies of local, state, and federal agencies; overview of legal and ethical standards; site budgeting and project management.

LDPS 7140 - Ldrshp Instructionl Improvmnt

(3) Theory, research, policy, and practice in educational restructuring and participatory governance; develops skills required to systematically analyze and plan by making data-driven decisions to foster instructional improvement and organizational change necessary to support instruction.

LDPS 7141 - The Principalship

(3) (EDAS 7111-8111 & 7311-8311) Role of the principal in school site leadership focusing on instructional leadership and organization and administration of the school's resources; projects for elementary, middle, junior, and secondary principalship.

LDPS 7150 - Educational Law

(3) (EDAS 7180-8180) Federal and state statutes and local regulations applicable to education; legal requirements and their implications for educational operation; legal research methods and case law.

LDPS 7330 - Race/Ethn/Gndr/Amer Ed

(3) Historical and contemporary study of educational practices and policies related to various ethnic and racial groups, as well as women in the United States; various models of institutional and community forms of multicultural education.

LEAD 7004 - Instructional Leadership

(3) This is a capstone course in which candidates have opportunities to demonstrate that they have acquired the knowledge of theories, practices, and methodology used by effective instructional leaders to create a school culture that fosters high expectations and continuous growth in the academic achievement of all students.

LEAD 7210 - Field Experiences

(1-9) (EDAS 7171-8171) Internship work experiences under supervision of practicing K-12 professional. May be repeated for maximum of 12 credits. Prospective enrollees must meet departmental deadlines for application. Grades of S, U, or IP will be given.

Administration/Supervision Licensure Program:

The department maintains a program leading to licensure for students holding an appropriate master's degree

Leadership and Policy Studies - Student Personnel Concentration, (MS)

Master of Science (MS)

The Department offers the Master of Science degree in Leadership and Policy Studies with a concentration in Student Personnel.

Program Admission

1. Each applicant must submit a completed application packet to the University Graduate School that includes:

- A completed admissions application
- An official report of the Graduate Record Examination (GRE) score. GRE is required for master's degree even in cases where applicant already has one master's degree.
- Official transcripts for all prior undergraduate and graduate courses.

2. In addition to the University Graduate School application packet above, each applicant to the MS in Student Personnel must submit:
    - Letter of application,
    - Professional resume,
    - Three letters of professional recommendation,
    - Brief statement of professional goals
    - The admission decision will be based on a holistic profile that includes, but is not limited to, information contained in the completed application packet described above. Interested applicants are required to contact the departmental office to obtain admission forms and a more complete statement of admission guidelines.

Deadline for submission of all application material for the MS Student Personnel concentration is April 1 for summer and fall semesters, and November 1 for spring semester

Students completing the MS or EdD in Leadership and Policy Studies will: (1) have developed their skills in leadership, change, policy formulation, the student's program and stewardship of a vision of effectiveness that is shared by others in the organization; (2) have had opportunities to analyze data and its relationship to organizational effectiveness; (3) have concentrated their studies in Student Personnel; and (4) have concentrated their studies in an area of specialization.

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements for Graduate Academic Programs) as well as the program requirements of the degree being pursued.

Program Requirements

1. A minimum of 36 semester hours is required of all students to obtain the master's degree.
2. Students will take 9 hours of the departmental core: LEAD 7000, LEAD 7100, and EDPR 7521; and 27 other hours of approved courses in their concentration.
3. The following policies in the Department of Leadership are exceptions to the policies of the Graduate School:
    1. A maximum of six (6) hours of transfer credit can be counted toward the concentration in School Administration and Supervision.
    2. A maximum of six (6) hours of course work can be validated in the concentration in School Administration and Supervision.

Student Personnel Concentration:

A minimum of 27 semester hours, including LEAD 7500; HIAD 7060, HIAD 7410, HIAD 7440, HIAD 7442, HIAD 7443, HIAD 7444; 2 additional courses; and a portfolio. A minimum of B must be earned in all courses on the program of study.

LEAD 7500 - Adult Lrng/Leadership **

(3) (HIAD 7255-8255) Characteristics of adult learners; factors that affect learning, achievement, and motivation throughout the adult life-cycle; implications for educational leaders and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 7060 - Intrnshp Hi/Adult Ed **

(1-6) Work experiences in higher education institution or in adult education settings under supervision of practicing professional and university supervisor. May be repeated for maximum of 6 credits. Grades of S, U, or IP will be given. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor. Grades of S, U, or I will be given.

HIAD 7410 - Overview Higher Educ **

(3) (EDAS 7190-8190) Higher education in social and historical contexts; organization and administration of colleges and universities. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 7440 - Stdnt Prsnl Svc High Ed

(3) (COUN 7613-8613) Activities, functions, relationships, and philosophy of student personnel services; historical developments and current trends in student personnel services in relation to changing concepts in higher education. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor. Grades of A-F will be given.

HIAD 7442 - College Student Dev

(3) (Same as COUN 7622-8622.) Comprehensive study of traditional and non-traditional college students; emphasis on identification of development needs. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 7443 - College Environments

(3) (Same as COUN 7623-8623) Person-environment interaction theories, campus ecology, impact of college environments on diverse student populations, and higher education environmental assessment techniques. Resttricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor. PREREQUISITE(S): HIAD 7442-HIAD 8442

HIAD 7444 - Multiculturalism Coll Camp

(3) Develops knowledge and skills necessary for leadership in diverse educational backgrounds. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

Liberal Studies, (MALS)

Master of Arts (MALS) Degree Program

The Master of Arts in Liberal Studies program at the University of Memphis allows students to customize an interdisciplinary course of study. The program is for those seeking the personal enrichment provided by liberal learning and the development of intellectual skills necessary to lifelong learning; critical reading, scholarly writing, and the art of interpersonal communication.

Program Admission and Prerequisites

Applicants to the program are evaluated as they apply and may be admitted for the fall, spring or summer sessions. Application for admission to the program consists of the following steps:

1. Completion of an undergraduate degree with a grade point average of at least 2.75 on a 4.0 scale from an accredited college or university.
2. Application for admission to the Graduate School: The Graduate School at the University of Memphis accepts applications via electronic submission at www.memphis.edu/admissions/apply.php
3. Application Packet: Instructions for completing this step are available under the MALS admissions information link at www.memphis.edu/univcoll/graduate/mals.php.
4. Personal interview with the MALS Graduate Coordinator.

Program Requirements:

Because each MALS student follows a unique course of study, students develop a contract with the College of Professional and Liberal Studies to create a program that satisfies both the interdisciplinary intent of the MALS program and the Graduate School's requirements for graduation.

At the time of admission to the MALS program, the Graduate Coordinator approves the student's course of study as reflected on the Coordinated Study Grid that accompanies the application essay. Students then enroll each semester in available courses from the approved plan. Within two weeks after the start of the final semester students must submit a final Program Contract that reiterates the approved academic goals (if necessary, reflecting any changes that have developed since admission) and identifies the Coordinated Study courses actually completed. Major deviations from the original approved plan require department pre-approval and will be addressed at the time of registration each semester.

The program requirements are:

1. Successful completion of the MALS degree requires thirty-three (33) credit hours, with a minimum of 24 credit hours at the 7000 level, twelve (12) of which are included in the MALS core.
2. The MALS core is required of all students, and consists of twelve (12) credit hours including UNIV 7000 - Fndtns Liberal Studies **, UNIV 7100 - Rsrch/Intrdiscipl Study **, UNIV 7200 - Liberal Studies Sem **, and UNIV 7997 - Special Project ** .
3. The Coordinated Study is comprised of twenty-one (21) credit hours selected from two or more disciplines, with a maximum of 12 credit hours from any one discipline. At least 12 hours must be 7000-level courses. No more than six (6) credit hours may be from non-core UNIV courses, including UNIV 7796 - Independent Study and/or UNIV 7110 - Internship.
4. Transfer credit is limited to twelve (12) semester hours. Credit previously earned at another university must be presented for evaluation not later than the end of the student's second semester of enrollment.
5. Successful completion of UNIV 7997 - Special Project **, followed by an oral comprehensive examination.

Master of Health Administration, (MHA)

Master of Health Administration (MHA) Program

M. Paige Powell, PhD

Associate Professor, MHA Program Director and Graduate Coordinator

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The University of Memphis Master of Health Administration (MHA) program is a nationally-ranked program with an award-winning emphasis on leadership and professional development. The MHA Program in the School of Public Health has been continuously accredited by the Commission on Accreditation of Healthcare Management Education (CAHME) since 1995. It is the only CAHME-accredited program in the State of Tennessee. The MHA degree program educates students interested in preparing for or furthering careers in a variety of healthcare settings, including hospital, ambulatory care, and managed care organizations. The program combines interdisciplinary academic preparation with health industry experience.

The 53-credit hour on-campus track can be completed full-time in two academic years (21 months) or part-time in as few as three years. Evening classes accommodate both full- and part-time students. Our online, Executive MHA Program prepares those with five or more years of experience to enhance their competencies and career opportunities.

The University of Memphis MHA provides a comprehensive, competency-based education to prepare future leaders in Health Administration. Our 19 competencies are focused on preparing future leaders in the domains of Leadership, Communication, Critical Thinking, Science/Analysis, and Management.

Program Admission

Applicants must receive favorable endorsement from the health administration faculty. Admission will be based on applicable test scores (Graduate Record Examination [GRE] or Graduate Management Aptitude Test [GMAT]); undergraduate grade point average; previous education and/or experience; and an ability to articulate career goals and education objectives via a letter of intent. Two letters of recommendation are also required, one of which should be from a professor or instructor familiar with the student's prior academic history and abilities.

Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (MCAT, DAT, and LSAT) taken in the past five years may be substituted for the GRE by applicants who are enrolled in or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, or law.

Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Program Prerequisites

Students are accepted from all undergraduate disciplines and professional areas; however, the program determines if students must successfully complete up to nine hours of prerequisite course work before being fully admitted into the program.

Program Requirements

The student is required to complete a minimum of fifty-three (53) semester hours. Forty-seven (47) hours are taken in the core curriculum and six (6) hours of electives chosen in consultation with an advisor. The six (6) hours of electives allow the student to extend basic knowledge gained in the core curriculum and can include such areas as health administration, public health, economics, marketing, finance, public policy, public administration, and management. The comprehensive examination (HADM 7210) must be successfully completed during the semester in which the student expects to graduate.

Core Courses

HADM 7100 - Day 1 Sem I: Leadership Skills

(1) The Day One Seminar is designed to equip students with experiences which will assist them in developing personal and professional leadership skills and will enable them to function effectively as early careerists and entry level professionals. Seminar I will focus on team-building, self-assessment, interviewing, communication, and technical writing. Throughout the seminar, students interact with faculty and community leaders to engage in a set of unique experiential learning opportunities. Grades of S, U, or IP will be given.

HADM 7101 - Day 1 Sem II: LeadershipSkills

(1) The Day One Seminar is designed to equip students with experiences which will assist them in developing personal and professional leadership skills and will enable them to function effectively as early careerists and entry level professionals. Seminar II focuses on team-building, leading others, networking, business etiquette, and professional development. Throughout the seminar, students interact with faculty and community leaders to engage in a set of unique experiential learning opportunities.

HADM 7102 - Health Care Law

(3) Covers legal topics in relationship to their effect on operation of health care organizations; includes informed consent, research, confidentiality, professional negligence, regulation of health care provider conduct, and other relevant topics. PREREQUISITE(S): One 7000-level historiography course in any field.

HADM 7103 - Health Planning

(3) Application of strategic planning and management concepts and techniques to health care sector; focus on strategy formation, strategic planning process, business planning and business development.

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

HADM 7108 - Health Care Finance I

(3) Introduction to accounting and financial management focusing on the health care industry; includes understanding financial reports, cost behavior and profit analysis, cost allocation, pricing and service decisions, managerial accounting, planning and budgeting, time value analysis, and financial risk and return.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

HADM 7110 - Leadershp/Org Chg in Hlth Care

(3) This course synthesizes theories and strategies for leadership and navigating organizational change in healthcare and is applicable for graduate and professional students in a variety of health-related disciplines. The course covers current theories of leadership and organizational behavior, focusing on healthcare applications. Emphasis will be placed on applying theoretical concepts in organizational situations such as assessing and leading organizational change.Synthesis of theories, strategies, and systems of managing and leading health care organizations; emphasis on team leadership skills, utilization and outcome analysis, change strategies, and planning.

HADM 7116 - Adm Health Serv Orgs

(3) Introduction to analysis of administrative practices in health services organizations: examines leadership roles, analyzes impact of professional roles on process within the organization, examines evolution of organizational design, appraises accountability relative to public trust.

HADM 7204 - Healthcare Qual & Outcms Mgmt

(3) This course is designed to acquaint the student with quality management philosophies, approaches, and methodologies for improving health systems and processes. Students completing this course will be able to identify, analyze and create a basic quality/outcome research proposal.

HADM 7206 - Managerial Epidemiology

(3) Introduction to principles and tools of epidemiology, exploring distribution and determinants of disease, and examining ways to apply this knowledge to the management of health service organizations.

HADM 7208 - Health Care Finance II

(3) Continuation of tools and techniques for financial management in health care settings, blending theory and practice through lecture and case analysis to provide students an opportunity to apply theory presented in class to practical examples.

HADM 7209 - Quant Methods for Hlth Svcs

(3) Covers use and capabilities of Excel, particularly in the functional ability to construct operational and financial models for healthcare organizations; encourages active hands-on" participation of students in the learning process; all data sets relate specifically to health care: e.g.: DRG codes

HADM 7210 - Comp Expr/Hlth Care Mgmt

(3) Capstone course for the MHA program, requiring students to draw from all previous learning in the program. Major focus is a small-team project to create a needs analysis; identify gaps in health care services; plan an intervention (service or facility); and determine how to create, finance, staff, and deliver the intervention. Preparation of a Certificate of Needs (CON) also required.

HADM 7605 - Human Resources Admin

(3) (POLS 7-8605) (POLS 7-8605). Policies, methods, and techniques utilized in public and health organizations; special attention is given to problems reflecting contemporary demands upon human resource systems, capacity to diagnose problems, select the most effective means of addressing them, and plan appropriate courses of action developed through case studies.

PUBH 7710 - HealthCare Economics

(3) (cross-listed with ECON 7710-8710) Applies basic economic concepts to analyze health care market and evaluate health policies; including distinctive economic characteristics of health, health care industry, and health care professionals; American system of health care; current health care policy issues such as health care reform, managed care, and manpower planning.

HADM 7190 - Internship Hlth Admn I

(1-6) Participation in a field experience program, including a written report critically describing the student's responsibilities. Field experience may result from a supervised internship in cooperating public and non-profit organizations or from an appropriate administrative experience if the student is employed in a public or non-profit organization.

Electives

Six hours will be taken with the approval of the faculty advisor.

Possible electives include courses within the concentration areas, as well as:

HADM 7130 - Quality Tools in HC Management

(3) This course is designed to teach students the methodology and tools of Lean Six Sigma from development of a project charge to completion of the project. Students will lead a real-world project through all phases of Six Sigma, complete a comprehensive exam, and defend the project to the instructor and a Master Black Belt. Upon successful completion, students will be certified Six Sigma Green Belts.

HADM 7140 - Population Health Management **

(3) This graduate course focuses on critical concepts in population health and population health management. Attention is given to both health care and public health dimensions of identifying, managing, and improving population health outcomes in an era of health care reform. Population-level determinants of health are addressed in detail, as are the rationale and tools for monitoring and improving health problems at a population level. Emphasis is given to specific models for population health management, as well as systemic innovations in health care and public health.

PUBH 7502 - Hlth Policy, Theory & Methods

(3) This course utilizes a multi-level approach to public health by providing a comprehensive overview of the health effects, history, marketing, politics, and control of tobacco use, combining medical, psychsocial, epidemiological and economic perspectives to give students a framework for understanding tobacco addiction and its prevention and treatment.

PUBH 7505 - Aging, Pub Hlth, & Hlth Svs

(3) 3

Other courses may serve as electives; students should check with their advisors

Retention Requirements

All students enrolled in the MHA program are expected to attain high academic achievement in all courses taken. The following criteria will be used to determine retention status of students:

Students having been admitted unconditionally who maintain a cumulative GPA of 3.00 or higher will be considered in good standing if not more than 2 (two) grades of 2.00 or lower have been earned.

Students must maintain a GPA of 3.00. In accordance with the Graduate School guidelines, any student not meeting this requirement will be placed on probation. The MHA Program Director will review each student's academic record to determine whether to request permission from the Graduate School to allow a student who has not maintained a 3.00 GPA to continue to enroll in classes while on probation. The MHA Program Director must approve courses for a student on probation. Probationary status continues even if the student has a grade under appeal. If a student remains on probation for two consecutive semesters or remains on probation after taking three courses (9 semester hours) without raising the overall GPA to 3.00, the student will be suspended from the program. Appeals of suspension must be submitted in writing to the MHA Program Director.

A student who has been suspended from the MHA program will be denied enrollment in MHA and PUBH courses subsequent to suspension.

Elective courses applied to the MHA program requirements must have the advisor's approval.

Master of Public Health - Biostatistics Concentration, (MPH)

Master of Public Health (MPH) Degree Program

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The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1) Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

Program Admission

A multi-disciplinary faculty admissions committee determines admission to the MPH program. Criteria for the selection process are broad because of the wide range of backgrounds from which students may apply. Prior background in public health or health care is not necessary for admission but may be considered in the admission process. The following is necessary for application:

Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Current Graduate Record Examination (GRE) scores from within the past five years are required.

Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (e.g. MCAT, DAT, LSAT, etc.) may be substituted for the GRE by applicants who are enrolled in or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, or law. Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Letters of recommendation from at least three persons familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health professional, are required. At least one letter from a former professor or instructor is required.

Applicants must also submit a statement of purpose in approximately 400-500 words indicating his or her present interests and career goals, including why s/he wants to pursue an MPH degree.

Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Concentration courses include:

Biostatistics

PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

Electives (18 hours)

Elective courses applied to the MPH program requirements must have the advisor's approval.

Possible electives include courses within the concentration areas as well as:

BIOL 7080 - Public Health Microbiol

(3) Overview of the nature of diseases threatening the public health of contemporary societies covering fundamental microbiology; microbe-human interactions; and emerging microbial diseases, common food-borne diseases, and pathogens for bioterrorism. Three lecture hours per week. Three lecture hours per week. PREREQUISITE(S): Permission of instructor.

COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

NUTR 6602 - Community Nutrition

(3) (HMEC, CSED 6602). Nutritional problems and practices of diverse ethnic, age, and socioeconomic groups; educational skill development for intervention; local, regional, national, international agencies that address these nutritional needs. PREREQUISITE(S): Permission of instructor.

NUTR 6902 - Study Tour/Foods/Nutr

(1-3) (HMEC, CSED 6900). On-the scene knowledge about foods and nutrition. May be repeated for a maximum of 6 credit hours. Only 6 hours applicable to degree. Restricted by Program or by Permit.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues. Lecture/Lab Hours: 3 contact hours (2-5 pm)/week.

PUBH 7337 - Public Health Nutrition

(3) This course examines dietary intake and nutrition behaviors from a public health perspective. Topics covered include dietary intake measurement for the monitoring of population health; socioecological factors impacting eating behaviors from infancy into adulthood; and the role of diet in the development of diseases with public health implications (e.g., obesity, malnutrition).

PUBH 7338 - Critical Issues in Global Hlth **

(3) This course focuses on critical issues in global health emphasizing the multidisciplinary approach to understanding global health problems as they occur within and across borders. Concepts include the interplay between global stressors such as population, urbanization, economics, environment, and war; and their effects on the spread of infectious and chronic diseases, nutrition, and environmental health.

PUBH 7340 - Behavioral Intervention Develp **

(3) (PSYC 7306-8306) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

PUBH 7345 - Health Literacy

(3) (Same as PSYC 7310-PSYC 8310) (Same as COMM 7345-8345) This course will introduce students to the issues of health literacy from a public health perpective. We will explore the impact of health literacy on access to care, vulnerable populations, management of chronic illness, mental health, healthcare costs, and several other areas.

PUBH 7347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation.

PUBH 7445 - Genetic Epidemiology

(3) This course will serve as a basic introduction to genetic epidemiology and its application in research. Basic concepts of human genetics will be introduced, and the research methods used to study the genetic basis of disease will be presented. Research methods discussed will include family based studies such as twin studies and affected sib pair linkage analyses, and candidate gene methods such as case-control, cohort and transmission/disequilibrium test. Gene-environment and gene-gene interaction will also be discussed. The course will conclude with a discussion of ethical issues around genetic epidemiology, current research and future directions. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 7450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice.

PUBH 7190 - Adv SAS for PUBH Prof 1

(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

PUBH 7191 - Adv SAS for PUBH Prof II

(3) This class introduces students to advanced SAS programming language statements and methods specifically for data management and reporting. Students will learn methods and techniques to identify data errors, use methods for data entry, maintain analytical data sets and summarize clinical/medical encounter data. This class is a continuation of PUBH 7190-8190.

PUBH 7501 - Health Systems Organizations

(3) This course focuses on issues that contribute to assessing and improving the quality of health systems and services, including: institutional reforms and capacity building, politics and governance, health system financing, public/private partnerships, and building community capacity. The course will emphasize how problems come to be recognized and defined, their characteristics and magnitude, and plans and programs to alleviate them. Students will be taught to understand health system characteristics, problems, policies and management and to champion solutions to structural and behavioral challenges in the health care system.

PUBH 7502 - Hlth Policy, Theory & Methods

(3) This course utilizes a multi-level approach to public health by providing a comprehensive overview of the health effects, history, marketing, politics, and control of tobacco use, combining medical, psychsocial, epidemiological and economic perspectives to give students a framework for understanding tobacco addiction and its prevention and treatment.

SOCI 7853 - Gender And Health

(3) Advanced course on sociological understandings of gender, health, and illness in the US; topics include health status, health behaviors, reproductive health, health professions, care-giving, aging and mortality with special attention to women and men of different class, racial, and ethnic groups.

SWRK 7031 - Rural/Urban Poverty

(3) This course examines the development and analysis of specific policies that impact rural and urban centers with high concentrations of poverty. Emphasis will be placed on the interaction effects of federal policies regarding crime, education, employment and housing, and federal and state income maintenance programs for the poor. The strengths and weaknesses of various approaches to policy development and analysis will be discussed.

PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

Note:

Other courses may serve as electives; students should check with their advisors

Other Requirements

Satisfy completion of PUBH 7985 - Practicum/Field Experience ** (3)

Satisfy completion of PUBH 7996 - Thesis (3) or PUBH 7992 - Master's Project Seminar ** (3).

NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Pass comprehensive examination.

MPH online course notes

** denotes courses that may be available online.

Retention Requirements

All students enrolled in the MPH program are expected to attain high academic achievement in all courses taken. The following criteria will be used to determine retention status of students:

Students having been admitted unconditionally who maintain a cumulative GPA of 3.00 or higher will be considered in good standing if not more than 2 (two) grades of C+ or lower has been earned.

Students must maintain a GPA of 3.00. In accordance with the Graduate School guidelines, any student not meeting this requirement will be placed on probation. The MPH Coordinator will review each student's academic record to determine whether to request permission from the Graduate School to allow a student who has not maintained a 3.00 GPA to continue to enroll in classes while on probation. The MPH Coordinator must approve courses for a student on probation. Probationary status continues even if the student has a grade under appeal. If a student remains on probation for two consecutive semesters or remains on probation after taking three courses (9 semester hours) without raising the overall GPA to 3.00, the student will be suspended from the program. Appeals of suspension must be submitted in writing to the MPH Coordinator.

A student who has been suspended from the MPH program will be denied enrollment in PUBH courses after suspension.

Master of Public Health - Environmental Health Concentration, (MPH)

Master of Public Health (MPH) Degree Program

Vikki Nolan, DSc, MPH
Associate Professor, Assistant Dean, MPH Coordinator
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901.678.1696

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The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1) Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

Program Admission

A multi-disciplinary faculty admissions committee determines admission to the MPH program. Criteria for the selection process are broad because of the wide range of backgrounds from which students may apply. Prior background in public health or health care is not necessary for admission but may be considered in the admission process. The following is necessary for application:

Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Current Graduate Record Examination (GRE) scores from within the past five years are required.

Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (e.g. MCAT, DAT, LSAT, etc.) may be substituted for the GRE by applicants who are enrolled in or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, or law. Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Letters of recommendation from at least three persons familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health professional, are required. At least one letter from a former professor or instructor is required.

Applicants must also submit a statement of purpose in approximately 400-500 words indicating his or her present interests and career goals, including why s/he wants to pursue an MPH degree.

Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Concentration courses include:

Environmental Health

PUBH 7124 - Environmental Toxicology

(3) This course discusses basic principles governing the behavior and effects of toxic chemicals released into the environment; sources, distribution, and fate of toxic chemicals in the environment; chemicals and cancer and birth defects; government regulation of chemical hazards. Focus is on human health impacts of chemicals found in the workplace and general environment. PREREQUISITE(S): SPED 3501 or SPED 6601;

PUBH 7128 - Envrnmnt Policy/DecisionMaking

(3) The course will present regulatory and non-regulatory approaches to the management of toxic substances in the environment, with emphasis on the scientific/technical basis for toxic substances control. It will examine approaches at the international level, in the European Union, and at the federal and state levels in the U.S. Overviews of each approach will be provided with the majority of the course dedicated to examination of the use of risk-based and public health-based approaches to toxicant control in regulatory as well as non-regulatory contexts. Topics that will be integrated into this examination include risk communication, risk perception, risk-benefit and cost-benefit analysis, and environmental justice.PRE-REQUISITES: 7124-8124 and 7126-8126

PUBH 7129 - Envrnmntl Sampling & Analysis **

(3) This is a graduate level laboratory and lecture course on principles, equipment, instrumentation, methodologies, and strategies for measuring environmental chemical and biological contaminants. We will examine sampling techniques, analytical methods, quality assurance/quality control, and regulatory mandates applied to air, water and soil samples. It is designed for students in the environmental health sciences and other graduate students interested in occupational and ambient-environmental exposure assessments for regulatory compliance and risk estimation.

PUBH 7126 - Prin Exposure/Risk Assessmnt

(3) Understanding of exposure and risk is a necessary application and of growing importance in environmental health studies. This course is designed to provide concepts, methods, models, statistics and theory necessary for the assessment of exposure to environmental agents and health risk from exposures. Topics to be covered include: the selection of study populations; identification and quantification of exposure pathways; the design of exposure assessment strategies; exposure measurement methods; risk assessment framework, modeling of health effects; and derivation of risk estimates. Specific examples of exposure and risk assessments will be analyzed and critiqued.

Electives (18 hours)

Elective courses applied to the MPH program requirements must have the advisor's approval.

Possible electives include courses within the concentration areas as well as:

BIOL 7080 - Public Health Microbiol

(3) Overview of the nature of diseases threatening the public health of contemporary societies covering fundamental microbiology; microbe-human interactions; and emerging microbial diseases, common food-borne diseases, and pathogens for bioterrorism. Three lecture hours per week. Three lecture hours per week. PREREQUISITE(S): Permission of instructor.

COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

NUTR 6602 - Community Nutrition

(3) (HMEC, CSED 6602). Nutritional problems and practices of diverse ethnic, age, and socioeconomic groups; educational skill development for intervention; local, regional, national, international agencies that address these nutritional needs. PREREQUISITE(S): Permission of instructor.

NUTR 6902 - Study Tour/Foods/Nutr

(1-3) (HMEC, CSED 6900). On-the scene knowledge about foods and nutrition. May be repeated for a maximum of 6 credit hours. Only 6 hours applicable to degree. Restricted by Program or by Permit.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues. Lecture/Lab Hours: 3 contact hours (2-5 pm)/week.

PUBH 7337 - Public Health Nutrition

(3) This course examines dietary intake and nutrition behaviors from a public health perspective. Topics covered include dietary intake measurement for the monitoring of population health; socioecological factors impacting eating behaviors from infancy into adulthood; and the role of diet in the development of diseases with public health implications (e.g., obesity, malnutrition).

PUBH 7338 - Critical Issues in Global Hlth **

(3) This course focuses on critical issues in global health emphasizing the multidisciplinary approach to understanding global health problems as they occur within and across borders. Concepts include the interplay between global stressors such as population, urbanization, economics, environment, and war; and their effects on the spread of infectious and chronic diseases, nutrition, and environmental health.

PUBH 7340 - Behavioral Intervention Develp **

(3) (PSYC 7306-8306) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

PUBH 7345 - Health Literacy

(3) (Same as PSYC 7310-PSYC 8310) (Same as COMM 7345-8345) This course will introduce students to the issues of health literacy from a public health perpective. We will explore the impact of health literacy on access to care, vulnerable populations, management of chronic illness, mental health, healthcare costs, and several other areas.

PUBH 7347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation.

PUBH 7445 - Genetic Epidemiology

(3) This course will serve as a basic introduction to genetic epidemiology and its application in research. Basic concepts of human genetics will be introduced, and the research methods used to study the genetic basis of disease will be presented. Research methods discussed will include family based studies such as twin studies and affected sib pair linkage analyses, and candidate gene methods such as case-control, cohort and transmission/disequilibrium test. Gene-environment and gene-gene interaction will also be discussed. The course will conclude with a discussion of ethical issues around genetic epidemiology, current research and future directions. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 7450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice.

PUBH 7190 - Adv SAS for PUBH Prof 1

(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

PUBH 7191 - Adv SAS for PUBH Prof II

(3) This class introduces students to advanced SAS programming language statements and methods specifically for data management and reporting. Students will learn methods and techniques to identify data errors, use methods for data entry, maintain analytical data sets and summarize clinical/medical encounter data. This class is a continuation of PUBH 7190-8190.

PUBH 7501 - Health Systems Organizations

(3) This course focuses on issues that contribute to assessing and improving the quality of health systems and services, including: institutional reforms and capacity building, politics and governance, health system financing, public/private partnerships, and building community capacity. The course will emphasize how problems come to be recognized and defined, their characteristics and magnitude, and plans and programs to alleviate them. Students will be taught to understand health system characteristics, problems, policies and management and to champion solutions to structural and behavioral challenges in the health care system.

PUBH 7502 - Hlth Policy, Theory & Methods

(3) This course utilizes a multi-level approach to public health by providing a comprehensive overview of the health effects, history, marketing, politics, and control of tobacco use, combining medical, psychsocial, epidemiological and economic perspectives to give students a framework for understanding tobacco addiction and its prevention and treatment.

SOCI 7853 - Gender And Health

(3) Advanced course on sociological understandings of gender, health, and illness in the US; topics include health status, health behaviors, reproductive health, health professions, care-giving, aging and mortality with special attention to women and men of different class, racial, and ethnic groups.

SWRK 7031 - Rural/Urban Poverty

(3) This course examines the development and analysis of specific policies that impact rural and urban centers with high concentrations of poverty. Emphasis will be placed on the interaction effects of federal policies regarding crime, education, employment and housing, and federal and state income maintenance programs for the poor. The strengths and weaknesses of various approaches to policy development and analysis will be discussed.

PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

Note:

Other courses may serve as electives; students should check with their advisors

Other Requirements

Satisfy completion of PUBH 7985 - Practicum/Field Experience ** (3)

Satisfy completion of PUBH 7996 - Thesis (3) or PUBH 7992 - Master's Project Seminar ** (3).

NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Pass comprehensive examination.

MPH online course notes

** denotes courses that may be available online.

Retention Requirements

All students enrolled in the MPH program are expected to attain high academic achievement in all courses taken. The following criteria will be used to determine retention status of students:

Students having been admitted unconditionally who maintain a cumulative GPA of 3.00 or higher will be considered in good standing if not more than 2 (two) grades of C+ or lower has been earned.

Students must maintain a GPA of 3.00. In accordance with the Graduate School guidelines, any student not meeting this requirement will be placed on probation. The MPH Coordinator will review each student's academic record to determine whether to request permission from the Graduate School to allow a student who has not maintained a 3.00 GPA to continue to enroll in classes while on probation. The MPH Coordinator must approve courses for a student on probation. Probationary status continues even if the student has a grade under appeal. If a student remains on probation for two consecutive semesters or remains on probation after taking three courses (9 semester hours) without raising the overall GPA to 3.00, the student will be suspended from the program. Appeals of suspension must be submitted in writing to the MPH Coordinator.

A student who has been suspended from the MPH program will be denied enrollment in PUBH courses after suspension.

Master of Public Health - Epidemiology Concentration, (MPH)

Master of Public Health (MPH) Degree Program

Vikki Nolan, DSc, MPH
Associate Professor, Assistant Dean, MPH Coordinator
228 Robison Hall
901.678.1696

Email: vgnolan @memphis.edu

The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1)

Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

Program Admission

A multi-disciplinary faculty admissions committee determines admission to the MPH program. Criteria for the selection process are broad because of the wide range of backgrounds from which students may apply. Prior background in public health or health care is not necessary for admission but may be considered in the admission process. The following is necessary for application:

Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Current Graduate Record Examination (GRE) scores from within the past five years are required.

Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (e.g. MCAT, DAT, LSAT, etc.) may be substituted for the GRE by applicants who are enrolled in or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, or law. Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Letters of recommendation from at least three persons familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health professional, are required. At least one letter from a former professor or instructor is required.

Applicants must also submit a statement of purpose in approximately 400-500 words indicating his or her present interests and career goals, including why s/he wants to pursue an MPH degree.

Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Concentration courses include:

Epidemiology

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

PUBH 7141 - Epidemiologic Survey Method **

(3) This course provides students in Public Health with the basic elements in designing and performing survey research. The course describes the initial steps in formulating and focusing the research question and proceeds to the key steps in performing survey research, i.e., identifying the target population, obtaining an appropriate sample, designing the survey instrument and implementing it.

PUBH 7172 - Epidemiology PUBH II **

(3) This course is designed for epidemiology majors and other students requiring a more thorough knowledge of the concepts and methods used in epidemiological research. This course stresses analytical study designs and etiologic research. Topics include exposure-disease associations, threats to internal validity and their control, and valid interpretation of study results, including concepts of association, causality, and effect modification. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR

Plus any one of the following 4 applied "topics " courses:

PUBH 7140 - Epidemiology Chronic Disease

(3) (COMM 7014-8014) This course is designed to provide graduate students with knowledge on major chronic diseases and skill on applying various epidemiologic methods to design and conduct epidemiological studies on chronic diseases. The course covers selected topics in chronic disease with critical analysis of the current epidemiologic literature.

PUBH 7174 - Epidemiology PUBH III

(3) This course is designed for doctoral and advanced master's degree students. The course focuses on the nature of causality in biological systems and the methods by which it may be determined. The course also focuses on extracting, organizing and interpreting various evidence to support public health and medical practices. Both observational and experimental study designs are considered. Landmark studies from the epidemiologic literature will be extensively used to illustrate these issues. PRE-REQUISITES: PUBH 7150, PUBH 7170, AND PUBH 7172, OR PERMISSION OF INSTRUCTOR.

PUBH 7442 - Cancer Epidemiology

(3) The course concentrates on distribution and trends of incidence, mortality and survival of major cancer types. It also discusses in depth current theories of cancer etiology, including radiation, tobacco, alcohol, drugs, occupation and other environmental, biologic and behavioral factors. Special issues of epidemiological research in cancer, such as study design, issues related to abstracting information from medical and other records and retrospective assessment of exposures will also be emphasized. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 7443 - Infectious Disease Epidemiolgy **

(3) This course is designed to introduce students to the basic concepts in infectious disease epidemiology. Topics include history and major concepts of infectious disease epidemiology, investigating new outbreaks, emerging infectious disease and bioterrorism. Measures for controlling infectious disease, such as surveillance, vaccination, and vector control will be taught. Major infectious diseases will be discussed in some detail, including HIV/AIDS, TB, Malaria, and Flu. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

Electives (18 hours)

Elective courses applied to the MPH program requirements must have the advisor's approval.

Possible electives include courses within the concentration areas as well as:

BIOL 7080 - Public Health Microbiol

(3) Overview of the nature of diseases threatening the public health of contemporary societies covering fundamental microbiology; microbe-human interactions; and emerging microbial diseases, common food-borne diseases, and pathogens for bioterrorism. Three lecture hours per week. Three lecture hours per week. PREREQUISITE(S): Permission of instructor.

COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

NUTR 6602 - Community Nutrition

(3) (HMEC, CSED 6602). Nutritional problems and practices of diverse ethnic, age, and socioeconomic groups; educational skill development for intervention; local, regional, national, international agencies that address these nutritional needs. PREREQUISITE(S): Permission of instructor.

NUTR 6902 - Study Tour/Foods/Nutr

(1-3) (HMEC, CSED 6900). On-the scene knowledge about foods and nutrition. May be repeated for a maximum of 6 credit hours. Only 6 hours applicable to degree. Restricted by Program or by Permit.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues. Lecture/Lab Hours: 3 contact hours (2-5 pm)/week.

PUBH 7337 - Public Health Nutrition

(3) This course examines dietary intake and nutrition behaviors from a public health perspective. Topics covered include dietary intake measurement for the monitoring of population health; socioecological factors impacting eating behaviors from infancy into adulthood; and the role of diet in the development of diseases with public health implications (e.g., obesity, malnutrition).

PUBH 7338 - Critical Issues in Global Hlth **

(3) This course focuses on critical issues in global health emphasizing the multidisciplinary approach to understanding global health problems as they occur within and across borders. Concepts include the interplay between global stressors such as population, urbanization, economics, environment, and war; and their effects on the spread of infectious and chronic diseases, nutrition, and environmental health.

PUBH 7340 - Behavioral Intervention Develp **

(3) (PSYC 7306-8306) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

PUBH 7345 - Health Literacy

(3) (Same as PSYC 7310-PSYC 8310) (Same as COMM 7345-8345) This course will introduce students to the issues of health literacy from a public health perpective. We will explore the impact of health literacy on access to care, vulnerable populations, management of chronic illness, mental health, healthcare costs, and several other areas.

PUBH 7347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation.

PUBH 7445 - Genetic Epidemiology

(3) This course will serve as a basic introduction to genetic epidemiology and its application in research. Basic concepts of human genetics will be introduced, and the research methods used to study the genetic basis of disease will be presented. Research methods discussed will include family based studies such as twin studies and affected sib pair linkage analyses, and candidate gene methods such as case-control, cohort and transmission/disequilibrium test. Gene-environment and gene-gene interaction will also be discussed. The course will conclude with a discussion of ethical issues around genetic epidemiology, current research and future directions. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 7450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice.

PUBH 7190 - Adv SAS for PUBH Prof 1

(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

PUBH 7191 - Adv SAS for PUBH Prof II

(3) This class introduces students to advanced SAS programming language statements and methods specifically for data management and reporting. Students will learn methods and techniques to identify data errors, use methods for data entry, maintain analytical data sets and summarize clinical/medical encounter data. This class is a continuation of PUBH 7190-8190.

PUBH 7501 - Health Systems Organizations

(3) This course focuses on issues that contribute to assessing and improving the quality of health systems and services, including: institutional reforms and capacity building, politics and governance, health system financing, public/private partnerships, and building community capacity. The course will emphasize how problems come to be recognized and defined, their characteristics and magnitude, and plans and programs to alleviate them. Students will be taught to understand health system characteristics, problems, policies and management and to champion solutions to structural and behavioral challenges in the health care system.

PUBH 7502 - Hlth Policy, Theory & Methods

(3) This course utilizes a multi-level approach to public health by providing a comprehensive overview of the health effects, history, marketing, politics, and control of tobacco use, combining medical, psychsocial, epidemiological and economic perspectives to give students a framework for understanding tobacco addiction and its prevention and treatment.

SOCI 7853 - Gender And Health

(3) Advanced course on sociological understandings of gender, health, and illness in the US; topics include health status, health behaviors, reproductive health, health professions, care-giving, aging and mortality with special attention to women and men of different class, racial, and ethnic groups.

SWRK 7031 - Rural/Urban Poverty

(3) This course examines the development and analysis of specific policies that impact rural and urban centers with high concentrations of poverty. Emphasis will be placed on the interaction effects of federal policies regarding crime, education, employment and housing, and federal and state income maintenance programs for the poor. The strengths and weaknesses of various approaches to policy development and analysis will be discussed.

PUBH 7309 - Appl Surv Analys in Pub Hlth

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Note:

Other courses may serve as electives; students should check with their advisors

Other Requirements

Satisfy completion of PUBH 7985 - Practicum/Field Experience ** (3)

Satisfy completion of PUBH 7996 - Thesis (3) or PUBH 7992 - Master's Project Seminar ** (3).

NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Pass comprehensive examination.

MPH online course notes

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All students enrolled in the MPH program are expected to attain high academic achievement in all courses taken. The following criteria will be used to determine retention status of students:

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Master of Public Health - Generalist (MPH)

Master of Public Health (MPH) Degree Program

Vikki Nolan, DSc, MPH
Associate Professor, Assistant Dean, MPH Coordinator
228 Robison Hall
901.678.1696

Email: vgnolan @memphis.edu

The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1) Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

Program Admission

A multi-disciplinary faculty admissions committee determines admission to the MPH program. Criteria for the selection process are broad because of the wide range of backgrounds from which students may apply. Prior background in public health or health care is not necessary for admission but may be considered in the admission process. The following is necessary for application:

Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Current Graduate Record Examination (GRE) scores from within the past five years are required.

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Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

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Possible electives include courses within the concentration areas as well as:

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COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

NUTR 6602 - Community Nutrition

(3) (HMEC, CSED 6602). Nutritional problems and practices of diverse ethnic, age, and socioeconomic groups; educational skill development for intervention; local, regional, national, international agencies that address these nutritional needs. PREREQUISITE(S): Permission of instructor.

NUTR 6902 - Study Tour/Foods/Nutr

(1-3) (HMEC, CSED 6900). On-the scene knowledge about foods and nutrition. May be repeated for a maximum of 6 credit hours. Only 6 hours applicable to degree. Restricted by Program or by Permit.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues. Lecture/Lab Hours: 3 contact hours (2-5 pm)/week.

PUBH 7337 - Public Health Nutrition

(3) This course examines dietary intake and nutrition behaviors from a public health perspective. Topics covered include dietary intake measurement for the monitoring of population health; socioecological factors impacting eating behaviors from infancy into adulthood; and the role of diet in the development of diseases with public health implications (e.g., obesity, malnutrition).

PUBH 7338 - Critical Issues in Global Hlth **

(3) This course focuses on critical issues in global health emphasizing the multidisciplinary approach to understanding global health problems as they occur within and across borders. Concepts include the interplay between global stressors such as population, urbanization, economics, environment, and war; and their effects on the spread of infectious and chronic diseases, nutrition, and environmental health.

PUBH 7340 - Behavioral Intervention Develp **

(3) (PSYC 7306-8306) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

PUBH 7345 - Health Literacy

(3) (Same as PSYC 7310-PSYC 8310) (Same as COMM 7345-8345) This course will introduce students to the issues of health literacy from a public health perpective. We will explore the impact of health literacy on access to care, vulnerable populations, management of chronic illness, mental health, healthcare costs, and several other areas.

PUBH 7347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation.

PUBH 7445 - Genetic Epidemiology

(3) This course will serve as a basic introduction to genetic epidemiology and its application in research. Basic concepts of human genetics will be introduced, and the research methods used to study the genetic basis of disease will be presented. Research methods discussed will include family based studies such as twin studies and affected sib pair linkage analyses, and candidate gene methods such as case-control, cohort and transmission/disequilibrium test. Gene-environment and gene-gene interaction will also be discussed. The course will conclude with a discussion of ethical issues around genetic epidemiology, current research and future directions. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 7450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice.

PUBH 7190 - Adv SAS for PUBH Prof 1

(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

PUBH 7191 - Adv SAS for PUBH Prof II

(3) This class introduces students to advanced SAS programming language statements and methods specifically for data management and reporting. Students will learn methods and techniques to identify data errors, use methods for data entry, maintain analytical data sets and summarize clinical/medical encounter data. This class is a continuation of PUBH 7190-8190.

PUBH 7501 - Health Systems Organizations

(3) This course focuses on issues that contribute to assessing and improving the quality of health systems and services, including: institutional reforms and capacity building, politics and governance, health system financing, public/private partnerships, and building community capacity. The course will emphasize how problems come to be recognized and defined, their characteristics and magnitude, and plans and programs to alleviate them. Students will be taught to understand health system characteristics, problems, policies and management and to champion solutions to structural and behavioral challenges in the health care system.

PUBH 7502 - Hlth Policy, Theory & Methods

(3) This course utilizes a multi-level approach to public health by providing a comprehensive overview of the health effects, history, marketing, politics, and control of tobacco use, combining medical, psychsocial, epidemiological and economic perspectives to give students a framework for understanding tobacco addiction and its prevention and treatment.

SOCI 7853 - Gender And Health

(3) Advanced course on sociological understandings of gender, health, and illness in the US; topics include health status, health behaviors, reproductive health, health professions, care-giving, aging and mortality with special attention to women and men of different class, racial, and ethnic groups.

SWRK 7031 - Rural/Urban Poverty

(3) This course examines the development and analysis of specific policies that impact rural and urban centers with high concentrations of poverty. Emphasis will be placed on the interaction effects of federal policies regarding crime, education, employment and housing, and federal and state income maintenance programs for the poor. The strengths and weaknesses of various approaches to policy development and analysis will be discussed.

PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

Note:

Other courses may serve as electives; students should check with their advisors

Other Requirements

Satisfy completion of PUBH 7985 - Practicum/Field Experience ** (3)

Satisfy completion of PUBH 7996 - Thesis (3) or PUBH 7992 - Master's Project Seminar ** (3).

NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Pass comprehensive examination.

MPH online course notes

** denotes courses that may be available online.

Retention Requirements

All students enrolled in the MPH program are expected to attain high academic achievement in all courses taken. The following criteria will be used to determine retention status of students:

Students having been admitted unconditionally who maintain a cumulative GPA of 3.00 or higher will be considered in good standing if not more than 2 (two) grades of C+ or lower has been earned.

Students must maintain a GPA of 3.00. In accordance with the Graduate School guidelines, any student not meeting this requirement will be placed on probation. The MPH Coordinator will review each student's academic record to determine whether to request permission from the Graduate School to allow a student who has not maintained a 3.00 GPA to continue to enroll in classes while on probation. The MPH Coordinator must approve courses for a student on probation. Probationary status continues even if the student has a grade under appeal. If a student remains on probation for two consecutive semesters or remains on probation after taking three courses (9 semester hours) without raising the overall GPA to 3.00, the student will be suspended from the program. Appeals of suspension must be submitted in writing to the MPH Coordinator.

A student who has been suspended from the MPH program will be denied enrollment in PUBH courses after suspension.

Master of Public Health - Health Systems and Policy Concentration, (MPH)

Master of Public Health (MPH) Degree Program

Vikki Nolan, DSc, MPH
Associate Professor, Assistant Dean, MPH Coordinator
228 Robison Hall
901.678.1696

Email: vgnolan @memphis.edu

The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1) Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

Program Admission

A multi-disciplinary faculty admissions committee determines admission to the MPH program. Criteria for the selection process are broad because of the wide range of backgrounds from which students may apply. Prior background in public health or health care is not necessary for admission but may be considered in the admission process. The following is necessary for application:

Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Current Graduate Record Examination (GRE) scores from within the past five years are required.

Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (e.g. MCAT, DAT, LSAT, etc.) may be substituted for the GRE by applicants who are enrolled in or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, or law. Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Letters of recommendation from at least three persons familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health professional, are required. At least one letter from a former professor or instructor is required.

Applicants must also submit a statement of purpose in approximately 400-500 words indicating his or her present interests and career goals, including why s/he wants to pursue an MPH degree.

Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health

Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Concentration courses include:

Health Systems and Policy

PUBH 7710 - HealthCare Economics

(3) (cross-listed with ECON 7710-8710) Applies basic economic concepts to analyze health care market and evaluate health policies; including distinctive economic characteristics of health, health care industry, and health care professionals; American system of health care; current health care policy issues such as health care reform, managed care, and manpower planning.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

HADM 7204 - Healthcare Qual & Outcms Mgmt

(3) This course is designed to acquaint the student with quality management philosophies, approaches, and methodologies for improving health systems and processes. Students completing this course will be able to identify, analyze and create a basic quality/outcome research proposal.

PUBH 7502 - Hlth Policy, Theory & Methods

(3) This course utilizes a multi-level approach to public health by providing a comprehensive overview of the health effects, history, marketing, politics, and control of tobacco use, combining medical, psychsocial, epidemiological and economic perspectives to give students a framework for understanding tobacco addiction and its prevention and treatment.

Electives (18 hours)

Elective courses applied to the MPH program requirements must have the advisor's approval.

Possible electives include courses within the concentration areas as well as:

BIOL 7080 - Public Health Microbiol

(3) Overview of the nature of diseases threatening the public health of contemporary societies covering fundamental microbiology; microbe-human interactions; and emerging microbial diseases, common food-borne diseases, and pathogens for bioterrorism. Three lecture hours per week. Three lecture hours per week. PREREQUISITE(S): Permission of instructor.

COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

NUTR 6602 - Community Nutrition

(3) (HMEC, CSED 6602). Nutritional problems and practices of diverse ethnic, age, and socioeconomic groups; educational skill development for intervention; local, regional, national, international agencies that address these nutritional needs. PREREQUISITE(S): Permission of instructor.

NUTR 6902 - Study Tour/Foods/Nutr

(1-3) (HMEC, CSED 6900). On-the scene knowledge about foods and nutrition. May be repeated for a maximum of 6 credit hours. Only 6 hours applicable to degree. Restricted by Program or by Permit.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships;

community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues. Lecture/Lab Hours: 3 contact hours (2-5 pm)/week.

PUBH 7337 - Public Health Nutrition

(3) This course examines dietary intake and nutrition behaviors from a public health perspective. Topics covered include dietary intake measurement for the monitoring of population health; socioecological factors impacting eating behaviors from infancy into adulthood; and the role of diet in the development of diseases with public health implications (e.g., obesity, malnutrition).

PUBH 7338 - Critical Issues in Global Hlth **

(3) This course focuses on critical issues in global health emphasizing the multidisciplinary approach to understanding global health problems as they occur within and across borders. Concepts include the interplay between global stressors such as population, urbanization, economics, environment, and war; and their effects on the spread of infectious and chronic diseases, nutrition, and environmental health.

PUBH 7340 - Behavioral Intervention Develp **

(3) (PSYC 7306-8306) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

PUBH 7345 - Health Literacy

(3) (Same as PSYC 7310-PSYC 8310) (Same as COMM 7345-8345) This course will introduce students to the issues of health literacy from a public health perpective. We will explore the impact of health literacy on access to care, vulnerable populations, management of chronic illness, mental health, healthcare costs, and several other areas.

PUBH 7347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation.

PUBH 7445 - Genetic Epidemiology

(3) This course will serve as a basic introduction to genetic epidemiology and its application in research. Basic concepts of human genetics will be introduced, and the research methods used to study the genetic basis of disease will be presented. Research methods discussed will include family based studies such as twin studies and affected sib pair linkage analyses, and candidate gene methods such as case-control, cohort and transmission/disequilibrium test. Gene-environment and gene-gene interaction will also be discussed. The course will conclude with a discussion of ethical issues around genetic epidemiology, current research and future directions. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 7450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice.

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(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

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PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of

censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

Note:

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Other Requirements

Satisfy completion of PUBH 7985 - Practicum/Field Experience ** (3)

Satisfy completion of PUBH 7996 - Thesis (3) or PUBH 7992 - Master's Project Seminar ** (3).

NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

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Master of Public Health - Social and Behavioral Sciences Concentration, (MPH)

Master of Public Health (MPH) Degree Program

Vikki Nolan, DSc, MPH
Associate Professor, Assistant Dean, MPH Coordinator
228 Robison Hall
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The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1) Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

Program Admission

A multi-disciplinary faculty admissions committee determines admission to the MPH program. Criteria for the selection process are broad because of the wide range of backgrounds from which students may apply. Prior background in public health or health care is not necessary for admission but may be considered in the admission process. The following is necessary for application:

Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Current Graduate Record Examination (GRE) scores from within the past five years are required.

Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (e.g. MCAT, DAT, LSAT, etc.) may be substituted for the GRE by applicants who are enrolled in or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, or law. Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Letters of recommendation from at least three persons familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health professional, are required. At least one letter from a former professor or instructor is required.

Applicants must also submit a statement of purpose in approximately 400-500 words indicating his or her present interests and career goals, including why s/he wants to pursue an MPH degree.

Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health

concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Concentration courses include:

Social and Behavioral Sciences

PUBH 7014 - Public Health Communication

(3) (COMM 7014-8014) Explores the communication processes and practices that can be used to promote positive change in health behaviors, including the rhetorical exigencies inherent in public health care communication, the various formats for disseminating medical information, and the specific audience needs that health care communication must address.

PUBH 7130 - Social Determinants of Health

(3) (cross-listed with ECON 7710-ECON 8710) This course focuses on the systematic study of the economic and social conditions which determine health. It examines the social gradient in health and explores how social influences such as poverty, social capital, job security, neighborhood characteristics, social support, transportation, discrimination, and stress affect health and longevity. It also explores structural interventions in shaping social environments that are conducive to better health. PRE-REQUISITE: PUBH 7160/8160 OR PERMISSION OF INSTRUCTOR

PUBH 7132 - Health Program Evaluation **

(3) This graduate seminar provides qualitative and quantitative perspectives on health program evaluation. The course examines various models, theories, methods, and processes in evaluating community and public health programs. It is a practice-oriented course and facilitates students developing applied skills in the field of health program evaluation.

PUBH 7340 - Behavioral Intervention Develp **

(3) (PSYC 7306-8306) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

Note:

** PUBH 7345 - Health Literacy may be substituted for PUBH 7014.*

Electives (18 hours)

Elective courses applied to the MPH program requirements must have the advisor's approval.

Possible electives include courses within the concentration areas as well as:

BIOL 7080 - Public Health Microbiol

(3) Overview of the nature of diseases threatening the public health of contemporary societies covering fundamental microbiology; microbe-human interactions; and emerging microbial diseases, common food-borne diseases, and

pathogens for bioterrorism. Three lecture hours per week. Three lecture hours per week. PREREQUISITE(S): Permission of instructor.

COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

NUTR 6602 - Community Nutrition

(3) (HMEC, CSED 6602). Nutritional problems and practices of diverse ethnic, age, and socioeconomic groups; educational skill development for intervention; local, regional, national, international agencies that address these nutritional needs. PREREQUISITE(S): Permission of instructor.

NUTR 6902 - Study Tour/Foods/Nutr

(1-3) (HMEC, CSED 6900). On-the scene knowledge about foods and nutrition. May be repeated for a maximum of 6 credit hours. Only 6 hours applicable to degree. Restricted by Program or by Permit.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 7334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues. Lecture/Lab Hours: 3 contact hours (2-5 pm)/week.

PUBH 7337 - Public Health Nutrition

(3) This course examines dietary intake and nutrition behaviors from a public health perspective. Topics covered include dietary intake measurement for the monitoring of population health; socioecological factors impacting eating behaviors from infancy into adulthood; and the role of diet in the development of diseases with public health implications (e.g., obesity, malnutrition).

PUBH 7338 - Critical Issues in Global Hlth **

(3) This course focuses on critical issues in global health emphasizing the multidisciplinary approach to understanding global health problems as they occur within and across borders. Concepts include the interplay between global stressors such as population, urbanization, economics, environment, and war; and their effects on the spread of infectious and chronic diseases, nutrition, and environmental health.

PUBH 7340 - Behavioral Intervention Develp **

(3) (PSYC 7306-8306) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

PUBH 7345 - Health Literacy

(3) (Same as PSYC 7310-PSYC 8310) (Same as COMM 7345-8345) This course will introduce students to the issues of health literacy from a public health perpective. We will explore the impact of health literacy on access to care, vulnerable populations, management of chronic illness, mental health, healthcare costs, and several other areas.

PUBH 7347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation.

PUBH 7445 - Genetic Epidemiology

(3) This course will serve as a basic introduction to genetic epidemiology and its application in research. Basic concepts of human genetics will be introduced, and the research methods used to study the genetic basis of disease will be presented. Research methods discussed will include family based studies such as twin studies and affected sib pair linkage analyses, and candidate gene methods such as case-control, cohort and transmission/disequilibrium test. Gene-environment and gene-gene interaction will also be discussed. The course will conclude with a discussion of ethical issues around genetic epidemiology, current research and future directions. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 7450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice.

PUBH 7190 - Adv SAS for PUBH Prof 1

(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software.

PUBH 7191 - Adv SAS for PUBH Prof II

(3) This class introduces students to advanced SAS programming language statements and methods specifically for data management and reporting. Students will learn methods and techniques to identify data errors, use methods for data entry, maintain analytical data sets and summarize clinical/medical encounter data. This class is a continuation of PUBH 7190-8190.

PUBH 7501 - Health Systems Organizations

(3) This course focuses on issues that contribute to assessing and improving the quality of health systems and services, including: institutional reforms and capacity building, politics and governance, health system financing, public/private partnerships, and building community capacity. The course will emphasize how problems come to be recognized and defined, their characteristics and magnitude, and plans and programs to alleviate them. Students will be taught to understand health system characteristics, problems, policies and management and to champion solutions to structural and behavioral challenges in the health care system.

PUBH 7502 - Hlth Policy, Theory & Methods

(3) This course utilizes a multi-level approach to public health by providing a comprehensive overview of the health effects, history, marketing, politics, and control of tobacco use, combining medical, psychsocial, epidemiological and economic perspectives to give students a framework for understanding tobacco addiction and its prevention and treatment.

SOCI 7853 - Gender And Health

(3) Advanced course on sociological understandings of gender, health, and illness in the US; topics include health status, health behaviors, reproductive health, health professions, care-giving, aging and mortality with special attention to women and men of different class, racial, and ethnic groups.

SWRK 7031 - Rural/Urban Poverty

(3) This course examines the development and analysis of specific policies that impact rural and urban centers with high concentrations of poverty. Emphasis will be placed on the interaction effects of federal policies regarding crime, education, employment and housing, and federal and state income maintenance programs for the poor. The strengths and weaknesses of various approaches to policy development and analysis will be discussed.

PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

Note:

Other courses may serve as electives; students should check with their advisors

Other Requirements

Satisfy completion of PUBH 7985 - Practicum/Field Experience ** (3)

Satisfy completion of PUBH 7996 - Thesis (3) or PUBH 7992 - Master's Project Seminar ** (3).

NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Pass comprehensive examination.

MPH online course notes

** denotes courses that may be available online.

Retention Requirements

All students enrolled in the MPH program are expected to attain high academic achievement in all courses taken. The following criteria will be used to determine retention status of students:

Students having been admitted unconditionally who maintain a cumulative GPA of 3.00 or higher will be considered in good standing if not more than 2 (two) grades of C+ or lower has been earned.

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A student who has been suspended from the MPH program will be denied enrollment in PUBH courses after suspension.

Master of Public Health - Urban Health Concentration, (MPH)

Master of Public Health (MPH) Degree Program

Vikki Nolan, DSc, MPH
Associate Professor, Assistant Dean, MPH Coordinator
228 Robison Hall
901.678.1696

Email: vgnolan @memphis.edu

The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1) Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

Program Admission

A multi-disciplinary faculty admissions committee determines admission to the MPH program. Criteria for the selection process are broad because of the wide range of backgrounds from which students may apply. Prior background in public health or health care is not necessary for admission but may be considered in the admission process. The following is necessary for application:

Applicants must hold a bachelor or graduate degree from an accredited college or university with an undergraduate cumulative grade point average of 3.00 or higher (on a 4.00 scale) or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Current Graduate Record Examination (GRE) scores from within the past five years are required.

Applicants already holding a doctoral degree or its professional equivalent obtained in the United States may be exempt from the GRE requirement. Professional school standardized test scores (e.g. MCAT, DAT, LSAT, etc.) may be substituted for the GRE by applicants who are enrolled in or who have already earned post-baccalaureate degrees in areas such as medicine, dentistry, or law. Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

Letters of recommendation from at least three persons familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health professional, are required. At least one letter from a former professor or instructor is required.

Applicants must also submit a statement of purpose in approximately 400-500 words indicating his or her present interests and career goals, including why s/he wants to pursue an MPH degree.

Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Concentration courses include:

Urban Health

ANTH 6571 - Race and Health Disparities

(3) History of scientific racism and race in the public and healthcare spheres; current understandings of human biological and genetic variation; role of cultural constructions of race in differential exposures to health hazards and access to health care; racial health disparities; strategies for addressing health inequalities.

PUBH 7002 - Comm Hlth Assessmt & Prog Plan

(3) This course introduces students to the concepts and methods of community health assessment and the process of planning for health improvement. The course covers relevant community health topics including the nature of health and its determinants; the use of quantitative and qualitative methods to assess needs; data analysis; community mobilization and capacity building; and the impact of current national policy, including the Affordable Care Act, on community health improvement. Using secondary data, students will work in teams to develop elements of a community needs assessment for Shelby County. Findings and recommendations for community health improvement will be compiled into a final report.

PUBH 7004 - Interdis Approach PH Challenge

(3) Interdisciplinary Approaches to Population Health Challenges is designed to provide students with an interdisciplinary, team-based experience in improving the health of the local community. Students bring their unique perspectives from their major fields to identify and test potential solutions to public health challenges that are multi-causal. Students will apply disciplinary competencies to real world challenges. Students will examine social determinants of health, and structural, environmental, and systemic issues that impact population health within the context of health equity. PREREQUISITE(S): permission of instructor.

PUBH 7132 - Health Program Evaluation **

(3) This graduate seminar provides qualitative and quantitative perspectives on health program evaluation. The course examines various models, theories, methods, and processes in evaluating community and public health programs. It is a practice-oriented course and facilitates students developing applied skills in the field of health program evaluation.

PUBH 7335 - Struct/Environ Iss/Urban Comm

(3) This course focuses on concepts of risk and burden of disease in urban communities. It examines contemporary issues and challenges of the social, cultural, built, and physical environments of urban communities. Key topics include public health and urban health; roots of health inequality; risk and burden of disearse; stress, socio-economic and structural influences on health; and community-based approaches (CBPR) to address public health concerns in urban communities.

MPH online course notes

** denotes courses that may be available online.

Master of Public Health – Professional Degree – 12 months (MPH)

Master of Public Health (MPH) Degree Program

Vikki Nolan, DSc, MPH
Associate Professor, Assistant Dean, MPH Coordinator
228 Robison Hall
901.678.1696

Email: vgnolan @memphis.edu

The mission of the CEPH accredited Master of Public Health (MPH) program is to provide a stimulating academic environment in a metropolitan setting that supports excellence and innovation in education, research, and service to enhance the lives and health of individuals, families, and communities in the Mid-South. Program objectives are: (1) Prepare future leaders in the field of public health by providing the highest quality education and practice opportunities in theories, approaches, methods, and other substantive issues pertinent to public health; (2) Create and nurture an environment conducive to interdisciplinary public health initiatives, with special emphasis on vulnerable populations who suffer disproportionately from illness and disability; (3) Pursue innovative and rigorous research on critical public health issues to prevent disease and injury, promote well-being, and foster overall physical and mental health; (4) Stimulate collaboration with the community to develop effective partnerships in combating the health challenges in our communities, city, state, and region; and (5) Inform public policy, disseminate health information, and increase awareness of public health concerns through disease surveillance, needs assessments, and program evaluation.

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acceptable scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS).

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Applicants must also submit a statement of purpose in approximately 400-500 words indicating his or her present interests and career goals, including why s/he wants to pursue an MPH degree.

Program Prerequisites

All MPH applicants will be expected to have adequate preparation in the sciences, including at least one college-level course in general biology (including human biology), mathematics (e.g., calculus or algebra), and a social science (e.g., sociology, anthropology, or psychology). Basic computer skills are also expected. Courses in health-related fields such as anatomy, physiology, nutrition, chemistry, physics, and statistics are not mandated, but are strongly recommended. Previous professional or other relevant work experience is also highly desirable, but not required.

Program Requirements:

Completion of a total of 42 hours, including 18 hours of core course requirements; 18 hours of electives, 3 hours of practicum/field experience, and 3 hours of a culmination experience in the form of either a thesis or master's project seminar. Students may choose a concentration in any of the following areas: Biostatistics, Epidemiology, Health Systems Management, Social and Behavioral Sciences, or Urban Health. They may also choose to have a Generalist MPH degree.

Core courses include:

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(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

PUBH 7150 - Biostatistical Methods I **

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PUBH 7160 - Soc/Behav Science Principles **

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Electives (18 hours)

Elective courses applied to the MPH program requirements must have the advisor's approval.

Possible electives include courses within the concentration areas as well as:

BIOL 7080 - Public Health Microbiol

(3) Overview of the nature of diseases threatening the public health of contemporary societies covering fundamental microbiology; microbe-human interactions; and emerging microbial diseases, common food-borne diseases, and pathogens for bioterrorism. Three lecture hours per week. Three lecture hours per week. PREREQUISITE(S): Permission of instructor.

COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and

technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

NUTR 6602 - Community Nutrition

(3) (HMEC, CSED 6602). Nutritional problems and practices of diverse ethnic, age, and socioeconomic groups; educational skill development for intervention; local, regional, national, international agencies that address these nutritional needs. PREREQUISITE(S): Permission of instructor.

NUTR 6902 - Study Tour/Foods/Nutr

(1-3) (HMEC, CSED 6900). On-the scene knowledge about foods and nutrition. May be repeated for a maximum of 6 credit hours. Only 6 hours applicable to degree. Restricted by Program or by Permit.

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

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Note:

Other courses may serve as electives; students should check with their advisors

Other Requirements

Satisfy completion of PUBH 7985 - Practicum/Field Experience ** (3)

Satisfy completion of PUBH 7996 - Thesis (3) or PUBH 7992 - Master's Project Seminar ** (3).

NOTE: Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

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Mathematical Sciences - Applied Mathematics Concentration, (MS)

MS Degree Program

Program objectives are (1) development of thorough background in mathematical sciences, including retention and integration of core knowledge; (2) development of research skills in mathematics; and (3) development of interdisciplinary opportunities and good oral and written communication skills.

General Program Prerequisites

1. An undergraduate degree with a major in mathematics or statistics is required. The minimum GPA is 2.5 on a 4.0 scale. Students whose major was not in mathematics or statistics will be considered on a case-by-case basis.
2. GRE General Test scores are required and are an important factor for admission. This requirement may be waived for applicants to the Teaching of Mathematics concentration who have a graduate degree (master's degree or higher) already or who have obtained the Graduate Certificate in the Teaching of Mathematics, who have a graduate GPA of 3.0 or above, and who have work experience in an education related field for 3 or more years.

3. Two letters of recommendation are required.
4. TOEFL scores are required for students whose native language is not English.

General Program Requirements

1. Satisfactory completion of 33 credit hours of graduate course work in a program approved by the department is required. At least 24 credit hours of course work have to be at the 7000 level or higher. At least 21 credit hours of course work have to be earned from courses offered by the Department of Mathematical Sciences.
2. Not more than three credit hours from graduate level seminars can be used to satisfy degree requirements.
3. Courses designed for the "Teaching of Mathematics" concentration can only be used to satisfy degree requirements in this concentration.
4. A passing grade on a comprehensive examination is required. Students may choose a thesis or non-thesis option.

Non-thesis Option

Each student must pass a final written four-hour comprehensive examination which may be broken into several parts at the department's discretion. The written comprehensive examination covers topics from four courses, each consisting of at least three credit hours of course work.

Thesis Option

Each student must identify a thesis advisor, enroll in at least three credit hours of MATH 7996 and submit a written thesis acceptable to the student's advisory committee. A student must present and defend the thesis before the advisory committee. The oral defense of the thesis will encompass material contained in the thesis and learned during course work and will count as the comprehensive examination. Up to six credit hours of MATH 7996 can be used to satisfy degree requirements.

MATH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Note:

Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Specific Degree Requirements

Applied Mathematics Concentration

The following courses are required:

MATH 6242 - Linear Algebra

(3) Linear transformations polynomials, determinants, direct-sum decompositions diagonalizable operators, rational and Jordan form, inner product spaces, the spectral theorem.

MATH 6391 - Partial Diffrntl Equation I

(3) Laplace transforms; Fourier series; introduction to partial differential equations.

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

At least three of the following elective courses are required:

MATH 6721 - Numerical Analysis

(3) Derivation and application of computer-oriented, numerical methods for functional approximation, differentiation, quadrature, and solution of ordinary differential equations.

MATH 7016 - Fourier Analysis

(3) Facilitates understanding of some important facts abut Fourier series, Fourier transforms, and finite Fourier analysis, including applications to other sciences (optics, acoustics, particle physics, uncertainty principle) as well as links within mathematics (infinitude of primes, isoperimetric inequality). May be repeated for a maximum of 6 credit hours when topics change.

MATH 7351 - Real Variables II

(3) Metric spaces, Baire category theorem, Hahn Banach theorem, uniform boundedness principle, closed graph theorem, general measure, signed measures, Radon-Nikodym theorem, product measures, Fubini theorem. Grades of S, U, or IP will be given.

MATH 7361 - Complex Analysis

(3) A selection of advanced topics in complex analysis, including analytic functions, power series, mapping properties, complex integration, Cauchy's theorem and its consequences, sequences of analytic functions. May be repeated for a maximum of 6 credit hours when topics change.

MATH 7504 - Partial Differential Equations

(3) A selection of the following topics: Explicit and semi-explicit formulas for some classical partial differential equations, Maximum Principle, Sobolev spaces, harmonic analysis methods, parabolic, hyperbolic and elliptic equations, introduction to nonlinear partial differential equations. May be repeated for a maximum of 6 credit hours when topics change. PREREQUISITE(S): Permission of Instructor.

The program must include at least 12 credit hours in the following broadly defined core categories:

Calculus of Variations and Optimization, Control Theory, Differential Equations, Financial Mathematics, Mathematical Physics, Modeling, Numerical Analysis and Scientific Computation. At least 6 of these 12 credit hours must be taken in the same core category. MATH 7996 does not count towards the required credit hours in the core categories.

The written comprehensive examination for students choosing the non-thesis option includes as topics:

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

- six credit hours of course work in one of the core categories (see item c. above)
- plus an additional course approved by the department

Mathematical Sciences - Mathematics Concentration, (MS)

MS Degree Program

Program objectives are (1) development of thorough background in mathematical sciences, including retention and integration of core knowledge; (2) development of research skills in mathematics; and (3) development of interdisciplinary opportunities and good oral and written communication skills.

General Program Prerequisites

1. An undergraduate degree with a major in mathematics or statistics is required. The minimum GPA is 2.5 on a 4.0 scale. Students whose major was not in mathematics or statistics will be considered on a case-by-case basis.
2. GRE General Test scores are required and are an important factor for admission. This requirement may be waived for applicants to the Teaching of Mathematics concentration who have a graduate degree (master's degree or higher) already or who have obtained the Graduate Certificate in the Teaching of Mathematics, who have a graduate GPA of 3.0 or above, and who have work experience in an education related field for 3 or more years.
3. Two letters of recommendation are required.
4. TOEFL scores are required for students whose native language is not English.

General Program Requirements

1. Satisfactory completion of 33 credit hours of graduate course work in a program approved by the department is required. At least 24 credit hours of course work have to be at the 7000 level or higher. At least 21 credit hours of course work have to be earned from courses offered by the Department of Mathematical Sciences.
2. Not more than three credit hours from graduate level seminars can be used to satisfy degree requirements.
3. Courses designed for the "Teaching of Mathematics" concentration can only be used to satisfy degree requirements in this concentration.
4. A passing grade on a comprehensive examination is required. Students may choose a thesis or non-thesis option.

Non-thesis Option

Each student must pass a final written four-hour comprehensive examination which may be broken into several parts at the department's discretion. The written comprehensive examination covers topics from four courses, each consisting of at least three credit hours of course work.

Thesis Option

Each student must identify a thesis advisor, enroll in at least three credit hours of MATH 7996 and submit a written thesis acceptable to the student's advisory committee. A student must present and defend the thesis before the advisory committee. The oral defense of the thesis will encompass material contained in the thesis and learned during course work and will count as the comprehensive examination. Up to six credit hours of MATH 7996 can be used to satisfy degree requirements.

MATH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Note:

Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Specific Degree Requirements

Mathematics Concentration

The following courses are required:

MATH 6242 - Linear Algebra

(3) Linear transformations polynomials, determinants, direct-sum decompositions diagonalizable operators, rational and Jordan form, inner product spaces, the spectral theorem.

MATH 6411 - Topology

(3) Introductory set theory, metric spaces, topological spaces, continuous functions, separation axioms, separability and countability axioms, connectedness, and compactness. PREREQUISITE(S): Permission of instructor.

MATH 7261 - Algebraic Theory I

(3) Studies in group theory and ring theory, including Sylow theory and factorization theory.

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

At least four of the following elective courses are required:

MATH 7016 - Fourier Analysis

(3) Facilitates understanding of some important facts abut Fourier series, Fourier transforms, and finite Fourier analysis, including applications to other sciences (optics, acoustics, particle physics, uncertainty principle) as well as

links within mathematics (infinitude of primes, isoperimetric inequality). May be repeated for a maximum of 6 credit hours when topics change.

MATH 7235 - Combinatorics

(3) (MATH 7793). Principles and techniques of combinatorial mathematics with a view toward applications in computer science; methods of enumeration, matching theory, paths and cycles, planarity, coloring problems, extremal problems.

MATH 7237 - Graph Theory

(3) Connectivity, Euler tours, and Hamilton cycles, matchings, coloring problems, planarity, and network flows; study of classical theorems due to Brooks, Menger, Kuratowski, Schur, Tutte, and Vizing.

MATH 7262 - Algebraic Theory II

(3) A continuation of Math 7261. Studies in field theory and modules, including free algebras, Galois theory, tensor products.

MATH 7351 - Real Variables II

(3) Metric spaces, Baire category theorem, Hahn Banach theorem, uniform boundedness principle, closed graph theorem, general measure, signed measures, Radon-Nikodym theorem, product measures, Fubini theorem. Grades of S, U, or IP will be given.

MATH 7352 - Ergodic Theory

(3) Examples of measure preserving transformations, Von Neumann and Birkhoff ergodic theorem, isomorphism, factors, ergodic decomposition, weak mixing, strong mixing, invariant measures for continuous transformations, unique ergodicity, applications to combinatorics and number theory (uniform distribution, continued fractions, Furstenberg correspondence principle, Roth and Sarkozy's theorem), entropy, asymptotic equipartition property. Grades of S, U, or IP will be given.

MATH 7355 - Functional Analysis I

(3) Vector spaces, Banach spaces, Hilbert spaces; linear functionals and operators in such spaces; spectral theory. PREREQUISITE(S): Permission of instructor.

MATH 7356 - Functional Analysis

(3) A continuation of MATH 7355-8355.

MATH 7361 - Complex Analysis

(3) A selection of advanced topics in complex analysis, including analytic functions, power series, mapping properties, complex integration, Cauchy's theorem and its consequences, sequences of analytic functions. May be repeated for a maximum of 6 credit hours when topics change.

MATH 7411 - Point Set Topology

(3) (6671) An axiomatic approach to compactness, separability, connnectedness, metrizability and other topological properties. PREREQUISITE(S): Permission of instructor.

The written comprehensive examination for students choosing the non-thesis option includes as topics:

MATH 7261 - Algebraic Theory I

(3) Studies in group theory and ring theory, including Sylow theory and factorization theory.

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

- Two additional courses approved by the department.

Mathematical Sciences - Statistics Concentration, (MS)

MS Degree Program

Program objectives are (1) development of thorough background in mathematical sciences, including retention and integration of core knowledge; (2) development of research skills in mathematics; and (3) development of interdisciplinary opportunities and good oral and written communication skills.

General Program Prerequisites

1. An undergraduate degree with a major in mathematics or statistics is required. The minimum GPA is 2.5 on a 4.0 scale. Students whose major was not in mathematics or statistics will be considered on a case-by-case basis.
2. GRE General Test scores are required and are an important factor for admission. This requirement may be waived for applicants to the Teaching of Mathematics concentration who have a graduate degree (master's degree or higher) already or who have obtained the Graduate Certificate in the Teaching of Mathematics, who have a graduate GPA of 3.0 or above, and who have work experience in an education related field for 3 or more years.
3. Two letters of recommendation are required.
4. TOEFL scores are required for students whose native language is not English.

General Program Requirements

1. Satisfactory completion of 33 credit hours of graduate course work in a program approved by the department is required. At least 24 credit hours of course work have to be at the 7000 level or higher. At least 21 credit hours of course work have to be earned from courses offered by the Department of Mathematical Sciences.
2. Not more than three credit hours from graduate level seminars can be used to satisfy degree requirements.
3. Courses designed for the "Teaching of Mathematics" concentration can only be used to satisfy degree requirements in this concentration.
4. A passing grade on a comprehensive examination is required. Students may choose a thesis or non-thesis option.

Non-thesis Option

Each student must pass a final written four-hour comprehensive examination which may be broken into several parts at the department's discretion. The written comprehensive examination covers topics from four courses, each consisting of at least three credit hours of course work.

Thesis Option

Each student must identify a thesis advisor, enroll in at least three credit hours of MATH 7996 and submit a written thesis acceptable to the student's advisory committee. A student must present and defend the thesis before the advisory committee. The oral defense of the thesis will encompass material contained in the thesis and learned during course work and will count as the comprehensive examination. Up to six credit hours of MATH 7996 can be used to satisfy degree requirements.

MATH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Note:

Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Specific Degree Requirements

Statistics Concentration

The following courses are required:

MATH 6636 - Intro Statistical Theory

(3) Functions of two random variables; gamma, beta, multinomial, and bivariate normal distributions; Bayes estimators; maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing.

MATH 7642 - Experimental Design

(3) Fundamental concepts in designing experiments, justification of linear models, randomization, principle of blocking, use of concomitant observations, principle of confounding, fractional replication, composite designs, incomplete block designs. COREQUISITE(S): NURS 7990 or permission of instructor.

MATH 7643 - Least Sq/Regr Analysis

(3) Basic concepts of hypothesis testing and confidence intervals; simple and multiple regression analyses, model selection, Mallow's Cp, examination of residuals, Box-Cox transformation, influence diagnostics, multicolinearity, ridge-regression, probit, logit, and log-linear analyses; intensive use of SAS or other statistical packages. PREREQUISITE(S): Completion of 18 graduate level credit hours in music, including MUHL 7400 and MUHL 6801.

MATH 7647 - Non-Param Stat Meth

(3) Use of distribution-free statistics for estimation, hypothesis testing, and correlation measures in designing and analyzing experiments.

MATH 7654 - Inference Theory

(3) Bayes and maximum likelihood estimators, sufficient statistics; Rao-Blackwell Theorem, sampling distributions; unbiasedness, completeness and UMVU estimators; efficient estimators, Cramer-Rao inequality; simple robust estimators; UMP-tests; likelihood ratio tests, t-tests and F-tests.

MATH 7685 - Simulation & Computing

(3) Uniform random number generation and testing, generation methods for non-uniform random variables, simulating random numbers from specific distributions, Metropolis-Hastings algorithm, Markov Chain Monet-Carlo (MCMC), Gibbs sampling. PREREQUISITE(S): Two semesters (or equivalent) of undergraduate improvisation, and permission of instructor.

MATH 7762 - Survival Analysis

(3) Nonparametric estimation and comparison of survival functions: Kaplan-Meier Estimator and other estimators of hazard functions; parametric survival models; Gehan test, Mantel-Haenszel test and their extensions; Cox proportional hazard model: conditional likelihood, partial likelihood analysis, identification of prognostic and risk factors; applications to life-testing and analysis of survival data using statistical packages such as SAS. Grades of A-F, or IP will be given.

The following elective courses are required:

Either

MATH 7645 - Sampling Techniques

(3) Planning, execution, and analysis of sampling from finite populations; simple, stratified, multistage cluster and systematic sampling; ratio and regression estimates, estimation of variance.

or

MATH 7657 - Multivar Stat Meth

(3) Basic contents: multivariate normal distributions; Wishart distribution, Hotelling-T2, Matric-t and Beta distributions; generalized regression models and growth curve models; multivariate analysis of variance; principal component analysis; discriminant analysis; factor analysis; curve fitting procedures in multivariate cases. All topics will be illustrated by practical examples.

and either

MATH 7660 - App Time Series Analy

(3) Basic concepts and examples of stationary and nonstationary time series; random harmonic analysis; spectral density functions, model building procedures for time series models; model identification; diagnostic checking, smooth,

forecasting and control; Box-Jenkin approach of time series analysis; some seasonal models. May be repeated when topic changes.

or

MATH 7670 - App Stochastic Models

(3) Markov chains with discrete time; classification of states, stationary distributions, absorption probabilities and absorption time; Markov chains with continuous time; birth-death processes, waiting time distributions, queuing models, population growth models, Kolmogorov forward and backward equations, diffusion processes, Fokker-Planck equation; applications to genetic problems, etc. May be repeated when topic changes.

Credit for

Credit for both MATH 6637 and MATH 7643 is not permitted.

The written comprehensive examination for students choosing the non-thesis option includes as topics:

MATH 6636 - Intro Statistical Theory

(3) Functions of two random variables; gamma, beta, multinomial, and bivariate normal distributions; Bayes estimators; maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing.

MATH 7654 - Inference Theory

(3) Bayes and maximum likelihood estimators, sufficient statistics; Rao-Blackwell Theorem, sampling distributions; unbiasedness, completeness and UMVU estimators; efficient estimators, Cramer-Rao inequality; simple robust estimators; UMP-tests; likelihood ratio tests, t-tests and F-tests.

- Two additional courses approved by the department.

Students choosing the thesis option

Students choosing the thesis option may replace either of the two electives (see b.) by three credit hours of MATH 7996.

MATH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Mathematical Sciences - Teaching of Mathematics Concentration, (MS)

MS Degree Program

Program objectives are (1) development of thorough background in mathematical sciences, including retention and integration of core knowledge; (2) development of research skills in mathematics; and (3) development of interdisciplinary opportunities and good oral and written communication skills.

General Program Prerequisites

1. An undergraduate degree with a major in mathematics or statistics is required. The minimum GPA is 2.5 on a 4.0 scale. Students whose major was not in mathematics or statistics will be considered on a case-by-case basis.
2. GRE General Test scores are required and are an important factor for admission. This requirement may be waived for applicants to the Teaching of Mathematics concentration who have a graduate degree (master's degree or higher) already or who have obtained the Graduate Certificate in the Teaching of Mathematics, who have a graduate GPA of 3.0 or above, and who have work experience in an education related field for 3 or more years.
3. Two letters of recommendation are required.
4. TOEFL scores are required for students whose native language is not English.

General Program Requirements

1. Satisfactory completion of 33 credit hours of graduate course work in a program approved by the department is required. At least 24 credit hours of course work have to be at the 7000 level or higher. At least 21 credit hours of course work have to be earned from courses offered by the Department of Mathematical Sciences.
2. Not more than three credit hours from graduate level seminars can be used to satisfy degree requirements.
3. Courses designed for the "Teaching of Mathematics" concentration can only be used to satisfy degree requirements in this concentration.
4. A passing grade on a comprehensive examination is required. Students may choose a thesis or non-thesis option.

Non-thesis Option

Each student must pass a final written four-hour comprehensive examination which may be broken into several parts at the department's discretion. The written comprehensive examination covers topics from four courses, each consisting of at least three credit hours of course work.

Thesis Option

Each student must identify a thesis advisor, enroll in at least three credit hours of MATH 7996 and submit a written thesis acceptable to the student's advisory committee. A student must present and defend the thesis before the advisory committee. The oral defense of the thesis will encompass material contained in the thesis and learned during course work and will count as the comprehensive examination. Up to six credit hours of MATH 7996 can be used to satisfy degree requirements.

MATH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Note:

Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Specific Degree Requirements

Teaching of Mathematics Concentration

The following courses are required:

MATH 6050 - Foundations of Geometry and Trigonometry

(3) Pedagogical content knowledge for the teaching of plane geometry, trigonometry, polar coordinates, complex numbers, Euler's Identity, conic sections, hyperbolic trigonometry, and the relationship between these. Emphasis on using technology for visualization. Knowledge of common misconceptions. Credit earned for this course may not be applied toward requirements for the Mathematical Sciences major. PREREQUISITE(S): Department Permit Required.

MATH 6051 - Methods of Proofs for Tchrs

(3) Enhance mathematical communication skills by learning methods to prove inductive statements, statements about size, and statements about relationships among objects using the language of functions and relations. This course will not be counted as credit for a graduate program in Mathematics except the Masters of Science in Mathematics with concentration in the Teaching of Mathematics.

MATH 6614 - Probability/Statistics

(3) Basic definition of probability functions; common discrete and continuous distributions;max.like-lihood and methods of moments estimation; basic concepts of hypothesis testing; comparisons of two population means, proportion, and variances; simple linear models. Students may not receive credit for both MATH 6614 and MATH 6635 PREREQUISITE(S): MATH 2110, or MATH 1920 and one of MATH 2702 or COMP 2700 or permission of instructor.

MATH 7281 - Linear Alg For Tchrs

(3) (MATH 7793) Euclidean n-space; vector spaces; subspaces; linear independence and bases; linear transformations; matrices; systems of linear conditions; characteristic values and vectors of linear transformations. This course will not be counted as credit for a graduate program in Mathematics except the Masters of Science in Mathematics with a concentration in the Teaching of Mathematics. PREREQUISITE(S): Permission of instructor.

MATH 7282 - Algebra for Teachers

(3) Current and proposed curriculums for College Algebra. Structures underlying polynomial and rational expressions. Definitions of exponential and logarithmic functions. Effective use of technology. Issues of assessment. Understanding student misconceptions. Links to secondary school mathematics and to the higher mathematics curriculum. This course will not be counted as credit for a graduate program in Mathematics except the Masters of Science in Mathematics with a concentration in the Teaching of Mathematics. PREREQUISITE(S): Permission of instructor.

MATH 7383 - Concepts of Calculus 1

(4) Study of the teaching of calculus of one real variable. Topics include limits; continuity, derivatives, applications of derivatives including Newton's method, graphing techniques, optimization, indeterminate forms and l'Hospital's rule, anti-derivatives, integration of technology, and issues of assessment. This course will not be counted as credit for a

graduate program in Mathematics except the Masters of Science in Mathematics with a concentration in the Teaching of Mathematics. PREREQUISITE(S): Permission of instructor.

MATH 7384 - Concepts of Calculus 2

(4) Study of the teaching of calculus of one real variable. Topics include integration and applications of the definite integral, techniques of integration and improper integrals, curves defined by parametric equations, arc length and surface area, polar coordinates, infinite series, Taylor and McLaurin series, integration of technology, and issues of assessment. This course will not be counted as credit for a graduate program in Mathematics except the Masters of Science in Mathematics with a concentration in the Teaching of Mathematics. PREREQUISITE(S): Permission of instructor.

MATH 7385 - Concepts of Multivariable Calculus

(4) Study of the teaching of multi-variable calculus. Covers multi-variable calculus including three-dimensional analytic geometry and vectors, quadratic surfaces, arc length and curvature, limits and continuity, partial derivatives and their applications, tangent planes, optimization problems and Lagrange multipliers, multiple integrals, vector fields, line and surface integrals, Green's theorem, Stokes' theorem, the divergence theorem. Particular attention is paid to visualization and geometry. This course will not be counted as credit for a graduate program in Mathematics except the Masters of Science in Mathematics with a concentration in the Teaching of Mathematics. PREREQUISITE(S): Permission of instructor.

MATH 7391 - Foundations of Differential Equations

(3) Study of the teaching of ordinary differential equations. Topics include first order differential equations; linear differential equations of all orders; series methods for linear equations; Laplace transform; systems of differential equations; applications; modeling approaches; and technology integration. This course will not be counted as credit for a graduate program in Mathematics except the Masters of Science in Mathematics with a concentration in the Teaching of Mathematics. PREREQUISITE(S): Permission of instructor.

MATH 7601 - Statistics for Tchrs

(3) Binomial and geometric random variables; sampling distributions; basic concepts of hypothesis testing; inference for two population means, proportions, and variances; simple linear regression; inference for regression coefficients. This course will not be counted as credit for a graduate program in Mathematics except the Masters of Science in Mathematics with concentration in the Teaching of Mathematics.

Mechanical Engineering, (MS)

MS Degree Program

Program Admission

The Herff College of Engineering has established uniform admission criteria that identify the pool of master's level applicants from which the department evaluates and recommends qualified applicants to be admitted.

Applicants whose highest degree is from a foreign university may be required to have their credentials evaluated by any credentialing agency listed on the National Association of Credential Evaluation Services (NACES) web site (http://www.naces.org/members.html). In addition, GRE is required of all applicants.

Program Requirements

A more detailed description of the information listed below will be given by the Coordinator of Graduate Studies to students admitted into the Mechanical Engineering MS program.

Thesis Option:

Successful completion of 30 semester hours to include 6 hours in MECH 7996 for thesis and 3 hours each in MECH 7341 and MECH 7342. Of the remaining 18 hours, no more than 9 hours of 6000-level MECH courses or collateral courses may be used in satisfying degree requirements. Only courses in mathematics, the physical sciences, or another engineering discipline may serve as collateral courses; each course must receive prior approval by the departmental graduate coordinator for it to be used in satisfying degree requirements. With prior approval, up to 3 hours of 7000-level collateral courses may be used in satisfying degree requirements.

MECH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

MECH 7341 - Engineering Analys I

(3) Analysis of engineering systems using closed form solutions; application of Fourier series and transforms, Laplace transforms, power series methods, vector calculus, ordinary and partial differential equations.

MECH 7342 - Engineering Analys II

(3) Continuation of MECH 7341. Theoretical and numerical analysis of engineering systems, and other advanced topics as applied to mechanical engineering problems. Engineering applications of probability and statistics, and hypothesis tests.

Non-Thesis Option:

Successful completion of 33 semester hours total to include 3 hours each in MECH 7341 and MECH 7342. Of the remaining 27 hours, no more than 9 hours in 6000 level MECH or collateral courses may be used in satisfying degree requirements. Only courses in mathematics, the physical sciences, or another engineering discipline may serve as collateral courses; each course must receive prior approval by the departmental graduate coordinator for it to be used in satisfying degree requirements. With prior approval, up to 3 hours of 7000-level collateral courses may be used in satisfying degree requirements. With prior approval, up to 3 hours of MECH 7992 may be used in satisfying degree requirements.

MECH 7341 - Engineering Analys I

(3) Analysis of engineering systems using closed form solutions; application of Fourier series and transforms, Laplace transforms, power series methods, vector calculus, ordinary and partial differential equations.

MECH 7342 - Engineering Analys II

(3) Continuation of MECH 7341. Theoretical and numerical analysis of engineering systems, and other advanced topics as applied to mechanical engineering problems. Engineering applications of probability and statistics, and hypothesis tests.

MECH 7992 - Research Project

(1-6) Independent research investigation of engineering problem under supervision of instructor for students in non-thesis option; both written and oral reports required. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

The department's graduate coordinator may approve transfer credit

The department's graduate coordinator may approve transfer credit of up to 12 credit hours previously earned at another institution. For these hours to be used in satisfying degree requirements, appropriate documentation must be provided by the student, and approval granted, not later than the end of the student's second semester of enrollment.

Students selecting the thesis option

Students selecting the thesis option will be required to complete an independent research project culminating in a masters thesis. Upon completion of the thesis, the student must successfully pass an oral examination to assess mastery of the thesis topic and to evaluate the student's knowledge in mechanical engineering. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Students selecting the non-thesis option

Students selecting the non-thesis option must pass an oral comprehensive examination to demonstrate mastery of mechanical engineering topics commensurate with the degree to be awarded.

Retention Policy

A student must maintain a GPA of 3.00 or higher throughout the program. If a student's GPA is below 3.0, that student will be on probation during the following semester. Failure to improve the GPA above 3.0 by the end of the probationary semester will result in dismissal from the program.

Graduation Requirements

Refer to "Minimum Degree Requirements for Graduate Academic Programs" for University graduation requirements.

Music - Composition Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (32 Hours)

The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Bibliography (3 hours)

MUHL 7400 - Biblio & Rsrch Methods

(3) Survey of the fields of historical and systematic investigation in music with bibliographical studies and research analysis.

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Ensemble (2 hours)

Composition

Applied Lessons (8 hours)

Taken over four semesters.

MUTC 7501 - Composition

(2-6) Free composition in all forms. Applicants to this course are required to submit original works in various forms and media as proof of maturity and technical preparation for graduate work. The course may be repeated with the instructor's permission for successive semesters. NOTE: Composition is taught as applied music. Students receive the equivalent of two half-hour lessons per week. The additional fee for this instruction is $250.00 per semester.

Choose one of the following (3 hours)

MUAP 7800 - Internship/Music Perform

(1-6) Music performances coordinated between the School of Music and Opera Memphis or the Memphis Symphony Orchestra. May be repeated. Grades of S/U, IP will be given. May be repeated Grades of S/U, IP will be given.

MUSE 7002 - Teaching Music in Higher Edu

(3) Problem and practices in the teaching of music in higher education. Topics will include tenure and promotion, syllbaus design, curriculum vitae construction, mock interviews, etc.

Approved Studies in Music (9 hours)

Approved Studies satisfy area-approved courses and are decided in consultation with the student's advisor.

Practicum (1 hour)

MUTC 7599 - Composition Practicum

(3-6) Grades of S, U, or IP will be given. May be repeated for up to 12 hours

Music - Conducting Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (32 Hours)

The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Bibliography (3 hours)

MUHL 7400 - Biblio & Rsrch Methods

(3) Survey of the fields of historical and systematic investigation in music with bibliographical studies and research analysis.

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Ensemble (3 hours)

Ensemble as appropriate to conducting specialty (Wind, Orchestra, or University Singers)

Applied Lessons (8 hours)

Taken over four semesters

MUAP 7701 - Conducting

(2-6) Conducting the concert band, the symphony orchestra, and the chorus in the larger musical forms; emphasis on interpretation. $250.00 instruction and lab fee. May be repeated for credit.

Score Study and Aural Training (2 hours)

MUAP 7703 - Score Study/Aural Train

(2) Skills of score reading, ear training, and score analysis for conductors.

Choose one of the following (3 hours)

MUAP 7800 - Internship/Music Perform

(1-6) Music performances coordinated between the School of Music and Opera Memphis or the Memphis Symphony Orchestra. May be repeated. Grades of S/U, IP will be given. May be repeated Grades of S/U, IP will be given.

MUSE 7002 - Teaching Music in Higher Edu

(3) Problem and practices in the teaching of music in higher education. Topics will include tenure and promotion, syllbaus design, curriculum vitae construction, mock interviews, etc.

Approved Studies in Music (6 hours)

Approved Studies satisfy area-approved courses and are decided in consultation with the student's advisor.

Recital (1 hour)

MUAP 7999 - Recital

(1-3) Student must be concurrently enrolled in an appropriate applied music course. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Note:

For students studying choral conducting, the conducting faculty will assess competence in vocal pedagogy, diction for the major choral languages, and foreign-language comprehension, and may assign remedial coursework as needed. Such coursework, if assigned at the undergraduate level, may be taken while enrolled in the Graduate School.

Music - Jazz and Studio Music Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (36 Hours)

The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Bibliography (3 hours)

MUHL 7400 - Biblio & Rsrch Methods

(3) Survey of the fields of historical and systematic investigation in music with bibliographical studies and research analysis.

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Ensemble (4 hours)

Choose between Jazz Ensemble or Jazz Combo

MUAP 7107 - Jazz Ensemble

(1)

MUAP 7202 - Jazz Combo

(1)

Applied Lessons (8 hours)

Lessons in performance, composition, and/or arranging taken over four semesters.

Jazz and Studio Music (12 hours)

MUTC 7010 - Adv Improv Pract/Mat

(3) (7050) Advanced improvisational techniques, including motivic development, pan-diatonic, panchromatic, and free improvisation; practices involving pentatonic, quartal, cluster, and polychordal compositions; survey and analysis of published improvisation teaching materials.

MUHL 6806 - History Of Jazz

(3) Stylistic origins and development of jazz; interaction of jazz and Western classical music styles.

MUSE 7520 - Jazz Pedagogy

(3) Issues and practical problems of running a jazz program at the post-secondary level. Grades of S, U, or IP will be given.

MUTC 7104 - Analytic Studies Jazz

(3) Directed study in selected areas of jazz historical styles; transcription and analysis of selected recordings and scores from specific jazz and popular styles; critical aural study of stylistic interpretation of major jazz big bands and combos of selected style periods.

Choose one of the following (3 hours)

MUAP 7999 - Recital

(1-3) Student must be concurrently enrolled in an appropriate applied music course. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

MUID 7699 - Media Music Prod Prac

(3) Grades of A-F, or IP will be given.

MUHL 7996 - Thesis

(1-3) Grades of S, U, or IP will be given.

NOTE:

Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Music - Music Education Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (32 Hours)

The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Ensemble (1 hour)

Music Education (12 hours)

MUSE 7220 - Research Music Education

(3) Active investigation and exploration of research methodologies specific to music education.

MUSE 7222 - Rsrch Appl Music Education

(3) Practical application of methodological techniques utilized in music education research; analysis and criticism of research techniques; design, implementation, and reporting of research data.

MUSE 7402 - Hist Phil Music Ed

(3) An examination of the historical and philosophical foundations that underline the curricula and instructional programs in music. May be repeated for credit with permission of instructor.

MUSE 7404 - Assessment in Music Classroom **

(3) Examination of aspects and types of assessment in the music classroom, with focus on assessment development and evaluation.

Electives in Music, MUSE, or Education (10 hours)

Choose one of the following (3 hours)

MUSE 7996 - Thesis

(1-3) Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

MUSE 7995 - Master's Project Music Ed

(1-3) Preparation of a practical research project as a culmination to the MMU in Music Education. Grades of S, U, or IP will be given.

NOTE:

Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Music - Musicology Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (32 Hours)

The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Bibliography (3 hours)

MUHL 7400 - Biblio & Rsrch Methods

(3) Survey of the fields of historical and systematic investigation in music with bibliographical studies and research analysis.

Music Theory (3 hours)

Any graduate music theory course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Ensemble (2 hours)

Music History (15 hours)

Minor Concentration in Music (6 hours)

Choose one of the following (3 hours)

MUHL 7996 - Thesis

(1-3) Grades of S, U, or IP will be given.

MUHL 7995 - Master's Portfolio

(1-3) An option for the final project in the MMu concentration in Musicology; a group of two to four original articles, of a form and scope suitable for submission to scholarly journals.

MUAP 7899 - Lecture Recital

(1-3) Student must be concurrently enrolled in an appropriate applied music course. All policies relating to dissertations are applicable to lecture recitals. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Note:

Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Reading knowledge of one foreign language

Reading knowledge of one foreign language, preferably German, must be demonstrated before graduation.

Students taking the option of Lecture Recital

Students taking the option of Lecture Recital must have a minimum of one semester of individual lessons at the 6000 level.

Music - Orff-Schulwerk Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (33 Hours)

The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Bibliography (3 hours)

MUSE 7220 - Research Music Education

(3) Active investigation and exploration of research methodologies specific to music education.

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Orff-Schulwerk (12 hours)

MUSE 6802 - Level I Orff-Schulwerk

(3) Basic Orff Schulwerk techniques, including pentatonic scale, simple burdens, obstinate, and playing pitched and unhitched percussion instruments and soprano recorder. Topics and skills in this highly participatory course will also include vocal and rhythmic training, movement, and improvisation. A degree in music or strong musicianship is required. PREREQUISITE(S): Graduate standing in music or permission of course director.

MUSE 7103 - Level II Orff-Schulwrk

(1-3) Builds on the foundation laid in Level I. adding folk melodies, diatonic modes, mixed meter, and lythms from many parts of the world. Accompaniments, musical forms, and improvisations are more complex. Both the alto and soprano recorders are studied. Music, movement, and speech are synthesized in cooperative learning lessons. May be repeated when topic varies. PREREQUISITE(S): MUSE 6802 or successful completion of Orff-Schulwerk Level I at an AOSA-approved course is required.

MUSE 7104 - Level III Orff Schlwrk

(3) Explores polymeters and functional harmony to include I-V, l-IV, and I-IV-V accompaniment settings. Forms include theme and variations, chaconne & passacaglia, decoration of the third, and ground bass. In pedagogy, students apply the Orff process to conceptual teaching. All recorder voicings are explored in a variety of combinations.

MUSE 7214 - Master Class Orff Schul

(3) To be in compliance with the American Orff-Schulwerk Association and with the amount of advanced composition students in the masterclass, the demands of their time outside of class warrant the change. The credit increase replaces the 1-credit ensemble requirement in the core requirements for the degree. PREREQUISITE(S): MUSE 7104 Grades of S, U, or IP will be given.

Electives (9 hours)

Courses chosen from music education.

Orff Practicum (3 hours)

MUSE 7998 - Orff Practicum

(1-3) Culminating project for degree in Orff-Schulwerk; consists of 3 videotaped lessons with children, based on appropriately detailed lesson plans that include singing, movement, playing instruments, and creativity. Videos will be reviewed by a committee of music education faculty PREREQUISITE(S): Permission of the instructor. Grades of S, U, or IP will be given.

Music - Pedagogy Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (34 Hours)

Performance (bass, bassoon, cello, clarinet, euphonium, flute, guitar, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice, woodwinds). The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Bibliography (3 hours)

MUHL 7400 - Biblio & Rsrch Methods

(3) Survey of the fields of historical and systematic investigation in music with bibliographical studies and research analysis.

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Ensemble (2 hours)

Applied Lessons (8 hours)

Taken over four semesters

Pedagogical Area (12 hours)

Choose one of the following (3 hours)

MUAP 7999 - Recital

(1-3) Student must be concurrently enrolled in an appropriate applied music course. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

MUSE 7996 - Thesis

(1-3) Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

MUSE 7995 - Master's Project Music Ed

(1-3) Preparation of a practical research project as a culmination to the MMU in Music Education. Grades of S, U, or IP will be given.

NOTE:

Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Music - Performance Concentration, (MMu)

MMu Degree Program

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Program Requirements (32 Hours)

Performance (bass, bassoon, cello, clarinet, euphonium, flute, guitar, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice, woodwinds). The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Bibliography (3 hours)

MUHL 7400 - Biblio & Rsrch Methods

(3) Survey of the fields of historical and systematic investigation in music with bibliographical studies and research analysis.

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses.

Ensemble (2 hours)

Applied Music (8 hours)

Taken over four semesters.

Choose one of the following (3 hours)

MUAP 7800 - Internship/Music Perform

(1-6) Music performances coordinated between the School of Music and Opera Memphis or the Memphis Symphony Orchestra. May be repeated. Grades of S/U, IP will be given. May be repeated Grades of S/U, IP will be given.

MUSE 7002 - Teaching Music in Higher Edu

(3) Problem and practices in the teaching of music in higher education. Topics will include tenure and promotion, syllbaus design, curriculum vitae construction, mock interviews, etc.

Approved Studies in Music (9 hours)

Approved Studies satisfy area-approved courses and are decided in consultation with the student's advisor.

Recital (1 hour)

MUAP 7999 - Recital

(1-3) Student must be concurrently enrolled in an appropriate applied music course. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Note:

For students studying voice, a minimum of 3 undergraduate hours in each of French, German, and Italian; two semesters of song repertory; and one semestser of vocal pedagogy are required. If such coursework has not been fulfilled during a student's undergraduate degree, it can be taken during his or her time in the Graduate School.

Nursing - Advanced Practice Nursing (Family Nurse Practitioner) Concentration, (MSN)

MSN Degree

Admission

Because the University seeks to provide in as much as possible a reasonably safe environment for its health career students and their patients, students may be required during the course of the program to demonstrate their physical and/or emotional fitness to meet the essential requirements of the program. Such essential requirements include freedom from communicable diseases, the ability to perform certain physical tasks, and suitable emotional fitness. Any appraisal measures used to determine such physical and/or emotional fitness will be in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990, so as not to discriminate against any individual on the basis of disability.

Core performance standards for admission and progression:

1. Critical thinking ability sufficient for clinical judgment.
2. Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.
3. Communication abilities sufficient for interaction with others in verbal and written form.
4. Physical abilities sufficient to move from room to room and maneuver in small spaces.
5. Gross and fine motor abilities sufficient to provide safe and effective nursing care.
6. Auditory ability sufficient to monitor and assess health needs.
7. Visual ability sufficient for observation and assessment necessary in nursing care.
8. Tactile ability sufficient for physical assessment.

Admission Requirements

Admission to the program will be based on competitive selection from the pool of applicants. Multiple criteria will be used when considering applicant admission including, but not limited to, letter of interest, undergraduate and graduate grade point averages, professional experience, applicant interview, and letters of recommendation.

1. Admission Requirements for MSN Applicants:
    1. Admission to the University of Memphis Graduate School
    2. Admission to the Loewenberg College of Nursing graduate nursing program.
    3. An undergraduate minimum cumulative grade point average of 2.8 on a 4.0 scale.
    4. Letter of interest which discusses prior professional experience, future career goals, and reasons for pursuing graduate study.
    5. Letters of recommendation from three persons qualified and familiar to judge the applicant's academic and professional background and experience in nursing practice, specifying in detail the applicant's capabilities for graduate study and for future practice as an advanced practice nurse.
    6. Interview with LCON graduate faculty if requested by Admissions Committee.
    7. Submission of current professional resume
    8. Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score: paper based 550 or greater; internet based 79; or 213 computer based.
    9. Eligibility to practice as a Registered Nurse in Tennessee or in an approved state in which the clinical assignments are completed. Appropriate licensure/authorization must be obtained during the first semester following admission to the program.

10. Students transferring from another graduate nursing program must submit a letter of good standing and transcript from the dean/director of the previous nursing program.
11. The standardized admission test is successful completion of the NCLEX licensing examination.
12. Successful completion of 3 semester hour or 4 quarter hour undergraduate statistics course.

2. Admission Requirements for individuals with a BSN Degree
    1. Completion of BSN
    2. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
3. Admission Requirements for Registered Nurse Applicants with a BA/BS non-nursing major
    1. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Completion of a 9-unit RN/MSN nursing bridge sequence. RN/MSN graduates will not be awarded the BSN degree.
4. Students admitted to MSN program, or post master's certificate programs must have and maintain while in the program:
    1. An unrestricted license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Current CPR certification.
    3. Evidence of hepatitis B (Heptavax); measles, mumps, rubella (MMR); polio; tetanus, diptheria, pertussis (Tdap), and varicella vaccinations and/or titers if available.
    4. Freedom from tuberculosis as evidenced by a negative PPD or health provider examination.
    5. Annual flu shot vaccination, unless medically contraindicated.
    6. Evidence of current professional malpractice insurance in the amount of $1,000,000 per occurrence and $6,000,000 in the aggregate.

Progression and Retention Requirements

1. Students in the Loewenberg College of Nursing graduate program must comply with all retention standards of the University of Memphis Graduate School.
2. Students must earn a grade of "B" or better in all clinical and lab courses (NURS 7102; NURS 7602; NURS 7604; NURS 7606; NURS 7609; NURS 7207; NURS 7209; NURS 7307; NURS 7309;NURS 7908 ; NURS 7909) in order to graduate.
3. Academic disqualification from the graduate nursing major will occur when the student:
    - fails to maintain a 3.0 GPA in graduate school.
    - fails to earn a grade of "B" (3.0) or better when repeating a course.
    - willfully misrepresents patient data or clinical practice.
    - willfully places any patient in physical or emotional jeopardy.
    - fails to maintain an active, unencumbered license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    - fails to disclose a felony conviction.
    - fails to disclose disciplinary action or diversion by any board of nursing (or equivalent).
    - fails to complete all degree requirements within five years of entering graduate nursing coursework.
4. All requirements for the MSN degree must be completed in 5 calendar years.

Family Nurse Practitioner Concentration (46 credit hours)

The MSN with a concentration in Advanced Practice Nursing (Family Nurse Practitioner) prepares advanced practice nurses who deliver primary health care to all ages; individuals and families throughout the lifespan and across the health continuum. Among their course of study, students will be provided with knowledge and clinical skills necessary for health promotion, disease prevention, assessment, and management of common acute and chronic illnesses.

Core Curriculum

NURS 7001 - Health Care Policy **

(3) Primary focus on analysis of health-care systems; examines public and private health-care delivery systems; explores future challenges and processes to improve systems. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7002 - Adv Nursing Research **

(3) Systematic examination and application of the research process; critically examines concept of evidenced-based practice and its application to nursing. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7990 - Scholarly Synthesis **

(3) As a culminating experience, this course provides the student with the opportunity to complete a scholarly project that demonstrates a synthesis of knowledge acquired in graduate study. The student will write a state of the science paper using a prescribed methodology for literature review and submit the paper as a manuscript for publication. The paper topic and content must be approved by a supervising faculty member and course coordinator.

Family Nurse Practitioner Concentration Required Courses

NURS 7000 - Theoretical Foundations **

(3) Exploration of theory development in nursing; analysis of selected nursing and related theories; relevance of theory to practice, education, research, and administration; includes process of theory development. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7003 - Adv Role Development **

(3) Provides an in-depth understanding of the legal, historical, political, social, and ethical aspects of advanced nursing; examines traditional and emerging roles for advanced nursing. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7101 - Adv Health Assessment **

(3) Focuses on development of diagnostic reasoning skills, emphasizing application of these skills in the presence of abnormal findings uncovered during physical examination of individuals across the lifespan. PREREQUISITE(S): Undergraduate course in health assessment; admission to MSN program. COREQUISITE(S): NURS 7102

NURS 7102 - Adv Health Assmt/Clinic **

(1) This clinical course emphasizes application of techniques to perform targeted and comprehensive advanced health assessment of the adult client; develops synthesis, critical analysis, interpretation of physical assessment data, diagnostic reasoning, and clinical judgment. Students must achieve a grade of B" or better to progress. COREQUISITE NURS 7101"

NURS 7103 - Adv Pathophysiology **

(3) Exploration of theoretical foundations of phenomena that alter health status across the life span; provides foundation for practitioner courses related to diagnosis and treatment of disease processes. PREREQUISITE(S):

PREREQUISITE: Undergraduate course in pathophysiology. PREREQUISITE: Admission to MSN program or permission of instructor.

NURS 7104 - Adv Pharmacology **

(3) Focus on pharmacological actions of drugs commonly prescribed in primary care settings; emphasizes pharmacokinetic and pharmacodynamic principles of drugs, side effects, therapeutic dosages, and drug interactions; integrates legal, ethical, and economic factors of prescriptive authority. PREREQUISITE(S): Evidence of successful completion of undergraduate pharmacology course; admission to MSN program or permission of instructor.

NURS 7601 - Family Nurse Practnr I **

(3) Focuses on advanced practice nursing and health-care management of women in diverse populations; includes biopsychosocial interactions affecting women throughout the lifespan. PREREQUISITE(S): Admission to graduate studies in psychology or permission of the instructor.NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7602

NURS 7602 - Family Nurs Prac I/Clin **

(2) Focuses on delivery of advanced nursing care to women; employs various clinical settings with diverse populations for clinical practice. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7601

NURS 7603 - Family Nurs Practnr II **

(3) Focuses on advanced practice nursing and health-care management of adults and older adults in diverse populations; includes developmental, physiological, pathological, and psychosocial changes relative to health maintenance, acute and chronic illnesses, and life transitions. PREREQUISITE(S): Admission to Family Nurse Practitioner program; NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7604

NURS 7604 - Family Nurs Pract II/CLN **

(4) Provides opportunities to deliver advanced nursing care to adults and older adults; student completes health assessments of adults and older adults and develops comprehensive plans of care. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7603

NURS 7605 - Family Nurs Pract III **

(3) Focuses on advanced practice nursing and health-care management of children and adolescents; includes developmental, physiological, pathological, and psychosocial changes relative to health maintenance, acute and chronic illnesses, and developmental transitions within the family context. PREREQUISITE(S): Admission to Family Nurse Practitioner program; NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7606

NURS 7606 - Family Nurs Prac III Cln **

(2) Provides opportunities to deliver advanced nursing care to children and adolescents in families and communities; employs various primary care settings for clinical practice in collaboration with nursing faculty and clinical preceptors.

Students must achieve a grade of B" or better to progress. PREREQUISITE(S): NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7605

NURS 7609 - FNP Practicum **

(4) Supervised full-time advanced clinical practice in a primary care setting with immersion into the role of Family Nurse Practitioner; allows for role synthesis and application of concepts in the practice setting. Student must achieve a B" or better to progress. PREREQUISITE(S): NURS 7000 NURS 7001 NURS 7002 NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 NURS 7601 NURS 7602 NURS 7603 NURS 7604 NURS 7605 NURS 7606 PREREQUISITE(S) or COREQUISITE(S): NURS 7990

Family Nurse Practitioner Concentration Progression and Retention Requirements

Family Nurse Practitioner students must complete a minimum of 500 clock hours to meet the academic and practicum requirements for national certification (*NTF Criteria, 2016*).

In accordance with the policy set forth by the University of Memphis Graduate School, before being recommended for graduation, every candidate for the master's degree and Post-Masters Certificate, who does not write a these is required to pass a final comprehensive/competency examination.

Family Nurse Practitioner Concentration Re-Entry after Disqualification

Following academic disqualification, students are eligible to reapply to the FNP program after 3 years or to the FNP Post Master's Certificate after 1 year. Minimum course requirements following readmission include the completion of FNP I, II, III, Residency and corequisite courses. All MSN progression, retention, and graduation policies apply.

Nursing - Executive Leadership Concentration, (MSN)

MSN Degree

Admission

Because the University seeks to provide in as much as possible a reasonably safe environment for its health career students and their patients, students may be required during the course of the program to demonstrate their physical and/or emotional fitness to meet the essential requirements of the program. Such essential requirements include freedom from communicable diseases, the ability to perform certain physical tasks, and suitable emotional fitness. Any appraisal measures used to determine such physical and/or emotional fitness will be in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990, so as not to discriminate against any individual on the basis of disability.

Core performance standards for admission and progression:

1. Critical thinking ability sufficient for clinical judgment.
2. Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.
3. Communication abilities sufficient for interaction with others in verbal and written form.

4. Physical abilities sufficient to move from room to room and maneuver in small spaces.
5. Gross and fine motor abilities sufficient to provide safe and effective nursing care.
6. Auditory ability sufficient to monitor and assess health needs.
7. Visual ability sufficient for observation and assessment necessary in nursing care.
8. Tactile ability sufficient for physical assessment.

Admission Requirements

Admission to the program will be based on competitive selection from the pool of applicants. Multiple criteria will be used when considering applicant admission including, but not limited to, letter of interest, undergraduate and graduate grade point averages, professional experience, applicant interview, and letters of recommendation.

1. Admission Requirements for MSN Applicants:
    1. Admission to the University of Memphis Graduate School
    2. Admission to the Loewenberg College of Nursing graduate nursing program.
    3. An undergraduate minimum cumulative grade point average of 2.8 on a 4.0 scale.
    4. Letter of interest which discusses prior professional experience, future career goals, and reasons for pursuing graduate study.
    5. Letters of recommendation from three persons qualified and familiar to judge the applicant's academic and professional background and experience in nursing practice, specifying in detail the applicant's capabilities for graduate study and for future practice as an advanced practice nurse.
    6. Interview with LCON graduate faculty if requested by Admissions Committee.
    7. Submission of current professional resume
    8. Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score: paper based 550 or greater; internet based 79; or 213 computer based.
    9. Eligibility to practice as a Registered Nurse in Tennessee or in an approved state in which the clinical assignments are completed. Appropriate licensure/authorization must be obtained during the first semester following admission to the program.
    10. Students transferring from another graduate nursing program must submit a letter of good standing and transcript from the dean/director of the previous nursing program.
    11. The standardized admission test is successful completion of the NCLEX licensing examination.
    12. Successful completion of 3 semester hour or 4 quarter hour undergraduate statistics course.
2. Admission Requirements for individuals with a BSN Degree
    1. Completion of BSN
    2. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
3. Admission Requirements for Registered Nurse Applicants with a BA/BS non-nursing major
    1. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Completion of a 9-unit RN/MSN nursing bridge sequence. RN/MSN graduates will not be awarded the BSN degree.
4. Students admitted to MSN program, or post master's certificate programs must have and maintain while in the program:
    1. An unrestricted license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Current CPR certification.
    3. Evidence of hepatitis B (Heptavax); measles, mumps, rubella (MMR); polio; tetanus, diptheria, pertussis (Tdap), and varicella vaccinations and/or titers if available.
    4. Freedom from tuberculosis as evidenced by a negative PPD or health provider examination.
    5. Annual flu shot vaccination, unless medically contraindicated.
    6. Evidence of current professional malpractice insurance in the amount of $1,000,000 per occurrence and $6,000,000 in the aggregate.

Progression and Retention Requirements

1. Students in the Loewenberg College of Nursing graduate program must comply with all retention standards of the University of Memphis Graduate School.
2. Students must earn a grade of "B" or better in all clinical and lab courses (NURS 7102; NURS 7602; NURS 7604; NURS 7606; NURS 7609; NURS 7207; NURS 7209; NURS 7307; NURS 7309;NURS 7908 ; NURS 7909) in order to graduate.
3. Academic disqualification from the graduate nursing major will occur when the student:
    - fails to maintain a 3.0 GPA in graduate school.
    - fails to earn a grade of "B" (3.0) or better when repeating a course.
    - willfully misrepresents patient data or clinical practice.
    - willfully places any patient in physical or emotional jeopardy.
    - fails to maintain an active, unencumbered license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    - fails to disclose a felony conviction.
    - fails to disclose disciplinary action or diversion by any board of nursing (or equivalent).
    - fails to complete all degree requirements within five years of entering graduate nursing coursework.
4. All requirements for the MSN degree must be completed in 5 calendar years.

Executive Leadership - Executive MSN (37 credit hours)

The Executive MSN is a 37-credit hour program that prepares nurses for management and executive nursing positions in various health care setting systems. The Executive Leadership MSN program aligns with the American Organization of Nurse Executives and the ANCC Magnet Recognition Program® components.

Core Curriculum

NURS 7001 - Health Care Policy **

(3) Primary focus on analysis of health-care systems; examines public and private health-care delivery systems; explores future challenges and processes to improve systems. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7002 - Adv Nursing Research **

(3) Systematic examination and application of the research process; critically examines concept of evidenced-based practice and its application to nursing. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7990 - Scholarly Synthesis **

(3) As a culminating experience, this course provides the student with the opportunity to complete a scholarly project that demonstrates a synthesis of knowledge acquired in graduate study. The student will write a state of the science paper using a prescribed methodology for literature review and submit the paper as a manuscript for publication. The paper topic and content must be approved by a supervising faculty member and course coordinator.

Executive Leadership Concentration Required Courses

NURS 7007 - Adv Role Dev for Nurse Execs

(3) Provides an in-depth understanding of the legal, historical, political, social, and ethical aspects of advanced nursing; examines traditional and emerging roles for advanced nursing; and critically review theories and conceptual models from nursing for use in advanced nursing roles. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7901 - Comm/Rel Bldg Nurse Exec

(3) Imparts knowledge and skills to effectively communicate interprofessionally, build and manage multidisciplinary relationships, influence behaviors, support diversity, implement shared decision making, support community involvement and academic relations. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7903 - Accountability,Advocacy,Ethics

(3) Imparts knowledge and skills to promote accountability; develop career planning paths, seek input from others; uphold high ethical principles and hold self and team accountable; identify areas of risk/liability and facilitate education of risk management and compliance issues; advocate for optimal health care; contribute to the advancement of the profession; and promote participation in professional organization(s). PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7303 - Health Care Finance **

(3) Introduction to accounting and financial management, focusing on health-care industry; includes understanding financial reports, cost behavior and profit analysis, cost allocation, pricing and servicing decisions, managerial accounting, planning and budgeting, time value analysis, and financial risk. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7904 - Fin/Hum Rsrcs Patient Care

(3) Imparts knowledge and skills required to articulate business models for health-care organizations; utilize accounting principles; interpret financial statements; develop plans for recruiting, compensating, establishing programs for emergency preparedness and workforce development; defend the business case for nursing; and educate multidisciplinary teams on financial implications of patient care decisions. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7905 - Improving Patient Care Del

(3) Imparts knowledge and skills to interpret clinical practice knowledge; analyze delivery models/work designs; explain payer mix, case mix index, and benchmark data; articulate and aligns team performance with the organization's performance improvement program and goals; use data and other sources of evidence to inform decision making; apply high reliability concepts; and disseminate research findings with teams. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7907 - Evidenc-Based Ldrshp Pract

(3) Imparts knowledge and skills to implement strategic management; analyze marketing opportunities; utilize hospital databases, decision support, and expert system programs to plan operational processes and systems; evaluate utility of information systems; involve nursing in planning, designing, choosing, and implementing information systems; and analyze benchmarking, financial, and occupational data. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7908 - Healthcare Finance Practicum

(3) Collaborates with a practicum mentor to develop healthcare finance competency to articulate the role of financial executives/leaders and typical areas of responsibility, financial operations, financial information distribution, budget cycles, management of capital assets, payers and reimbursement, quality in relation to financial performance, and federal statutes. PREREQUISITE(S): Admission to MSN program or permission of instructor. Practicum hours: 180.

NURS 7909 - Nurse Executive Practicum

(4) Student collaborates with Executive mentor nurse to enhance competency in communication/relationship building, knowledge of health-care environment, leadership, professionalism, and business skills. The mentor should be a Master's prepared nurse working in a leadership role. Exceptions must be cleared with the course faculty before the semester begins. Student must achieve a "B" or better to progress. PREREQUISITE(S): Completion of all MSN Executive Leadership courses with the exception of COREQUISITE: NURS 7990 or permission of instructor.

Nursing - Nursing Education Concentration, (MSN)

MSN Degree

Admission

Because the University seeks to provide in as much as possible a reasonably safe environment for its health career students and their patients, students may be required during the course of the program to demonstrate their physical and/or emotional fitness to meet the essential requirements of the program. Such essential requirements include freedom from communicable diseases, the ability to perform certain physical tasks, and suitable emotional fitness. Any appraisal measures used to determine such physical and/or emotional fitness will be in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990, so as not to discriminate against any individual on the basis of disability.

Core performance standards for admission and progression:

1. Critical thinking ability sufficient for clinical judgment.
2. Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.
3. Communication abilities sufficient for interaction with others in verbal and written form.
4. Physical abilities sufficient to move from room to room and maneuver in small spaces.
5. Gross and fine motor abilities sufficient to provide safe and effective nursing care.
6. Auditory ability sufficient to monitor and assess health needs.
7. Visual ability sufficient for observation and assessment necessary in nursing care.
8. Tactile ability sufficient for physical assessment.

Admission Requirements

Admission to the program will be based on competitive selection from the pool of applicants. Multiple criteria will be used when considering applicant admission including, but not limited to, letter of interest, undergraduate and graduate grade point averages, professional experience, applicant interview, and letters of recommendation.

1. Admission Requirements for MSN Applicants:
    1. Admission to the University of Memphis Graduate School
    2. Admission to the Loewenberg College of Nursing graduate nursing program.

3. An undergraduate minimum cumulative grade point average of 2.8 on a 4.0 scale.
4. Letter of interest which discusses prior professional experience, future career goals, and reasons for pursuing graduate study.
5. Letters of recommendation from three persons qualified and familiar to judge the applicant's academic and professional background and experience in nursing practice, specifying in detail the applicant's capabilities for graduate study and for future practice as an advanced practice nurse.
6. Interview with LCON graduate faculty if requested by Admissions Committee.
7. Submission of current professional resume
8. Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score: paper based 550 or greater; internet based 79; or 213 computer based.
9. Eligibility to practice as a Registered Nurse in Tennessee or in an approved state in which the clinical assignments are completed. Appropriate licensure/authorization must be obtained during the first semester following admission to the program.
10. Students transferring from another graduate nursing program must submit a letter of good standing and transcript from the dean/director of the previous nursing program.
11. The standardized admission test is successful completion of the NCLEX licensing examination.
12. Successful completion of 3 semester hour or 4 quarter hour undergraduate statistics course.

2. Admission Requirements for individuals with a BSN Degree
    1. Completion of BSN
    2. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
3. Admission Requirements for Registered Nurse Applicants with a BA/BS non-nursing major
    1. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Completion of a 9-unit RN/MSN nursing bridge sequence. RN/MSN graduates will not be awarded the BSN degree.
4. Students admitted to MSN program, or post master's certificate programs must have and maintain while in the program:
    1. An unrestricted license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Current CPR certification.
    3. Evidence of hepatitis B (Heptavax); measles, mumps, rubella (MMR); polio; tetanus, diptheria, pertussis (Tdap), and varicella vaccinations and/or titers if available.
    4. Freedom from tuberculosis as evidenced by a negative PPD or health provider examination.
    5. Annual flu shot vaccination, unless medically contraindicated.
    6. Evidence of current professional malpractice insurance in the amount of $1,000,000 per occurrence and $6,000,000 in the aggregate.

Progression and Retention Requirements

1. Students in the Loewenberg College of Nursing graduate program must comply with all retention standards of the University of Memphis Graduate School.
2. Students must earn a grade of "B" or better in all clinical and lab courses (NURS 7102; NURS 7602; NURS 7604; NURS 7606; NURS 7609; NURS 7207; NURS 7209; NURS 7307; NURS 7309;NURS 7908 ; NURS 7909) in order to graduate.
3. Academic disqualification from the graduate nursing major will occur when the student:
    - fails to maintain a 3.0 GPA in graduate school.
    - fails to earn a grade of "B" (3.0) or better when repeating a course.
    - willfully misrepresents patient data or clinical practice.
    - willfully places any patient in physical or emotional jeopardy.
    - fails to maintain an active, unencumbered license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.

- fails to disclose a felony conviction.
- fails to disclose disciplinary action or diversion by any board of nursing (or equivalent).
- fails to complete all degree requirements within five years of entering graduate nursing coursework.

4. All requirements for the MSN degree must be completed in 5 calendar years.

Nursing Education Concentration (40 credit hours)

The MSN with a concentration in Nursing Education prepares the student as a nurse educator to teach in schools of nursing programs and in various health care system settings. Among their course of study, students will learn about nursing and educational theories, learning strategies, curricular development, program planning and evaluation, and develop skills in different teaching methodologies.

Core Curriculum

NURS 7001 - Health Care Policy **

(3) Primary focus on analysis of health-care systems; examines public and private health-care delivery systems; explores future challenges and processes to improve systems. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7002 - Adv Nursing Research **

(3) Systematic examination and application of the research process; critically examines concept of evidenced-based practice and its application to nursing. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7990 - Scholarly Synthesis **

(3) As a culminating experience, this course provides the student with the opportunity to complete a scholarly project that demonstrates a synthesis of knowledge acquired in graduate study. The student will write a state of the science paper using a prescribed methodology for literature review and submit the paper as a manuscript for publication. The paper topic and content must be approved by a supervising faculty member and course coordinator.

Nursing Education Concentration Required Courses:

NURS 7000 - Theoretical Foundations **

(3) Exploration of theory development in nursing; analysis of selected nursing and related theories; relevance of theory to practice, education, research, and administration; includes process of theory development. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7003 - Adv Role Development **

(3) Provides an in-depth understanding of the legal, historical, political, social, and ethical aspects of advanced nursing; examines traditional and emerging roles for advanced nursing. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7103 - Adv Pathophysiology **

(3) Exploration of theoretical foundations of phenomena that alter health status across the life span; provides foundation for practitioner courses related to diagnosis and treatment of disease processes. PREREQUISITE(S): PREREQUISITE: Undergraduate course in pathophysiology. PREREQUISITE: Admission to MSN program or permission of instructor.

NURS 7101 - Adv Health Assessment **

(3) Focuses on development of diagnostic reasoning skills, emphasizing application of these skills in the presence of abnormal findings uncovered during physical examination of individuals across the lifespan. PREREQUISITE(S): Undergraduate course in health assessment; admission to MSN program. COREQUISITE(S): NURS 7102

NURS 7102 - Adv Health Assmt/Clinic **

(1) This clinical course emphasizes application of techniques to perform targeted and comprehensive advanced health assessment of the adult client; develops synthesis, critical analysis, interpretation of physical assessment data, diagnostic reasoning, and clinical judgment. Students must achieve a grade of B" or better to progress. COREQUISITE NURS 7101"

NURS 7104 - Adv Pharmacology **

(3) Focus on pharmacological actions of drugs commonly prescribed in primary care settings; emphasizes pharmacokinetic and pharmacodynamic principles of drugs, side effects, therapeutic dosages, and drug interactions; integrates legal, ethical, and economic factors of prescriptive authority. PREREQUISITE(S): Evidence of successful completion of undergraduate pharmacology course; admission to MSN program or permission of instructor.

NURS 7204 - Curriculum Design & Ed Theory **

(3) The course introduces the student to traditional and contemporary considerations for curriculum planning and design as applied to nursing education. An emphasis is placed on curriculum designs and explores major research based theories of adult and nursing education. These concepts will be applied to a variety of settings and/or levels of education.

NURS 7205 - Evaluation Mthds in NursingEdu **

(3) Analysis of testing, benchmarking, and evaluation methods in the clinical practice of nursing across classroom, seminar, and electronic formats; includes evaluation methods to insure competency in the clinical area.

NURS 7207 - Clinical Focus Practicum **

(2) Use of theory, clinical concepts, and nursing research in delivery of care to specific patient populations from a social, cultural, psychological, physical, spiritual, and economic perspective for the advanced practice nurse. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): Completion of all non-practicum MSN education courses.

NURS 7209 - Nursing Education Practicum **

(4) Integrates theory in a reality context; provides opportunities to participate in all phases of teaching and to experiment with different teaching methods. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): Completion of all non-practicum MSN education courses.

Plus one of the following clinical focus courses:

NURS 7505 - Advanced Adult Health Nursing **

(3) Pre- or Co-Requisites: NURS 7101, 7102, 7103, 7104

NURS 7525 - Ecg/Crit Care Nurses **

(3)

NURS 7635 - Advanced Pediatric Nursing **

(3) This course focuses on health maintenance and health promotion for children and their families experiencing both acute and chronic illness/disabilities are addressed. May be repeated for a maximum of 6 credit hours with permission of the chair or graduate coordinator.

NURS 7515 - Adv Psych/Mentl Health Nursing

(3) Pre-Requisites: NURS 7101, 7102, 7103, 7104

NURS 7545 - Adv Womens Hlth/Perinatal Nurs **

(3) Pre- or Co-Requisites: NURS 7101, 7102, 7103, 7104 PREREQUISITE(S): r.

Nutrition - Clinical Nutrition Concentration, (MS)

MS Degree Program

Program objectives are to: (1) recognize the diverse nature of subject matter embodied in the nutrition disciplines; (2) understand the research findings and theoretical constructs undergirding the nutrition disciplines (3) understand and embrace ethical standards of the respective disciplines.

Program Prerequisites

1. Prospective students must apply to both the Graduate School and the School of Health Studies, except Clinical Nutrition applicants must follow the DICAS application process See http://www.memphis.edu/shs/programs/clinical_nutrition.php). The applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an official report of Graduate Record Examination (GRE) scores must be submitted except:
    1. Environmental Nutrition (ENVN): An applicant seeking admission to the ENVN concentration is not required to submit GRE scores. However, official GRE or other standardized test scores may be requested or submitted to support an application.
2. An applicant, except in Clinical Nutrition, must also submit the following to the School: 1) SHS Graduate Admission Application Form, 2) two letters of recommendation, and 3) a 300-500 word statement of goals including identification of the intended area of concentration. (Contact the school's academic services coordinator for application forms. School application forms are also available on-line at. (www.memphis.edu/shs/students/grad_admission.php)

3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5, except Clinical Nutrition applicants must have a minimum GPA of 3.0.
4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses:
    1. Clinical Nutrition: Completion of an undergraduate degree and an Academy of Nutrition and Dietetics (AND)-approved Didactic Program in Dietetics Verification Statement.
    2. Environmental Nutrition: life science-oriented courses such as nutrition, biology, health sciences, public health, health promotion, food service, and anthropology
    3. Nutrition Science: science-oriented courses such as, but not limited to, nutrition, biology, biochemistry, health sciences, and chemistry
5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.
6. Student admissions to the respective programs within the Nutrition (NUTR) major are differentially restricted to enable Graduate Faculty within each concentration to closely mentor their students. To ensure maximum consideration for admission into a specific NUTR concentration, the following dates are provided: May 1 for summer and fall and November 1 for the spring semester. Clinical Nutrition applicants must participate in the DICAS application process during mid-February. The admission committee may request a personal interview.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

A minimum of 30 hours is required for the major although respective concentrations may require additional credit hours.

Program Research Core (6 hours):

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

OR

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

Concentration requirements:

Clinical Nutrition (23 hours):

HPRO 7780 - Health Counseling **

(3) Introduces clinical counseling techniques focusing on the development and application of basic health counseling and lifestyle coaching skills. Self-evaluation, giving and receiving feedback and reflection upon the development of clinical skills and ethical tendencies is an essential part of this course.

NUTR 7205 - Nutrition Care Acute/Chronic I

(3) (CSED 7205). Didactic and laboratory methods in the selection, performance, and interpretation of nutrition assessment techniques.Emphasis on the nutrition-care process and terminology. Restricted by Program or by Permit.

NUTR 7305 - Nutrition Care Acute/ChronicII

(3) Integration of principles of anatomy, normal and pathophysiology, biochemistry, psychology, anthropology, epidemiology, and foods science with a survey of current nutritional, medical, and pharmacological treatments in the prevention, treatment, and management of diseases and disorders of the body systems. PREREQUISITE(S): PSYC 7302 or equivalent.

NUTR 7405 - Pharmacol Nutr Prof

(3) Introduction to pharmaceutical sciences including general principles and phases of drug action, drug and nutrient interactions, pharmaceutical issues in nutrition support, supplement/herbal issues, and highlights of commonly prescribed medication that are used in medical condition which have a nutrition component.

NUTR 7412 - Cellular Nutrition I

(3) (CSED 7412). Generation, storage, and use of energy; metabolism of carbohydrate, protein, fat, and other macro and micronutrients; control of metabolic processes in normal, anabolic, and catabolic conditions. May be repeated for a maximum of 6 credit hours. Restricted by program or permit required. PREREQUISITE(S): Psychology graduate student or permission of instructor.

NUTR 7415 - Prof Issues Nutr

(2) Survey of professional issues for clinical dietitians. Topics covered will include ethics, reimbursement, communicating nutrition information to the public, professional development and participation, entrepreneurship, marketing, and developing business plans.

NUTR 7422 - Cellular Nutrition II

(3) (CSED 7422). Cellular and subcellular metabolism of the micro-nutrients; digestion, absorption, transport, utilization, and excretion of vitamins and minerals; interrelationships of micro- and macronutrients; recent advances in micronutrient research.

NUTR 7522 - Clncl Nutritn/Food Servc Mgmt

(3) (CSED 7522). Influence of leadership/management styles/practices on clinical nutrition/food service management effectiveness.

Guided electives selected with approval of the advisor:

Clinical Nutrition (0 hours)

Culminating Experience (6-10 hours)

(Consult Graduate School Calendar for submission deadlines - www.memphis.edu/gradschool/calendar.php):

Clinical Nutrition:

NUTR 7481 - Clin Intern NUTR

(6) (CSED 7481) Directed clinical experience (100 hours per credit) in health care settings serving children, adolescent, and adults in clinical and community settings, as well as administration of nutrition services. Emphasis on nutrition in growth and development, maintenance of wellness, and prevention and treatment of disease and disability. May be repeated for up to 12 hours of credit. May be repeated a maximum of 6 hours. PREREQUISITE(S): Enrollment in Clinical Nutrition program.

and

NUTR 7482 - Clinical Residency NUTR

(1) Individualized clinical experience (120 hours) designed at an advanced level to enhance self-direction in learning and to develop advanced competence in area of individual interest. May be repeated for a maximum of 6 credit hours. PREREQUISITE(S): PSYC 7301, PSYC 7302, PSYC 7303, and permission of instructor.

Other Requirements

1. Successful completion of an oral or written comprehensive examination (successful defense of the Clinical Internship in NUTR, Internship in Environmental Nutrition, Applied Project, or Thesis may serve this purpose). (Consult Graduate School Calendar for submission deadlines - www.memphis.edu/gradschool/calendar.php)
2. Consult Graduate School Calendar for Intent to Graduate submission deadlines - www.memphis.edu/gradschool/calendar.php

Nutrition - Environmental Nutrition Concentration, (MS)

MS Degree Program

Program objectives are to: (1) recognize the diverse nature of subject matter embodied in the nutrition disciplines; (2) understand the research findings and theoretical constructs undergirding the nutrition disciplines (3) understand and embrace ethical standards of the respective disciplines.

Program Prerequisites

1. Prospective students must apply to both the Graduate School and the School of Health Studies, except Clinical Nutrition applicants must follow the DICAS application process See http://www.memphis.edu/shs/programs/clinical_nutrition.php). The applicant must submit an official

transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an official report of Graduate Record Examination (GRE) scores must be submitted except:
    1. Environmental Nutrition (ENVN): An applicant seeking admission to the ENVN concentration is not required to submit GRE scores. However, official GRE or other standardized test scores may be requested or submitted to support an application.
2. An applicant, except in Clinical Nutrition, must also submit the following to the School: 1) SHS Graduate Admission Application Form, 2) two letters of recommendation, and 3) a 300-500 word statement of goals including identification of the intended area of concentration. (Contact the school's academic services coordinator for application forms. School application forms are also available on-line at. (www.memphis.edu/shs/students/grad_admission.php)
3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5, except Clinical Nutrition applicants must have a minimum GPA of 3.0.
4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses:
    1. Clinical Nutrition: Completion of an undergraduate degree and an Academy of Nutrition and Dietetics (AND)-approved Didactic Program in Dietetics Verification Statement.
    2. Environmental Nutrition: life science-oriented courses such as nutrition, biology, health sciences, public health, health promotion, food service, and anthropology
    3. Nutrition Science: science-oriented courses such as, but not limited to, nutrition, biology, biochemistry, health sciences, and chemistry
5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.
6. Student admissions to the respective programs within the Nutrition (NUTR) major are differentially restricted to enable Graduate Faculty within each concentration to closely mentor their students. To ensure maximum consideration for admission into a specific NUTR concentration, the following dates are provided: May 1 for summer and fall and November 1 for the spring semester. Clinical Nutrition applicants must participate in the DICAS application process during mid-February. The admission committee may request a personal interview.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

Program Research Core (6 hours):

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

Concentration requirements:

Environmental Nutrition (21 hours):

NUTR 7182 - Environmental Nutrition **

(3) Study of the relationships between food, nutrition, and the environment with emphasis on sustainability. PREREQUISITE(S): COMP 6040 or COMP 6041 or permission of instructor.

NUTR 7183 - Complementary NUTR **

(3) Study of complementary nutrition practices with emphasis on evaluating effectiveness.

NUTR 7710 - Humanitarian Nutrition **

(3) Study of local and global food/nutrition availability and accessibility. Food justice and environmental stewardship.

NUTR 7712 - Cultural Nutrition and Foods **

(3) Overview of traditional food practices locally and globally to develop understanding of food values. PREREQUISITE(S): PSYC 7301 and PSYC 7302 .

NUTR 7720 - Food Policy

(3) A study of major food policy and political considerations impacting our local and global food systems. Emphasis on food policy issues in the US related to food justice and environmental stewardship. PREREQUISITE(S): Admission into the MS Program in Environmental Nutrition, or permission of instructor.

NUTR 7722 - Sustainable Food System **

(3) Current issues related to sustainable food systems. Sustainable agriculture, health, hunger, environmental, economic, food safety, and political perspectives of relevant topics.

NUTR 7850 - Seminar in Environmental NUTR **

(3) In depth review and presentation of topic focused on a current issue in environmental nutrition. PREREQUISITE(S): Permission of instructor.

Guided electives selected with approval of the advisor:

Environmental Nutrition (3 hours)

Culminating Experience (3 hours)

(Consult Graduate School Calendar for submission deadlines - www.memphis.edu/gradschool/calendar.php):

Environmental Nutrition:

NUTR 7800 - Internship in Environ NUTR **

(3-6) Directed field experience focusing on development of knowledge, skills, and techniques needed to function as an environmental nutrition specialist in public or private settings. PREREQUISITE(S): PSYC 7301 and PSYC 7434, or permission of instructor

OR

NUTR 7950 - Applied Project in NUTR **

(1-6) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee.

Other Requirements

1. Successful completion of an oral or written comprehensive examination (successful defense of the Clinical Internship in NUTR, Internship in Environmental Nutrition, Applied Project, or Thesis may serve this purpose). (Consult Graduate School Calendar for submission deadlines - www.memphis.edu/gradschool/calendar.php)
2. Consult Graduate School Calendar for Intent to Graduate submission deadlines - www.memphis.edu/gradschool/calendar.php

Nutrition - Nutrition Science Concentration, (MS)

MS Degree Program

Program objectives are to: (1) recognize the diverse nature of subject matter embodied in the nutrition disciplines; (2) understand the research findings and theoretical constructs undergirding the nutrition disciplines (3) understand and embrace ethical standards of the respective disciplines.

Program Prerequisites

1. Prospective students must apply to both the Graduate School and the School of Health Studies, except Clinical Nutrition applicants must follow the DICAS application process See http://www.memphis.edu/shs/programs/clinical_nutrition.php). The applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an official report of Graduate Record Examination (GRE) scores must be submitted except:
    1. Environmental Nutrition (ENVN): An applicant seeking admission to the ENVN concentration is not required to submit GRE scores. However, official GRE or other standardized test scores may be requested or submitted to support an application.
2. An applicant, except in Clinical Nutrition, must also submit the following to the School: 1) SHS Graduate Admission Application Form, 2) two letters of recommendation, and 3) a 300-500 word statement of goals including identification of the intended area of concentration. (Contact the school's academic services coordinator for application forms. School application forms are also available on-line at. (www.memphis.edu/shs/students/grad_admission.php)
3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5, except Clinical Nutrition applicants must have a minimum GPA of 3.0.
4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses:
    1. Clinical Nutrition: Completion of an undergraduate degree and an Academy of Nutrition and Dietetics (AND)-approved Didactic Program in Dietetics Verification Statement.
    2. Environmental Nutrition: life science-oriented courses such as nutrition, biology, health sciences, public health, health promotion, food service, and anthropology

3. Nutrition Science: science-oriented courses such as, but not limited to, nutrition, biology, biochemistry, health sciences, and chemistry

5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.
6. Student admissions to the respective programs within the Nutrition (NUTR) major are differentially restricted to enable Graduate Faculty within each concentration to closely mentor their students. To ensure maximum consideration for admission into a specific NUTR concentration, the following dates are provided: May 1 for summer and fall and November 1 for the spring semester. Clinical Nutrition applicants must participate in the DICAS application process during mid-February. The admission committee may request a personal interview.

Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

A minimum of 30 hours is required for the major although respective concentrations may require additional credit hours.

Program Research Core (6 hours):

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

OR

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

Concentration requirements:

Nutrition Science (12 hours):

NUTR 7152 - Problems in NUTR

(3) ESMS 7152/HPRO 7152/PETE 7152 Independent study and/or research project on selected problems and issues. PREREQUISITE(S): Permission of instructor. Grades of A-F, or IP will be given.

NUTR 7412 - Cellular Nutrition I

(3) (CSED 7412). Generation, storage, and use of energy; metabolism of carbohydrate, protein, fat, and other macro and micronutrients; control of metabolic processes in normal, anabolic, and catabolic conditions. May be repeated for a maximum of 6 credit hours. Restricted by program or permit required. PREREQUISITE(S): Psychology graduate student or permission of instructor.

NUTR 7422 - Cellular Nutrition II

(3) (CSED 7422). Cellular and subcellular metabolism of the micro-nutrients; digestion, absorption, transport, utilization, and excretion of vitamins and minerals; interrelationships of micro- and macronutrients; recent advances in micronutrient research.

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

Guided electives selected with approval of the advisor:

Nutrition Science (9 hours)

Culminating Experience (6-10 hours)

(Consult Graduate School Calendar for submission deadlines - www.memphis.edu/gradschool/calendar.php):

Nutrition Science:

HMSE 7996 - Thesis

(1-6) (FITW/HLTH/PHED /RECR 7996) Application for writing a thesis must be filled out on an approved form after consultation with the major professor and filed with the Director of Graduate Programs. Grades of S, U, or IP will be given.

or

NUTR 7950 - Applied Project in NUTR **

(1-6) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee.

Note:

Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Other Requirements

1. Successful completion of an oral or written comprehensive examination (successful defense of the Clinical Internship in NUTR, Internship in Environmental Nutrition, Applied Project, or Thesis may serve this purpose). (Consult Graduate School Calendar for submission deadlines - www.memphis.edu/gradschool/calendar.php)
2. Consult Graduate School Calendar for Intent to Graduate submission deadlines - www.memphis.edu/gradschool/calendar.php

Philosophy, (MA)

MA Degree Program

Program objectives are: (1) development of expertise in the discipline to teach introductory courses; (2) ability to write a research paper on a philosophical topic for formal presentation; and (3) ability to demonstrate knowledge and skills for advanced study.

Program Admission

The Philosophy Department admits students for the fall semester of each academic year. Information and application forms can be found on the department web site. Applications received after January 5 cannot be guaranteed consideration for an assistantship for the upcoming academic year.

Program Prerequisites

1. A bachelor's degree from a recognized college or university. Official transcripts should be sent to the Office of Graduate Admissions.
2. A minimum of a 2.5 quality point average on a scale of 4.0. Students with less than a 2.5 quality point average may, on occasion, be admitted.
3. An acceptable score on the general test of the Graduate Record Examination.
4. At least 18 semester hours in undergraduate philosophy courses including the following courses or their equivalent: introduction to philosophy, ethics, elementary logic, history of ancient philosophy, and history of modern philosophy. Students who lack one or more of these courses may be admitted to the program only on the condition that they take the appropriate course as soon as possible.
5. Three letters of recommendation from people qualified to judge the student's ability to undertake graduate work.
6. A 10-20 page writing sample and a 1-2–page statement of purpose should be submitted to the Coordinator of Graduate Admissions in Philosophy.

Program Requirements

1. Thirty to thirty-three hours of class work, 24 of which must be at the 7000 level or above. Students who write a thesis are required to take 30 hours, 3 of which are credit for the thesis. Students who do not write a thesis are required to take 33 hours. Students who elect to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Students with approved collateral areas may take up to six hours outside the department if they are writing a thesis or nine hours if they are not.
2. A written comprehensive examination covering the primary area of research interest of the student. This examination will incorporate an historical component relevant to the area of research interest.

Physics - Computational Physics, Non-thesis, (MS)

MS Degree Program

Program Admission Requirements

1. Prospective students, in addition to meeting the requirements for admission to The Graduate School, are required to present as a prerequisite for admission a satisfactory record of undergraduate work in physics. Normally 21 credit hours of physics course work will be required, including classical mechanics, electricity and magnetism, modern physics, quantum physics, and thermal physics, and 12 credit hours of calculus and differential equations. Students who are deficient in undergraduate work may be admitted on a conditional basis and would be allowed to take graduate courses only after fulfilling the undergraduate course deficiencies. Submission of general GRE score is strongly recommended for admission.

Program Requirements

After meeting the general degree requirements for admission to The Graduate School

After meeting the general degree requirements for admission to The Graduate School, students selecting Physics as a major will be assigned to the Department Graduate Committee, which must approve and direct their course of study.

Core requirements (9 credit hours)*:

PHYS 7200 - Quantum Mechanics I

(3) Dirac's bra-ket formalism, perturbation theory, spin, multiparticle systems, second quantization, Feynman's path integral formulation, quantum information, relativistic quantum mechanics, interpretation of quantum mechanics. PREREQUISITE(S): PHYS 4410/PHYS 6410 or equivalent.

PHYS 8200 - Quantum Mechanics I

(3) Fundamentals of Hilbert Space, simple quantum systems and relations to classical mechanics, symmetry in quantum mechanics, interaction with electromagnetic fields, introduction to perturbation methods and scattering theory. May be repeated for a maximum of 9 credits

PHYS 7386 - Methods of Theoretical Physics

(3) Complex analysis, Fourier series, Fourier and Laplace transforms, ordinary differential equations, partial differential equations, special functions.

PHYS 7520 - Statistical Mechanics

(3) Microcanonical, canonical and grand-canonical ensembles, ideal gases, weakly-interacting systems, quantum statistics, applications to polyatomic gases, phonons and black body radiation.

- Satisfactory completion of an oral comprehensive exam typically given during the final thesis oral presentation.

Computational Physics, non-thesis program (33 credit hours)

(Physics Program requirement*: 9 credit hours, Concentration requirement: 6 credit hours, Additional courses: 18 credit hours)

PHYS 7385 - Methods in Computational Physics

(3) Solution of problems in macroscopic and atomic-level problems in physics by numerical analysis and computer simulation, with emphasis on the accuracy and efficiency of large-scale computations and the physical interpretation of results.

MATH 7721 - Adv Numerical Analysis

(3) A continuation of Mathematics 6721; specialized methods and techniques in field of numerical analysis.

Sufficient additional courses numbered 6000 and above

Sufficient additional courses numbered 6000 and above, including PHYS 7100/PHYS 8100 and PHYS 7300, to satisfy a minimum of 33 semester hours. These courses can be taken in a collateral field of study. CHEM 6415, COMP 7721, MATH 6391, MATH 6393, MATH 6721, MATH 7321, MATH 7393.

PHYS 7100 - Classical Mechanics

(3) Variational principles, Lagrangians and Hamiltonians, Poisson brackets, canonical transformations, Hamilton-Jacobi theory, and chaos in Hamiltonian systems. PREREQUISITE(S): PADM 7641 or permission of instructor.

PHYS 8100 - Classical Mechanics

(3) Variational principles, Lagrangians and Hamiltonians, Poisson brackets, canonical transformations, Hamilton-Jacobi theory, and chaos in Hamiltonian systems. May be repeated for a total of 12 credits

PHYS 7300 - Electrodynamics

(3) Electrostatics, multipole expansion, magnetostatics, electrodynamics, electromagnetics waves. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Completion of 21 hours in PADM program, including PADM 7600 and PADM 7601, and permission of instructor.

MATH 6391 - Partial Diffrntl Equation I

(3) Laplace transforms; Fourier series; introduction to partial differential equations.

MATH 6721 - Numerical Analysis

(3) Derivation and application of computer-oriented, numerical methods for functional approximation, differentiation, quadrature, and solution of ordinary differential equations.

MATH 7321 - Modeling & Computation

(3) Introduction to process of formulating, solving, and interpreting mathematical models of real phenomena; both formal analysis and numerical techniques for variety of models.

MATH 7393 - Differl Equatns/App

(3) Basic concepts in ordinary and partial differential equations (possibly functional or stochastic differential equations); existence, uniqueness, continuous dependence theorems. Application areas could include diffusion, wave propagation, population dynamics, neural networks, mathematical biology and ecology, quantum theory, kinetic theory, depending on interests of class. PREREQUISITE(S): Permission of Instructor

Physics - Computational Physics, Thesis, (MS)

MS Degree Program

Program Admission Requirements

1. Prospective students, in addition to meeting the requirements for admission to The Graduate School, are required to present as a prerequisite for admission a satisfactory record of undergraduate work in physics. Normally 21 credit hours of physics course work will be required, including classical mechanics, electricity and magnetism, modern physics, quantum physics, and thermal physics, and 12 credit hours of calculus and differential equations. Students who are deficient in undergraduate work may be admitted on a conditional basis and would be allowed to take graduate courses only after fulfilling the undergraduate course deficiencies. Submission of general GRE score is strongly recommended for admission.

Program Requirements

After meeting the general degree requirements for admission to The Graduate School

After meeting the general degree requirements for admission to The Graduate School, students selecting Physics as a major will be assigned to the Department Graduate Committee, which must approve and direct their course of study.

Core requirements (9 credit hours)*:

PHYS 7200 - Quantum Mechanics I

(3) Dirac's bra-ket formalism, perturbation theory, spin, multiparticle systems, second quantization, Feynman's path integral formulation, quantum information, relativistic quantum mechanics, interpretation of quantum mechanics. PREREQUISITE(S): PHYS 4410/PHYS 6410 or equivalent.

PHYS 8200 - Quantum Mechanics I

(3) Fundamentals of Hilbert Space, simple quantum systems and relations to classical mechanics, symmetry in quantum mechanics, interaction with electromagnetic fields, introduction to perturbation methods and scattering theory. May be repeated for a maximum of 9 credits

PHYS 7386 - Methods of Theoretical Physics

(3) Complex analysis, Fourier series, Fourier and Laplace transforms, ordinary differential equations, partial differential equations, special functions.

PHYS 7520 - Statistical Mechanics

(3) Microcanonical, canonical and grand-canonical ensembles, ideal gases, weakly-interacting systems, quantum statistics, applications to polyatomic gases, phonons and black body radiation.

- Satisfactory completion of an oral comprehensive exam typically given during the final thesis oral presentation.

Computational Physics, thesis program (30 credit hours)

(Physics Program core requirement*: 9 credit hours, Concentration requirement: 6 credit hours, Thesis: 6 credit hours, Additional courses: 9 credit hours)

PHYS 7385 - Methods in Computational Physics

(3) Solution of problems in macroscopic and atomic-level problems in physics by numerical analysis and computer simulation, with emphasis on the accuracy and efficiency of large-scale computations and the physical interpretation of results.

MATH 7721 - Adv Numerical Analysis

(3) A continuation of Mathematics 6721; specialized methods and techniques in field of numerical analysis.

PHYS 7996 - Thesis

(1-6) Research contributing to the development of the MS thesis. Only 6 semester hours may be counted toward degree requirements. Grades of S, U, or IP will be given.

The student must present

The student must present a research proposal to the graduate thesis committee at the end of the first semester of his/her study for the thesis approval.

Additional courses to be taken from the following list:

These courses must be approved by the graduate advisor.

MATH 6391 - Partial Diffrntl Equation I

(3) Laplace transforms; Fourier series; introduction to partial differential equations.

MATH 7321 - Modeling & Computation

(3) Introduction to process of formulating, solving, and interpreting mathematical models of real phenomena; both formal analysis and numerical techniques for variety of models.

MATH 7393 - Differl Equatns/App

(3) Basic concepts in ordinary and partial differential equations (possibly functional or stochastic differential equations); existence, uniqueness, continuous dependence theorems. Application areas could include diffusion, wave propagation, population dynamics, neural networks, mathematical biology and ecology, quantum theory, kinetic theory, depending on interests of class. PREREQUISITE(S): Permission of Instructor

Physics - General Physics Concentration, Non-Thesis option, (MS)

MS Degree Program

Program Admission Requirements

1. Prospective students, in addition to meeting the requirements for admission to The Graduate School, are required to present as a prerequisite for admission a satisfactory record of undergraduate work in physics. Normally 21 credit hours of physics course work will be required, including classical mechanics, electricity and magnetism, modern physics, quantum physics, and thermal physics, and 12 credit hours of calculus and differential equations. Students who are deficient in undergraduate work may be admitted on a conditional basis and would be allowed to take graduate courses only after fulfilling the undergraduate course deficiencies. Submission of general GRE score is strongly recommended for admission.

Program Requirements

After meeting the general degree requirements for admission to The Graduate School

After meeting the general degree requirements for admission to The Graduate School, students selecting Physics as a major will be assigned to the Department Graduate Committee, which must approve and direct their course of study.

Core requirements (9 credit hours)*:

PHYS 7200 - Quantum Mechanics I

(3) Dirac's bra-ket formalism, perturbation theory, spin, multiparticle systems, second quantization, Feynman's path integral formulation, quantum information, relativistic quantum mechanics, interpretation of quantum mechanics. PREREQUISITE(S): PHYS 4410/PHYS 6410 or equivalent.

PHYS 8200 - Quantum Mechanics I

(3) Fundamentals of Hilbert Space, simple quantum systems and relations to classical mechanics, symmetry in quantum mechanics, interaction with electromagnetic fields, introduction to perturbation methods and scattering theory. May be repeated for a maximum of 9 credits

PHYS 7386 - Methods of Theoretical Physics

(3) Complex analysis, Fourier series, Fourier and Laplace transforms, ordinary differential equations, partial differential equations, special functions.

PHYS 7520 - Statistical Mechanics

(3) Microcanonical, canonical and grand-canonical ensembles, ideal gases, weakly-interacting systems, quantum statistics, applications to polyatomic gases, phonons and black body radiation.

- Satisfactory completion of an oral comprehensive exam typically given during the final thesis oral presentation.

General Physics Concentration, non-thesis option (33 credit hours)

(Physics Program core requirement*: 9 credit hours, Concentration requirement: 6 credit hours, Additional courses: 18 credit hours)

General Physics Concentration requirement (6 credit hours):

PHYS 7100 - Classical Mechanics

(3) Variational principles, Lagrangians and Hamiltonians, Poisson brackets, canonical transformations, Hamilton-Jacobi theory, and chaos in Hamiltonian systems. PREREQUISITE(S): PADM 7641 or permission of instructor.

PHYS 8100 - Classical Mechanics

(3) Variational principles, Lagrangians and Hamiltonians, Poisson brackets, canonical transformations, Hamilton-Jacobi theory, and chaos in Hamiltonian systems. May be repeated for a total of 12 credits

PHYS 7300 - Electrodynamics

(3) Electrostatics, multipole expansion, magnetostatics, electrodynamics, electromagnetics waves. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Completion of 21 hours in PADM program, including PADM 7600 and PADM 7601, and permission of instructor.

Sufficient additional courses to satisfy a minimum of 33 semester hours

Sufficient additional courses to satisfy a minimum of 33 semester hours, in which 9 may be in a collateral field of study. These courses must be approved by the graduate advisor. 23 semester hours must be taken in courses numbered 7000 or above.

Complete a survey of

Complete a survey of an area of current research in fundamental or applied physics and make an oral and written presentation based on this survey before a faculty committee. The subject of this survey must be approved by the departmental graduate committee at least one semester prior to graduation.

Physics - General Physics Concentration, Thesis Option, (MS)

MS Degree Program

Program Admission Requirements

1. Prospective students, in addition to meeting the requirements for admission to The Graduate School, are required to present as a prerequisite for admission a satisfactory record of undergraduate work in physics. Normally 21 credit hours of physics course work will be required, including classical mechanics, electricity and magnetism, modern physics, quantum physics, and thermal physics, and 12 credit hours of calculus and differential equations. Students who are deficient in undergraduate work may be admitted on a conditional basis and would be allowed to take graduate courses only after fulfilling the undergraduate course deficiencies. Submission of general GRE score is strongly recommended for admission.

Program Requirements

After meeting the general degree requirements for admission to The Graduate School

After meeting the general degree requirements for admission to The Graduate School, students selecting Physics as a major will be assigned to the Department Graduate Committee, which must approve and direct their course of study.

Core requirements (9 credit hours)*:

PHYS 7200 - Quantum Mechanics I

(3) Dirac's bra-ket formalism, perturbation theory, spin, multiparticle systems, second quantization, Feynman's path integral formulation, quantum information, relativistic quantum mechanics, interpretation of quantum mechanics. PREREQUISITE(S): PHYS 4410/PHYS 6410 or equivalent.

PHYS 8200 - Quantum Mechanics I

(3) Fundamentals of Hilbert Space, simple quantum systems and relations to classical mechanics, symmetry in quantum mechanics, interaction with electromagnetic fields, introduction to perturbation methods and scattering theory. May be repeated for a maximum of 9 credits

PHYS 7386 - Methods of Theoretical Physics

(3) Complex analysis, Fourier series, Fourier and Laplace transforms, ordinary differential equations, partial differential equations, special functions.

PHYS 7520 - Statistical Mechanics

(3) Microcanonical, canonical and grand-canonical ensembles, ideal gases, weakly-interacting systems, quantum statistics, applications to polyatomic gases, phonons and black body radiation.

- Satisfactory completion of an oral comprehensive exam typically given during the final thesis oral presentation.

General Physics Concentration, thesis option (30 credit hours)

(Physics Program core requirement*: 9 credit hours, Concentration requirement: 6 credit hours, Thesis: 6 credit hours, Additional courses: 9 credit hours)

General Physics Concentration requirement:

PHYS 7100 - Classical Mechanics

(3) Variational principles, Lagrangians and Hamiltonians, Poisson brackets, canonical transformations, Hamilton-Jacobi theory, and chaos in Hamiltonian systems. PREREQUISITE(S): PADM 7641 or permission of instructor.

PHYS 8100 - Classical Mechanics

(3) Variational principles, Lagrangians and Hamiltonians, Poisson brackets, canonical transformations, Hamilton-Jacobi theory, and chaos in Hamiltonian systems. May be repeated for a total of 12 credits

PHYS 7300 - Electrodynamics

(3) Electrostatics, multipole expansion, magnetostatics, electrodynamics, electromagnetics waves. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Completion of 21 hours in PADM program, including PADM 7600 and PADM 7601, and permission of instructor.

Sufficient additional courses

Sufficient additional courses, including 6 semester hours in PHYS 7996, Thesis, to satisfy a minimum of 30 semester hours (9 semester hours may be in a collateral field of study with course numbers 6000 or above). These courses must be approved by the graduate advisor. 21 semester hours must be taken in courses numbered 7000 or above.

PHYS 7996 - Thesis

(1-6) Research contributing to the development of the MS thesis. Only 6 semester hours may be counted toward degree requirements. Grades of S, U, or IP will be given.

The student must present

The student must present a research proposal to the graduate thesis committee at the end of the first semester of his/her study for the thesis approval.

The student must complete

The student must complete a research project, submit a written thesis describing the research, orally present and defend the thesis before a faculty committee. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Physics - Materials Science Concentration, Non-Thesis, (MS)

MS Degree Program

Program Admission Requirements

1. Prospective students, in addition to meeting the requirements for admission to The Graduate School, are required to present as a prerequisite for admission a satisfactory record of undergraduate work in physics. Normally 21 credit hours of physics course work will be required, including classical mechanics, electricity and magnetism, modern physics, quantum physics, and thermal physics, and 12 credit hours of calculus and differential equations. Students who are deficient in undergraduate work may be admitted on a conditional basis and would be allowed to take graduate courses only after fulfilling the undergraduate course deficiencies. Submission of general GRE score is strongly recommended for admission.

Program Requirements

After meeting the general degree requirements for admission to The Graduate School

After meeting the general degree requirements for admission to The Graduate School, students selecting Physics as a major will be assigned to the Department Graduate Committee, which must approve and direct their course of study.

Core requirements (9 credit hours)*:

PHYS 7200 - Quantum Mechanics I

(3) Dirac's bra-ket formalism, perturbation theory, spin, multiparticle systems, second quantization, Feynman's path integral formulation, quantum information, relativistic quantum mechanics, interpretation of quantum mechanics. PREREQUISITE(S): PHYS 4410/PHYS 6410 or equivalent.

PHYS 8200 - Quantum Mechanics I

(3) Fundamentals of Hilbert Space, simple quantum systems and relations to classical mechanics, symmetry in quantum mechanics, interaction with electromagnetic fields, introduction to perturbation methods and scattering theory. May be repeated for a maximum of 9 credits

PHYS 7386 - Methods of Theoretical Physics

(3) Complex analysis, Fourier series, Fourier and Laplace transforms, ordinary differential equations, partial differential equations, special functions.

PHYS 7520 - Statistical Mechanics

(3) Microcanonical, canonical and grand-canonical ensembles, ideal gases, weakly-interacting systems, quantum statistics, applications to polyatomic gases, phonons and black body radiation.

- Satisfactory completion of an oral comprehensive exam typically given during the final thesis oral presentation.

Materials Science Concentration, non-thesis program (33 credit hours)

(Physics Program requirement*: 9 credit hours, Concentration requirement: 12 credit hours, Additional courses: 12 credit hours)

Materials Science Concentration requirement:

PHYS 6610 - Solid State Physics

(3) Crystal structures, crystal bonding, x-ray diffraction, lattice vibrations and phonons, free and nearly-free electron models, energy bands of insulators, metals, and semiconductors.

PHYS 7390 - Polymer Physics

(3) Introduction to polymers, phase, behavior and dynamics. These include single polymer chain conformations, dilute and semi-dilute polymer solutions, polyelectrolyte solutions, effect of confinement, polymer blends, diblock copolymers, and kinetics of polymers in dilute and concentrated polymer solutions. PREREQUISITE(S): PADM 7601 or equivalent or permission of instructor.

MECH 7361 - Mech Bhvr Of Materials

(3) (6804) Performance of materials at elevated temperatures; statistical aspect of brittle fracture; advanced treatment of fatigue failure; linear elastic fracture mechanics; friction and wear; ductile failure; strengthening mechanisms; embrittlement modes; case studies in materials selection. PREREQUISITE(S): NURS 7003.

Sufficient additional courses

Sufficient additional courses (12 credit hours in collateral field of study with course numbers 6000 or above), to satisfy a minimum of 33 semester hours. These courses must be approved by the graduate advisor.

Complete

Complete a survey of an area of current research in fundamental or applied materials physics and make an oral and written presentation based on this survey before a faculty committee. The subject of this survey must be approved by the departmental graduate committee at least one semester prior to graduation.

Physics - Materials Science Concentration, Thesis, (MS)

MS Degree Program

Program Admission Requirements

1. Prospective students, in addition to meeting the requirements for admission to The Graduate School, are required to present as a prerequisite for admission a satisfactory record of undergraduate work in physics. Normally 21 credit hours of physics course work will be required, including classical mechanics, electricity and magnetism, modern physics, quantum physics, and thermal physics, and 12 credit hours of calculus and differential equations. Students who are deficient in undergraduate work may be admitted on a conditional basis and would be allowed to take graduate courses only after fulfilling the undergraduate course deficiencies. Submission of general GRE score is strongly recommended for admission.

Program Requirements

After meeting the general degree requirements for admission to The Graduate School

After meeting the general degree requirements for admission to The Graduate School, students selecting Physics as a major will be assigned to the Department Graduate Committee, which must approve and direct their course of study.

Core requirements (9 credit hours)*:

PHYS 7200 - Quantum Mechanics I

(3) Dirac's bra-ket formalism, perturbation theory, spin, multiparticle systems, second quantization, Feynman's path integral formulation, quantum information, relativistic quantum mechanics, interpretation of quantum mechanics. PREREQUISITE(S): PHYS 4410/PHYS 6410 or equivalent.

PHYS 8200 - Quantum Mechanics I

(3) Fundamentals of Hilbert Space, simple quantum systems and relations to classical mechanics, symmetry in quantum mechanics, interaction with electromagnetic fields, introduction to perturbation methods and scattering theory. May be repeated for a maximum of 9 credits

PHYS 7386 - Methods of Theoretical Physics

(3) Complex analysis, Fourier series, Fourier and Laplace transforms, ordinary differential equations, partial differential equations, special functions.

PHYS 7520 - Statistical Mechanics

(3) Microcanonical, canonical and grand-canonical ensembles, ideal gases, weakly-interacting systems, quantum statistics, applications to polyatomic gases, phonons and black body radiation.

- Satisfactory completion of an oral comprehensive exam typically given during the final thesis oral presentation.

Materials Science Concentration, thesis program (30 credit hours)

(Physics Program requirement*: 9 credit hours, Concentration requirement: 12 credit hours, Thesis: 6 credit hours, Additional courses: 3 credit hours)

Materials Science Concentration requirement:

PHYS 6610 - Solid State Physics

(3) Crystal structures, crystal bonding, x-ray diffraction, lattice vibrations and phonons, free and nearly-free electron models, energy bands of insulators, metals, and semiconductors.

PHYS 6720 - Materials Physics

(3) Basic concepts in materials science emphasizing relationships between microscopic structure and properties; crystallography and symmetries, thermodynamics of material, phase equilibria, structure of ceramics and polymers,

mechanical properties of material, kinetics of phase transformations in materials. PREREQUISITE(S): Permission of the Coordinator of Graduate Studies

MECH 7361 - Mech Bhvr Of Materials

(3) (6804) Performance of materials at elevated temperatures; statistical aspect of brittle fracture; advanced treatment of fatigue failure; linear elastic fracture mechanics; friction and wear; ductile failure; strengthening mechanisms; embrittlement modes; case studies in materials selection. PREREQUISITE(S): NURS 7003.

MECH 8361 - Mech Behvr Of Materials

(3) Performance of materials at elevated temperatures; statistical aspect of brittle fracture; advanced treatment of fatigue failure; linear elastic fracture mechanics; friction and wear; ductile failure; strengthening mechanisms; embrittlement modes; case studies in materials selection.

PHYS 7390 - Polymer Physics

(3) Introduction to polymers, phase, behavior and dynamics. These include single polymer chain conformations, dilute and semi-dilute polymer solutions, polyelectrolyte solutions, effect of confinement, polymer blends, diblock copolymers, and kinetics of polymers in dilute and concentrated polymer solutions. PREREQUISITE(S): PADM 7601 or equivalent or permission of instructor.

PHYS 7996 - Thesis

(1-6) Research contributing to the development of the MS thesis. Only 6 semester hours may be counted toward degree requirements. Grades of S, U, or IP will be given.

Sufficient additional courses

Sufficient additional courses (in a collateral field of study with course numbers 6000 or above), including 6 semester hours in PHYS 7996, Thesis, to satisfy a minimum of 30 semester hours. These courses must be approved by the graduate advisor.

PHYS 7996 - Thesis

(1-6) Research contributing to the development of the MS thesis. Only 6 semester hours may be counted toward degree requirements. Grades of S, U, or IP will be given.

The student must present

The student must present a research proposal to the graduate thesis committee at the end of the first semester of his/her study for the thesis approval.

The student must complete

The student must complete a research project, submit a written thesis describing the research, orally present and defend the thesis before a faculty committee. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Political Science, (MA)

MA Degree Program

Program Admission

1. Admission to the program will be based on selections from a pool of applicants who meet the University's Graduate School admission requirements.
2. Significant weight is given to the following factors in determining admissions to the MA program:
    1. An undergraduate grade point average of 3.0 on a 4.0 scale from an accredited college or university.
    2. GRE or LSAT scores.
    3. Letters of recommendation from two persons (at least one academic) familiar with the applicant's academic background or experience, specifying in detail the applicant's capabilities for graduate study.
    4. A statement of approximately 1000 words indicating the applicant's present interests and career goals, including why the applicant wants the MA degree.

Program Requirements

1. Students who write a thesis must complete 33 hours of graduate courses, including 3-6 hours of credit for POLS 7996, Thesis. Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Students who do not write a thesis must complete 36 hours of graduate courses.
2. All students must complete POLS 7100, Seminar in Scope and Methods of Political Science Research, and POLS 7401 - Sem Political Theory, and POLS 7101 - Political Statistics, with grades of B or better in each course.
3. At least 27 semester hours of the courses (30 hours for the non-thesis option) must be taken at the 7000 level, at least 21 (24 for the non-thesis option) of which must be in Political Science.
4. No more than 6 semester hours of internship courses may be counted toward the 33 or 36 semester hour requirement. Without the approval of the graduate coordinator and chair, no more than 6 semester hours outside the department of Political Science may be counted toward the 33 or 36 semester-hour requirement.
5. Non-thesis students must pass a comprehensive examination and thesis students must pass an oral defense of their thesis. The oral defense of the thesis constitutes a comprehensive examination over all course-work.
6. Comprehensive examinations will consist of four questions total. Students will answer two exam questions from any two of the following fields: American Politics, Public Law, Comparative Politics, International Relations, Political Theory, Public Policy or a combination of International Relations and Comparative Politics. A student should take a minimum of nine hours in each of the two examination fields.
    1. With the approval of the academic coordinator and the chair, a student may substitute 9 hours in a collateral field for one of the two examination fields.
    2. The examination committee will consist of a chair and two other faculty, chosen by the student in consultation with the academic coordinator and the chair of the examining committee.
    3. Each of the two written exams will be graded by at least two faculty readers, at least one of whom is a member of the examination committee.
    4. Students receive a grade of "low pass," "pass," "high pass," or "fail," on each of the two exams. If a student receives a grade of "high pass" on both of the exams, the oral examination is waived. Otherwise, the student will, upon passing the two written exams, submit to an oral exam with the committee, to cover both examination areas.
    5. Students who fail either of the written exams will not submit to an oral exam with the committee that semester. The student will be required to re-take the failed written exam(s) the following semester and then submit to an oral examination upon passage of said exams.

6. Should students earn a low pass on any portion of the written exam(s) and then fail to compensate for the written weaknesses during their oral examination, the members of the examination committee will allow the students one week to successfully rewrite the examination answers in question. If the student fails to sufficiently improve their answers, they must retake the exams the following semester.

Professional Studies, (MPS)

MPS Degree Program

Program Admission and Prerequisites

Applicants to the program are evaluated as they apply and may be admitted for the fall, spring or summer sessions. All applicants must meet the following admission requirements:

1. Completion of an undergraduate degree with a grade point average of at least 2.75 on a 4.0 scale from an accredited college or university.
2. An acceptable score on the GRE General Test.
3. Applicants with substantial professional work experience may submit a portfolio in lieu of the GRE. The portfolio is to include: a resume; a 500 to 600 word essay detailing motivation for entering the MPS program and how the program will help the applicant achieve personal and professional goals; and two sealed letters of professional reference. Applicants may also include a detailed description of professional responsibilities, professional achievements, and professional awards/recognitions, if applicable.

Program Requirements

Completion of MPS program core:

PRST 7100 - Prof Envron/Issue/Ethic **

(3) Classical approaches to ethics presented with their application to decision points confronted in various professions, as well as analysis of issues of diversity and moral responsibility in professional practice.

PRST 7200 - Globalization/Profsns **

(3) Analysis of globalization and its effects on the workplace, including the interactions of advancing communications technology, multi-national corporations, and global societies.

PRST 7300 - Research Methods **

(3) The study and application of research methods appropriate to professional studies.

PRST 7998 - Professional Project **

(3) Supervised research that serves as the integrative culmination for the Master of Professional Studies student.

- An oral comprehensive examination

Completion of 21 semester hours of concentration courses (and electives where applicable)

For the Strategic Leadership Concentration

Complete at least one course from each of five subject areas and two additional classes from any of the subject areas:

Leadership Theory:

PRST 7500 - Foundation/Leadership **

(3) Students will study leadership from a historical and contemporary perspective. They will identify, apply, and reflect on aspects of leadership development, including concepts of personal change toward effective leadership in a changing environment. Topics cover historical development of leadership theories, personal assessment and development, values and ethics, motivation, power, followership, group dynamics, diversity in leadership, controversy with civility, change process, and citizenship.

LDPS 7000 - Current Issue/Leadershp

ELPA 7560 - Small Group Leadership **

(3) (HMEC, CSED 6702) This course examines how group behavior affects organizational effectiveness, decision making, conflict resolution, and strategies for efficient group and task management. Restricted to Psychology graduate student or permission of instructor. PREREQUISITE(S): Permission of instructor.

Research/Data Analysis:

PRST 7770 - Comp Based Decsn Model **

(3) Modeling and analyzing managerial problems on spreadsheets. Working knowledge of Excel will be assumed so that we can focus on the modeling aspects. The spreadsheet modeling experience in this course will enhance not only analytical problem solving capabilities but also spreadsheet skills of even an experienced Excel user.

PRST 7600 - Statistical Analysis **

(3) The purpose of this course is to provide students with an introductory survey of the many applications of descriptive and inferential statistics. Grades of S, U, or I will be given.

Organizational Structure and Change:

PRST 7310 - Leadership/Organization **

(3) Organizational leadership is a course designed to inform the individual about the structure and behavior of actors at all levels of the organization.

PRST 7800 - Organizational Change Skills **

(3) This course examines concepts and techniques of organization development (OD) and the leadership skills required for organizational change. Based on behavioral science knowledge and methods, OD interventions facilitate planned organizational change and renewal. May be repeated for maximum of 24 hours credit

Communication:

COMM 7110 - Leadership/Communicatn

(3)

PRST 7700 - Conflict Mgmt/Negotiatn **

(3) Negotiation and Conflict Management presents negotiation theory â€" strategies and styles â€" within an employment context. May be repeated for maximum of 20 credits with change in topic

Strategic Planning and Assessment:

PRST 7105 - Project Planning & Scheduling **

(3) Contemporary methods used in project planning and scheduling; emphasis on critical path method (CPM) with computer application; solution of actual problems stressed.

PRST 7040 - Human Resources Mgmt **

(3) This course emphasizes the development of skills for dealing with selected aspects of human resource management. It aims to enhance the students' ability to apply theoretical concepts and alternative approaches for dealing with common issues concerning the human side of the enterprise. The course is geared to serve the needs of line and staff administrators in supervisory positions.

For the Human Resources Leadership concentration

Complete all four of the Concentration Courses, plus three additional courses as noted below:

Concentration Courses:

PRST 7040 - Human Resources Mgmt **

(3) This course emphasizes the development of skills for dealing with selected aspects of human resource management. It aims to enhance the students' ability to apply theoretical concepts and alternative approaches for dealing with common issues concerning the human side of the enterprise. The course is geared to serve the needs of line and staff administrators in supervisory positions.

PRST 7600 - Statistical Analysis **

(3) The purpose of this course is to provide students with an introductory survey of the many applications of descriptive and inferential statistics. Grades of S, U, or I will be given.

PRST 7910 - Employment & HR Law **

(3) This course provides an overview of legal issues affecting the administration of employment issues, human resource management and leadership. The course focuses on policies and laws that impact human resource decisions in organizations. Prerequisite PRST 7040.

PRST 7920 - Diversity in the Workplace **

(3) Examines processes and techniques to conduct an organizational analysis and identify training needs in an organizational environment, with emphasis on how language, gender, race, tradition, education, economic structure, and organizational philosphy interact.

Choose one:

PRST 7500 - Foundation/Leadership **

(3) Students will study leadership from a historical and contemporary perspective. They will identify, apply, and reflect on aspects of leadership development, including concepts of personal change toward effective leadership in a changing environment. Topics cover historical development of leadership theories, personal assessment and development, values and ethics, motivation, power, followership, group dynamics, diversity in leadership, controversy with civility, change process, and citizenship.

PRST 7310 - Leadership/Organization **

(3) Organizational leadership is a course designed to inform the individual about the structure and behavior of actors at all levels of the organization.

Choose two:

PRST 7700 - Conflict Mgmt/Negotiatn **

(3) Negotiation and Conflict Management presents negotiation theory â€" strategies and styles â€" within an employment context. May be repeated for maximum of 20 credits with change in topic

PRST 7930 - Compensation and Benefits **

(3) The focus of this course is on management tools designed to ensure that the right people get the right pay for achieving organizational objectives in the right way.

PRST 7940 - Recruitment,Selection,Retentio **

(3) 3

PRST 7400 - Instr Dsgn Train/Develpmt **

(3) Organizational leadership is a course designed to inform the individual about the structure and behavior of actors at all levels of the organization.

For the Training and Development Concentration

Complete five (5) of the concentration courses and two of the specialization courses as noted below:

Concentration Courses (five courses):

PRST 7410 - Evaluation of Learning **

(3) Evaluation of Learning, covers the concepts and skills used in evaluation models, theories, and best practices.

PRST 7420 - Org Needs Assessment **

(3) The purpose of this course is to provide an overview of the processes and techniques used to conduct an organizational analysis and then identify training needs in private and public organizations. Grades of A-F will be given.

PRST 7400 - Instr Dsgn Train/Develpmt **

(3) Organizational leadership is a course designed to inform the individual about the structure and behavior of actors at all levels of the organization.

PRST 7770 - Comp Based Decsn Model **

(3) Modeling and analyzing managerial problems on spreadsheets. Working knowledge of Excel will be assumed so that we can focus on the modeling aspects. The spreadsheet modeling experience in this course will enhance not only analytical problem solving capabilities but also spreadsheet skills of even an experienced Excel user.

PRST 7600 - Statistical Analysis **

(3) The purpose of this course is to provide students with an introductory survey of the many applications of descriptive and inferential statistics. Grades of S, U, or I will be given.

Specialization Courses (two courses required):

PRST 7105 - Project Planning & Scheduling **

(3) Contemporary methods used in project planning and scheduling; emphasis on critical path method (CPM) with computer application; solution of actual problems stressed.

PRST 7440 - Engage the Adult Online Learnr **

(3) This course specifically addresses web-based learning environments with a particular focus on student engagement and interaction. Developing alternative means of training employees has become of greater interest to employers recently, and e-training can give employers a mechanism for cutting costs, an alternative method for delivering training at any time and any place, a means for remediation of employee training, and an opportunity for employees to develop learning communities. Grades of S, U, or I will be given.

PRST 7450 - Computer-Based Instruction **

(3) Students will study leadership from a historical and contemporary perspective. They will identify, apply, and reflect on aspects of leadership development, including concepts of personal change toward effective leadership in a changing environment. Topics cover historical development of leadership theories, personal assessment and development, values

and ethics, motivation, power, followership, group dynamics, diversity in leadership, controversy with civility, change process, and citizenship. Grades of S, U, or I will be given.

PRST 7430 - Adv Instr Desgn/Train&Devel

(3) This course builds on basic instructional design theory and enhances it with considerations necessary to build and deliver instructionally sound training materials across multiple media, focusing on electronic media delivery systems. This course will include an in-depth look at media selection strategies, interface design considerations, and instructional strategies for developing online training.

PRST 7040 - Human Resources Mgmt **

(3) This course emphasizes the development of skills for dealing with selected aspects of human resource management. It aims to enhance the students' ability to apply theoretical concepts and alternative approaches for dealing with common issues concerning the human side of the enterprise. The course is geared to serve the needs of line and staff administrators in supervisory positions.

PRST 7910 - Employment & HR Law **

(3) This course provides an overview of legal issues affecting the administration of employment issues, human resource management and leadership. The course focuses on policies and laws that impact human resource decisions in organizations. Prerequisite PRST 7040.

PRST 7920 - Diversity in the Workplace **

(3) Examines processes and techniques to conduct an organizational analysis and identify training needs in an organizational environment, with emphasis on how language, gender, race, tradition, education, economic structure, and organizational philosphy interact.

Successful completion of

PRST 7998 - Professional Project **

(3) Supervised research that serves as the integrative culmination for the Master of Professional Studies student.

- followed by an oral comprehensive examination.

Public Administration, (MPA)

Master of Public Administration (MPA)

Master of Public Administration (MPA) Degree Program has concentrations in nonprofit administration and public policy/management.

Program Admission

Applicants must satisfy admission requirements of the Graduate School and receive favorable endorsement from the public administration faculty. Admission will be based on:

1. Applicable test scores (Graduate Record Examination [GRE], Graduate Management Aptitude Test [GMAT], or Miller Analogy Test [MAT]);
2. Undergraduate grade point average; Applicants for the MPA degree may be eligible for a waiver of the standardized entrance exam (GRE, GMAT or MAT). To learn more about the waiver policy please go to: www.memphis.edu/padm/mpa/standardized-waiver.
3. Previous education and/or experience demonstrated via a résumé and two letters of reference;
4. Ability to articulate career goals and education objectives via a personal statement.

Inquiries can be directed to mpa_admissions@memphis.edu

Program Requirements

1. Students are required to complete a minimum of thirty-nine (39) semester hours. Twenty-one (21) hours are taken in the core curriculum; fifteen (15) hours are required in each concentration, plus a three (3) hour internship. An individual course plan is designed for each student and approved by the Coordinator of Graduate Studies. The two concentrations allow students to extend the basic knowledge gained in the core curriculum to more focused public service fields, including nonprofit administration and public policy and management.

The core curriculum is as follows:

PADM 7661 - Contemp Persp PA

(3) In-depth examination of contemporary theories of public administration; emphasis on study of political, administrative, and legal context of public administration to further understanding of trends that affect present-day performance of government and nonprofit agencies.

PADM 7663 - Issue Public Mgmt Polcy

(3) Special issues of current interest that relate to planning, implementation, and evaluation of programs in public and nonprofit agencies; emphasis on policy analysis techniques.

PADM 7601 - Research Methods

(3) Issues and techniques in data collection for design and implementation of independent research projects; logic of conducting research in public administration, measurement, and sampling; introduction to program evaluation and specific quantitative decision-making techniques.

PADM 7602 - Public Bdgt Adm/Fin **

(3) Detailed study of administrative, technical and political arenas of of financial policy, the budgetary process, and fiscal controls for public and nonprofit organizations.

PADM 7605 - Human Resources Admin **

(3) Policies, methods, and techniques utilized in public and health organizations; special attention is given to problems reflecting contemporary demands upon human resource systems, capacity to diagnose problems, select the most effective means of addressing them, and plan appropriate courses of action developed through case studies.

PADM 7607 - Public Mgmt Leadership

(3) Theoretical and applied aspects of public and nonprofit leadership addressed in a holistic approach; focus on the most current literature and public debate; leadership examined from various perspectives reflected across the curriculum: administrative theory, public law, finance, ethics, research methods, and public policy.

PADM 7612 - Program/Policy Evaltn

(3) Models, theories, and techniques of program and policy evaluation in public administration; evaluation research design, data collection and analysis, dissemination of results, and possible applications of evaluations to policy-making and administration; organizational and political contexts of evaluation.

or

PADM 7213 - Sem Publ Pol Analysis

(3) Empirical and normative analysis of public policy at the local, state, national, and international levels, emphasizing the theories, literature, and methodologies current to this field.

Other Requirements

1. The capstone project must be successfully completed during the calendar year in which the student expects to graduate. Students must also successfully complete PADM 7607 - Public Mgmt Leadership, during the calendar year in which the student expects to graduate.

Concentration Requirements

1. Based on their course plan, students must complete five graduate courses (15 hours) specific to their academic goals and the guidelines of the concentration.
2. Public Service Field Experience: Students with no administrative experience must enroll in PADM 7610 - Internship Public Admin (3 Hours). The internship placement should relate to the student's concentration and career goals. Students must complete a minimum of 18 semester hours prior to enrollment in PADM 7610.

Non-Degree-Seeking Students

If a student has taken graduate courses at The University of Memphis as a non-degree-seeking student, the student may apply a maximum of 9 credit hours toward his/her degree requirements. The grade in each course applied must be at least a "3.00." The Coordinator of Graduate Studies must approve all course work taken as a non-degree-seeking student.

Romance Languages, (MA)

MA Degree Program

A student entering the program will be assigned a major advisor, usually the respective graduate coordinator for French or Spanish. This advisor is to be consulted in all matters concerning the student's program of study. It is the student's responsibility to familiarize himself/herself with the detailed online description of the program concerning requirements, policies, and procedures including--but not limited to--the reading list, coursework requirements, course descriptions, comprehensive examination procedures, reading knowledge of a second language, independent studies, language proficiency, grade point average requirements, time limitation, academic misconduct policies, and other issues. It is also the student's responsibility to consult with his/her respective graduate coordinator and/or the chair for further clarification.

Teaching Assistantships carry a stipend and cover the cost of tuition for the entire program. The Department also offers Research Assistantships which carry a stipend and half-tuition scholarship per academic semester. Both awards are offered on a competitive basis. Part-time students or students who have a full-time job or any other activities that may interfere with their academic responsibilities **are not eligible**. Students interested in obtaining a teaching or research assistantship must be officially admitted into the MA program in Romance Languages first and should submit **a letter of intent**, addressed to the Chairman, Department of Foreign Languages and Literatures with a copy to the Coordinator of Graduate Studies. Applicants are encouraged to visit the department web site at http://www.memphis.edu/fl/programs/ for a detailed description of the program and information about the stipend amount for teaching and research assistantships.

Program Prerequisites

1. The applicant must provide an official transcript showing that a bachelor's degree was awarded by an accredited college or university. Official transcripts should be sent to the Office of Graduate Admissions.
2. A minimum of a 3.0 quality point average on a scale of 4.0 is highly desirable. Students with less than a 3.0 quality point average may be admitted with the approval of the Department Chair and the Coordinator of Graduate Studies.
3. A minimum of 24 upper-division semester hours or the equivalent in French or Spanish. Examples of an equivalent preparation in French or Spanish include having native or near-native proficiency, university studies in a French/Spanish-speaking country, etc.
4. A reasonable proficiency in the language of concentration, to be determined by the Department prior to admission. An oral interview in French or Spanish is required. The applicant must contact the respective coordinator in French or Spanish early in the admission process to make arrangements for the interview.
5. A writing sample in French or Spanish depending on the concentration chosen must be submitted to the respective coordinator of French or Spanish. This documentation is intended to demonstrate the student's adequate command of writing skills in his/her field of concentration.
6. A letter of intent explaining the applicant's motivation and objectives in pursuing a graduate degree in French or Spanish.
7. Two letters of recommendation from professors who have taught the applicant.
8. A 3.0 GPA for upper-division courses in the field. A GPA below 3.0 requires the approval of the Department Chair and the Coordinator of Graduate Studies.
9. International students, i.e. applicants whose highest degree is from a foreign university, must have their credentials evaluated. The university will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site http://www.naces.org. The **course-by course report is required**. International students must therefore:
    1. score a minimum of **94** on the web-based TOEFL and a minimum of 26 on the speaking portion of the same exam.
    2. convert their educational credentials–grades and diploma—into their US equivalents with an appropriate agency listed on the National Association of Credential Evaluation services;
    3. Ask the same agency to submit the official transcript and diploma along with their respective conversion and translation to Graduate Admissions, University of Memphis.

Program Requirements

1. A total of thirty-three (33) semester hours.
2. The possibility of collateral hours — i. e. coursework in another discipline or department which is related to the field of concentration—are handled differently in French and Spanish. Students interested in taking collateral hours will need to consult with the respective coordinator in French and Spanish to see if these hours are available in their concentration and if they are eligible.At least 23 hours must be taken in 7000-level courses (eight [8] courses in all).

3. Satisfactory completion of minimum standards for eligibility to take the comprehensive exams. Students in the program must seek advice from the respective coordinator in French and Spanish to determine that the coursework they carry fulfills these minimum standards.
4. A reading knowledge of a foreign language other than that of the concentration. This may be demonstrated in the following ways:
    1. achieving a grade of B ("3.0") or better in a fourth-semester language course (e.g. FREN/GERM/ITAL/SPAN 2020),
    2. achieving a grade of B ("3.0") or better in a graduate reading course (FREN 7000 and GERM 7000 are the only two courses available for this option. They are usually offered in the summer)
    3. achieving a grade of B ("3.0") or better in upper-division courses at the 3000- or 4000-levels (e.g. FREN 3302/GERM 3790/ITAL 3311/PORT 3301/SPAN 3303),
    4. achieving a grade of B ("3.0") or better in graduate courses taught in the target language at the 6000- or 7000 levels (e.g. FREN 6302/PORT 6024/SPAN 6307,
    5. students who provide evidence of knowledge of a foreign language other than that of the concentration equivalent to a fourth-semester language course or superior may arrange with the section head of the specific language for a written test to prove competency.
5. A comprehensive written and oral examination after completion of 33 hours and fulfillment of the reading knowledge requirement. These examinations will be conducted in the language of the concentration. For a full description of the comprehensive examination procedures, please visit the department website at http://www.memphis.edu/fl

School Psychology, (MA)

MA and EdS Degree

This program is offered collaboratively with the College of Education and coursework from both areas is required. Students entering the program must complete both the MA and the EdS degrees, including an internship of one school year, in order to obtain an endorsement for licensure. The EdS degree is an advanced sequence in the specialty and is to be pursued only by persons who have completed the MA degree or comparable degree with a concentration in school psychology, or who already hold school psychology credentials. The program is accredited by the Council for the Accreditation of Educator Preparation (CAEP), and holds full approval from the National Association of School Psychologists (NASP)/CAEP. It is also formally approved by the Tennessee State Department of Education and leads to that agency's license in school psychology.

The overall goal of the MA/EdS program is that students will successfully complete the content domain-related requirements of the program, obtain credentialing for school-based practice from the Tennessee State Board of Education or comparable authority in other states, and become Nationally Certified School Psychologists (NCSP).

Program objectives are: (1) understanding of the nature of educational settings and ability to work cooperatively and effectively with parents, school personnel, and other professionals; (2) broad expertise in assessment and intervention at the individual, group, and system level; and (3) development of research and evaluation skills, including data analysis and oral and written communication of research.

Program Admission and Prerequisites

Enrollment in the program is limited. All application information must have been received by June 15 for an applicant to be considered for admission to the MA and EdS program in School Psychology. Applications will be reviewed as they are completed and applicants are encouraged to complete the application well in advance of the deadline. The following items are required for consideration for admission:

1. An undergraduate overall grade point average of 3.00/4.00. Applicants with an undergraduate GPA below this minimal level are admitted only if other supporting data are exceptional.

2. GRE scores (Verbal, Quantitative, and Written Analytical).
3. Letters of recommendation from at least three persons (professional educators, psychologists, and/or employers) familiar with the applicant's academic background, aptitude for graduate work in school psychology, and interest in working with school-age children in school settings.
4. Undergraduate preparation in Psychology and/or Education. It is strongly recommended that applicants have at least 18 undergraduate hours in Psychology and/or Education, with preparation in the psychology of learning, psychological appraisal/measurement, human growth and development, and foundations of education.
5. The program is pursued on a full-time basis and students enroll for 12 hours each semester. Enrolling for fewer hours is done with the permission of the program director.

Program Requirements—MA Degree (30 hours)

Psychology courses (22 hours):

PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 7802 - Child Disability/Family

(3) An overview of childhood disability and family considerations applied to psychological services in school and agency settings; agency and family visitations provide experiential learning in addition to theory and research. PREREQUISITE(S): Course on characteristics of exceptional children or permission of instructor.

PSYC 7803 - Psych Ed Assessmnt I

(3) Critical analysis of intellectual assessment including skill development in administration, scoring, and interpretation of major individual tests of intelligence; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit.

PSYC 7804 - Psych Ed Assessmnt II

(3) Critical analysis of personality assessment including skill development in administration, scoring, and interpretation of major personality assessment techniques; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit. PREREQUISITE(S): School psychology students must have a grade of 3.0 or higher in PSYC 7803.

PSYC 7805 - Psych Consultation

(3) This course teaches the theory and skills needed for providing consultation to students and families in educational and clinical settings; focusing on an ecological, problem-centered model, content will include factors influencing the consultation process at the individual, group, and system level. Restricted by Program or by Permit. PREREQUISITE(S): School psychology students must have a grade of 3.0 or higher in PSYC 7803 and PSYC 7804.

PSYC 7806 - Sch Psych Interventions

(3) Comprehensive review of psychosocial interventions for use with children, adolescents, and their families and educators; counseling theories; crisis response; dual emphasis on empirically-validated interventions and on the practical application of skills in educational and clinical settings. Restricted by Program or by Permit. PREREQUISITE(S): School Psychology students must have a grade of 3.0 or higher in PSYC 7803 and PSYC 7804.

Education courses (15 hours):

EDPR 7151 - Individual Differences **

(3) (EDPS 7151-8151) Theoretical foundations of instructional models designed to optimize student learning; topics include theories of intelligence, theories of learning, learning styles, gender differences, cultural differences, tracking and ability grouping, assessment, response to intervention, and the use of technology. All of these topics are explored as they relate to individual differences in learning.

EDPR 7511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor.

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

LEAD 6000 - Educ/Schl/Am Society

(3) (EDFD 7003-8003) Interdisciplinary study of educational policies and practices in American society; role and function of the school and the teacher; analysis of major problems and issues facing contemporary public education. Five hours of school visitation required. (Fulfills foundations requirement for graduate students seeking teacher licensure.)

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

Written and oral examinations

Participation in service experiences

Participation in service experiences in the Psychological Services Center or other agency placements for training purposes.

Secondary Licensure, (MAT)

Master of Arts in Teaching (MAT) Degree Program

MAT Program Admission

Applicants must complete admissions requirements to be admitted. **All admissions requirements must be met prior to being admitted into the MAT program.** MAT admission requirements are designed to be both competitive and selective, to be knowledge and performance-based, to be clear and consistent, to maintain diversity, and to meet or exceed undergraduate requirements and minimum state requirements.

To be admitted to the MAT program a candidate must:

1. Take and pass the Core Academics Skills for Educations (CORE) Writing. If the GRE has been taken, the student may have the CORE waived if the scores are appropriate (verbal 143, quantitative 138, writing 3.5) and are less than 5 years old.
2. Take and pass the Praxis II Content Knowledge Exam required for the teacher candidate's licensure area. Please refer to http://www.tn.gov/education/section/licensing to verify what exam should be taken.

   Submit an electronic Graduate Admissions Application and include the following:
   1. An official transcript reflecting an earned bachelor's degree with a 3.0 or higher grade point average from an accredited institution. Applicants with a successful professional career may appeal this grade point average requirement. Documentation of a "successful professional career" is necessary and may include, but is not limited to, items such as an administrators' letter of recommendation, teacher evaluations, lesson plans, teaching video, etc.
   2. Passing scores on the CORE Academic Skills for Educators: Writing (162)
   3. Passing scores on the Praxis II Content Knowledge Exam for the teacher candidate's licensure area they plan to teach.
3. Submit the ICL department MAT application (http://www.memphis.edu/icl/docs/mat-application.doc) to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152) along with copies of the CORE and Praxis II Content Knowledge scores.

Teacher Education Program (TEP) Admission

1. Students who plan to pursue a graduate program of studies leading to teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). Students are encouraged to apply for admission into TEP as soon as they enroll in any College of Education courses.
2. TEP admissions deadlines are September 15 for fall and January 31 for spring.
3. Requirements for provisional admission into TEP include:
   1. A grade point average of 3.25 at the graduate level and undergraduate grade point average of 3.0 or higher;
   2. Pass all sections of the CORE Academic Skills for Educators;
   3. Pass the Praxis II Content Knowledge Exam required by the State of Tennessee for the licensure area being pursued.
   4. TBI Background Check

5. Completion of teacher aptitude survey

4. Requirements for full admission to TEP must be completed prior to the Clinical Teaching Semester and/or the semester candidates enroll in ICL 7993. They include:
    1. 3.25 graduate grade point average
    2. Passed Praxis II licensure exams

Passing scores on all required Praxis II Licensure Exams for Licensure and Graduation: Candidates participating in the Clinical Teaching Semester and/or ICL 7993 must submit a successful Teacher Performance Assessment (edTPA). Candidates who seek a Practitioner License must have a composite of 3.0 on the Teacher Evaluation used in their employing district.

Students must be provisionally admitted to the Teacher Education Program (TEP) before completing all Level I courses and starting Level II courses. (Level I Professional Core courses provide requisite foundations for teaching and should be completed before taking Level II Professional Specialization courses that focus on specialized strategies for teaching and learning in educational environments).

Students who do not apply to TEP or fail to maintain criteria during the program will not be allowed to continue in the program.

NOTE: MAT admission, TEP admission, and Graduate School admission are separate procedures.

Program Requirements

Students seeking licensure and the MAT degree must take a minimum of 30-46 graduate semester hours, depending on program and licensure area. Minimum hours may increase depending on licensure requirements. Students who are employed by a school district on a Practitioner License may have the Level III (clinical teaching semester) waived if they provide the necessary documentation to verify one year of successful teaching experience in their area of licensure with a composite Teacher Evaluation Score of 3.0 or higher. Students in this category should contact the Teacher Education Office in 202 Ball Hall for specific requirements. Please note that all initial licensure candidates, including candidates who on a Job-Embedded Practitioners License, must take ICL 7993, either along with clinical teaching semester or the last semester before applying for license if working on a Practitioner License. This course serves as the culminating experience and will require successful completion of the Teacher Performance Assessment (edTPA) to be able to be recommended for licensure.

Secondary Licensure Program Requirements

Clinical teaching semester students seeking Secondary Licensure and the MAT degree must complete the following requirements:

Secondary Level I Licensure Requirements:

IDT 7061 - Instructional Design & EdTech **

(3) Computers and technology in the instructional process, including problem solving using computer tools; technological applications for the classroom; uses for technology in different content areas.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various

programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

EDPR 7112 - Adol Psyc Appld Educ **

(3) (EDPS 7112-8112) Advanced study of theories and research on the physical, psychological, social, cognitive, and cultural aspects of adolescent development; implications for education, treatment, secondary school personnel, and others who live and work with adolescents.

or

EDPR 7117 - Life-Span Human Dev **

(3) Theories and research on the physical, psychological/emotional, social, cognitive, and cultural aspects of human development across the life span.

or

ASTL 7703 - Knowledge Of Learner **

(3) (5703) Human development from conception through adolescence applied to school settings; aspects of human development impacted by human interaction and nurturing and those unaffected by environmental input; includes gross and fine motor development, temperament, visual and auditory perception, family characteristics, genetic inheritance, attention, cognitive tempo, play, and language development.

ICL 7030 - Assessment & Evaluation **

(3) Test construction and methods of evaluation; emphasis on teacher made tests, standardized tests, test administration, test data management, interpretation and application of test data to instructional decisions, and reporting test results to students and parents.

or

TELC 7002 - Assessment/Evaluation **

(3)

Secondary Level II and III Licensure Requirements:

LITL 7545 - Tchg Lit Subject Areas **

(2) Methods, materials, and organizational patterns by which literacy skills are developed and improved through integration with teaching strategies in subject areas. Additional field hours required. PREREQUISITE(S): TEP admission

3 hours of appropriate methods courses

ICL 7174 - Spec Mthds For Lang Ed **

(3) (Same as LING 7174). Examines theoretical and practical issues relating to teaching of foreign languages K-12 through lectures, reading of current literature, class discussion, guest speakers, etc.; explores role of context in

comprehension and learning, listening, reading, oral proficiency, writing, testing, culture, and curriculum. Field Experience: 8 hours. PREREQUISITE(S): Admission to TEP

ICL 7303 - Eng/Lan Comp Secnd Schl **

(3) Emphasis on developing and implementing a sequential curriculum in secondary school language and composition. Field Experience: 8 hours. PREREQUISITE(S): Admission to TEP

ICL 7502 - Tchg Mathematics SCED **

(3) Consideration of principles and techniques of teaching mathematics in secondary schools including study and evaluation of materials of instruction. Field experience: 8 hours. PREREQUISITE(S): Admission to TEP

ICL 7602 - Tchg Sci Scndry Schl **

(3) An examination and analysis of modern science teaching strategies in the secondary school; emphasis on information processing and classroom learning strategies. Field experience: 8 hours. PREREQUISITE(S): Admission to TEP

ICL 7652 - Tchng Soc Std Mid/Sec **

(3) Consideration of principles and techniques for teaching secondary social studies. Additional field hours required. PREREQUISITE(S): Admission to TEP

BUED 7655 - Mat & Meth In Voc Educ

(3) Instructional media and aids relating to vocational office education with emphasis on recent developments and research; particular emphasis on individual instruction techniques for the block-time approach to office education programs.

ICL 7808 - Clinical Teaching Semester

(3-9) Full-time clinical placement appropriate to candidate's area of licensure providing opportunities to demonstrate professional competencies associated with successful teaching and student achievement. Capstone performance assessment required for successful completion. May be repeated for maximum of 12 hours PREREQUISITE(S): Admission to TEP, and passing all required licensure exams. COREQUISITE(S): ICL 7993

and

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Students are required to complete

Students are required to complete a number of clinical/field experiences during the day in secondary school settings prior to clinical teaching semester. These field experiences will be incorporated into courses required for licensure.

MAT Degree Requirements

MAT Degree Requirements in addition to the above: EDPR 7521 and ICL 7993 (Professional Seminar & Teacher Performance Assessment-3 Hours). Must be taken prior to clinical teaching semester and ICL 7993.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Students who wish to become licensed

Students who wish to become licensed as a teacher of foreign languages that do not require a PRAXIS content knowledge test must pass the ACTFL Oral Proficiency Examination in addition to the requirements for licensure that other students must meet.

Students seeking secondary licensure must

Students seeking secondary licensure must select one of the following endorsement areas: art education, biology, chemistry, earth science, English, English as a Second Language, French, geography, German, government, history, Latin, library information specialist, marketing, math, physics, political science, psychology, Russian, sociology, Spanish, and other foreign languages.

Other Requirements

1. All students seeking teacher licensure must successfully pass clinical teaching semester or must document successful completion of professional experience in lieu of clinical teaching semester.
    1. Students who are employed by a school district on a Practitioner License issued by the State of Tennessee may have the Level III clinical teaching semester waived if they provide the necessary documentation to verify one year of successful teaching experience and composite score of 3 or higher on the Teacher Evaluation used by their employing district. They must also be successful with the Teacher Performance Assessment (edTPA) to be recommended for licensure. Students in this category should contact the Licensure Coordinator for specific requirements.
    2. Students must enroll in the appropriate clinical teaching semester course during clinical teaching semester.
    3. Applications for clinical teaching semester must be filed one semester before clinical teaching semester.
    4. Application for documenting successful completion of professional experience in lieu of clinical teaching semester must be filed at the beginning of the first month of the semester in which the candidate plans to complete the approved academic program leading to final licensure. The Teacher Performance Assessment (edTPA) must be completed during the semester the candidate on a Practitioner License plans to apply for their Professional License.
2. Licensure in Tennessee requires acceptable scores on specified Praxis II Tests of pedagogy and teaching content knowledge.

3. Validation of methods courses is not permitted.

Retention

To remain in the Master of Arts in Teaching (MAT) and the Teacher Education Program (TEP) the student must maintain a graduate grade point average of 3.25. Failure to maintain a 3.25 GPA will result in termination of a candidate's TEP status and will result in academic probation in the MAT program.

Social Work - Advanced Practice with Adults and Families Concentration, (MSW)

MSW Degree Program

Program Admission and Prerequisites

A faculty committee of no less than three members will determine admission to the Master of Social Work program. Admission will require a majority vote in favor of the candidate from members of the committee. The following is necessary for application:

1. A baccalaureate degree from an accredited college or university.
2. Generally a grade point average of at least 3.0 or better (A=4.0) for the final 60 semester hours or 90 quarter hours of undergraduate study is necessary for consideration.
3. Submission of GRE test scores or the Praxis – Core Academic Skills for Educators Writing Exam; admission is competitive.
4. Experience in a Social Work related field as a paid employee, volunteer or researcher is desirable.
5. A Professional Goal Statement (see the Department's website for specific instructions).
6. Provide a professional resume.
7. Provide three professional references.
    1. At least one must be from a former faculty member.
    2. Two of the three must be from sources familiar with your volunteer, internship, or paid work experience

The MSW Program accepts students for Fall and Spring admissions. The deadline for fall admissions is March 1st for scholarships/assistantships considerations and April 15th for regular admission. The deadline for Spring admissions is October 15th. Applications received after April 15th and October 15th will be considered if space is available.

Program Requirements

Students are required to complete a minimum of sixty (60) semester hours; thirty (30) hours are taken in the foundation curriculum and thirty (30) hours are required in the concentration curriculum.

Thesis Option

- 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours), 24 semester hours of concentration-level coursework (18 semester hours) and field (6 semester hours), and a minimum of 6 semester hours of SWRK 7996 - Thesis.
- All courses in the 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours) are required and must be taken with a passing grade before concentration-level coursework, elective semester hours, independent study semester hours, or thesis hours may be undertaken.

- 12 hours of concentration-level coursework and 12 hours of concentration-level field and field seminar are required courses.
- The 6 semester hours of SWRK 7996 replace 2 electives and must be taken in two consecutive semesters.
- A passing score on the capstone Comprehensive Examination. The comprehensive examination for the Master of Social Work program consists of three components: 1) an evaluation of the student's ability to meet MSW program competencies in field placement; 2) a student self-assessment of her/his ability to meet all MSW program competencies; and 3) completion of a social work licensure practice examination with a score of 75 or higher.

Non-Thesis Option

- 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours), 18 semester hours of concentration-level coursework (18 semester hours) and field (6 semester hours) and field seminar (6 semester hours).
- All courses in the 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours) are required and must be taken with a passing grade before concentration-level coursework, elective semester hours, or independent study semester hours may be undertaken.
- 12 hours of concentration-level coursework, 6 hours of concentration-level field and 6 hours of concentration-level field seminar are required courses.
- 6 semester hours of electives or independent study must be taken with the non-thesis option.
- A passing score on the capstone Comprehensive Examination. The comprehensive examination for the Master of Social Work program consists of three components: 1) an evaluation of the student's ability to meet MSW program competencies in field placement; 2) a student self-assessment of her/his ability to meet all MSW program competencies; and 3) completion of a social work licensure practice examination with a score of 75 or higher.

The foundation curriculum

The foundation curriculum provides evidence-based knowledge, behaviors and skills for social work practice with individuals, families, groups, organizations and communities. The concentration curriculum allows students to extend the basic knowledge gained in the foundation to a more focused advanced evidence-based practice with families and children or advanced evidence-based practice with adults and families. . Both the foundation and concentration portions of the program emphasize evidence-based practice and critical thinking skills.

To accommodate a wide range of student needs

To accommodate a wide range of student needs, the MSW program of study offers options for full-time (4 semesters of study; 60 credit hours) and extended study (6 to 8 semesters of study; 60 credit hours). Regardless of progression through the program, the educational components of each sequencing option are the same. The concentration curriculum is generally full-time (2 semesters), although students may choose to extend (3 to 5 semesters). All MSW students follow the same learning expectations for field education, take the same comprehensive exam at the conclusion of the program, and meet the same requirements for graduation. Courses are offered in the traditional classroom settings, on-line and in a hybrid format (combination of traditional classroom and on-line).

Students must follow a structured program of study that includes all of the following foundation courses (30 credit hours) (unless advanced standing):

SWRK 7001 - Skills Prof Pract SWRK

(3) The course covers the profession's unique mission, values, roles and typically practice used in the conduct of social work practice. It further examines theories of practice and generalist roles and skills. The course is designed to prepare students for their initial field experience in Field Placement I. The course introduces students to the Practice Wheel as a primary model for serving children and families.

SWRK 7002 - Individuals and Families

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with individuals and families. Foundation knowledge and skills are developed in the areas of theory, therapeutic alliance, risk assessment, case formulation, ethical decision-making, critical thinking and evidence-based practice. Particular emphasis is placed on social work practice with culturally diverse, vulnerable and high-risk populations.

SWRK 7003 - Groups

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with groups. The course emphasizes mezzo practice skills/ roles, evidence-based theories, problem-solving processes, group dynamics, phases of group development, needed for group work with organizations and community groups. Issues inherent to diversity, at-risk populations and social justice are integrated.

SWRK 7005 - Assessmnt,Diag,Psychopath

(3) A required concentration course designed to provide students with current information about the assessment and diagnosis of mental disorders utilizing the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) classification system. The course includes etiology, prevention, assessment and treatment approaches for a number of commonly diagnosed mental health disorders. Students will identify a range of risk and protective factors effecting individuals with a mental illness and compare/contrast theories and interventions. PREREQUISITE(S): 3.0 credit hours; SWRK 7021, SWRK 7022, SWRK 7002

SWRK 7021 - SW Across the Lifespan

(3) Course provides a multidimensional understanding of person and environment relationships. An ecological/ systems framework is paired with a developmental approach to provide an interactional understanding of human behavior. The course examines life span development from conception through older adulthood. Issues of human diversity (i.e. race, ethnicity, class, gender, sexual orientation) will be highlighted.

SWRK 7022 - Organizations and Communities

(3) A required foundation course designed to prepare students to apply evidence based interventions to social work practice with organizations and communities. The course emphasizes macro practice skills/ roles. The course stresses an eco-systems perspective and looks at social system malfunctions and inequities. The nature and dynamics of social service networks and social service network eco-systems perspective.

SWRK 7025 - Scientific Methods

(3) A required foundation course designed to teach research methods and the elements of evidence based practice. The course focuses on social work practice-focused quantitative and qualitative research knowledge and skills including critical evaluation of empirical literature, basic research methodology including construct operationalization, study

design, selection, development, implementation, measurement, specific instruments, data management and data analysis using statistical software.

SWRK 7030 - Social Welfare Policy/Services

(3) Examines local, state, national and international policies affecting social work practice; exploring the historical process leading to current welfare policy. Using rational and non-rational theoretical perspectives, it presents policy and service domains and the values and philosophies underlying welfare provision. Students explore NASW policy positions, social welfare policy in other countries and comparative policy.

SWRK 7051 - Field Placement I

(3) This course provides opportunities for students to integrate what they are learning in the classroom with practical experience in an agency that provides social work services. The first course prepares students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and increase their self-understanding.

SWRK 7052 - Field Placement II

(3) The first year of field placement is intended to prepare students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and ethical framework of the profession of social work, and to increase their self-understanding. Field Placement II builds on the learning foundation that was established in Field Placement I.

Upon successful completion of at least 8 of the 10 foundation courses

Upon successful completion of at least 8 of the 10 foundation courses students move to the concentration curriculum, which includes 30 credit hours in either the Advanced Practice with Children, Youth, and Families concentration or the Advanced Practice with Adults and Families concentration.

Advanced Practice with Adults and Families

SWRK 7018 - Adv. Individual Adults

(3) The course covers advanced direct practice with adults. Treatment techniques include cognitive behavioral therapy, motivational interviewing, and other evidence based practices.

SWRK 7019 - Adv. Family Adults

(3) The course covers prevention and intervention approaches with families at an advanced level. Topics include integrative and holistic models of care across a range of settings in adult mental health, substance abuse, disabilities, chronic conditions, long term care, violence, and criminal justice.

SWRK 7033 - Adv. Community Adults

(3) (7460) The course covers advanced community practice with adults. Students learn policies and administrative practices to serve adults and older adults, explore policy and program implementation programs, learn administration and budgeting basics, understand community practice models, and become prepared to assume leadership positions in social service agencies and organizations.

SWRK 7026 - Evaluative Research

(3) A required concentration course designed to teach students hard skills in ethical program evaluation; statistical analysis techniques; and research findings dissemination and application from the micro to the macro levels and throughout diverse areas of practice. Must be repeated for a minimum of 12 hours credit (4 semesters).

SWRK 7053 - Field Placement III

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement III builds on the learning foundation that was established in Field Placement I and II.

SWRK 7054 - Field Placement IV

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement IV builds on the learning foundation that was established in Field Placement I, II, and III.

SWRK 7055 - Integrative Field Seminar I

(3) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

SWRK 7056 - Integrative Field Seminar II

(3) (6501) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

- Elective (3)
- Elective (3)

Retention Requirements

1. Students in the MSW program must comply with all retention standards of the Graduate School at the University of Memphis.
2. All students are required to maintain a cumulative GPA of at least 3.00. Should the student's cumulative GPA fall below that mark, a period of one semester will be allowed to correct the deficiency. At the discretion of the chair, the coordinator of graduate studies in the student's college, and the Assistant Vice Provost for Graduate Studies, this period may be extended one additional semester. Students failing to improve their GPA to an acceptable level in that time will be dismissed from the program.
3. No more than 6 hours of "C-," "C" or "C+" will be applied toward meeting degree requirements. No grade of a D+ or lower will count toward the degree.
4. All degree requirements for the Master of Social Work must be completed within 6 years of initial enrollment.

Program Requirements

All students seeking the Master of Social Work degree must:

1. Successfully complete all courses required in the program of study
2. Abide by the honor's statement which includes a commitment to engage in professional conduct appropriate for a Social Worker at all times in accordance with the Code of Ethics of the National Association of Social Workers (NASW).
3. Adhere to all graduate and University requirements as stated in The University of Memphis Graduate Catalog (available from the Graduate School).
4. Satisfactorily pass a written comprehensive examination in the final semester of study.

Social Work - Advanced Practice with Children, Youth, and Families Concentration, (MSW)

MSW Degree Program

Program Admission and Prerequisites

A faculty committee of no less than three members will determine admission to the Master of Social Work program. Admission will require a majority vote in favor of the candidate from members of the committee. The following is necessary for application:

1. A baccalaureate degree from an accredited college or university.
2. Generally a grade point average of at least 3.0 or better (A=4.0) for the final 60 semester hours or 90 quarter hours of undergraduate study is necessary for consideration.
3. Submission of GRE test scores or the Praxis – Core Academic Skills for Educators Writing Exam; admission is competitive.
4. Experience in a Social Work related field as a paid employee, volunteer or researcher is desirable.
5. A Professional Goal Statement (see the Department's website for specific instructions).
6. Provide a professional resume.
7. Provide three professional references.
    1. At least one must be from a former faculty member.
    2. Two of the three must be from sources familiar with your volunteer, internship, or paid work experience

The MSW Program accepts students for Fall and Spring admissions. The deadline for fall admissions is March 1st for scholarships/assistantships considerations and April 15th for regular admission. The deadline for Spring admissions is October 15th. Applications received after April 15th and October 15th will be considered if space is available.

Program Requirements

Students are required to complete a minimum of sixty (60) semester hours; thirty (30) hours are taken in the foundation curriculum and thirty (30) hours are required in the concentration curriculum.

Thesis Option

- 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours), 24 semester hours of concentration-level coursework (18 semester hours) and field (6 semester hours), and a minimum of 6 semester hours of SWRK 7996 - Thesis.
- All courses in the 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours) are required and must be taken with a passing grade before concentration-level coursework, elective semester hours, independent study semester hours, or thesis hours may be undertaken.

- 12 hours of concentration-level coursework and 12 hours of concentration-level field and field seminar are required courses.
- The 6 semester hours of SWRK 7996 replace 2 electives and must be taken in two consecutive semesters.
- A passing score on the capstone Comprehensive Examination. The comprehensive examination for the Master of Social Work program consists of three components: 1) an evaluation of the student's ability to meet MSW program competencies in field placement; 2) a student self-assessment of her/his ability to meet all MSW program competencies; and 3) completion of a social work licensure practice examination with a score of 75 or higher.

Non-Thesis Option

- 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours), 18 semester hours of concentration-level coursework (18 semester hours) and field (6 semester hours) and field seminar (6 semester hours).
- All courses in the 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours) are required and must be taken with a passing grade before concentration-level coursework, elective semester hours, or independent study semester hours may be undertaken.
- 12 hours of concentration-level coursework, 6 hours of concentration-level field and 6 hours of concentration-level field seminar are required courses.
- 6 semester hours of electives or independent study must be taken with the non-thesis option.
- A passing score on the capstone Comprehensive Examination. The comprehensive examination for the Master of Social Work program consists of three components: 1) an evaluation of the student's ability to meet MSW program competencies in field placement; 2) a student self-assessment of her/his ability to meet all MSW program competencies; and 3) completion of a social work licensure practice examination with a score of 75 or higher.

The foundation curriculum

The foundation curriculum provides evidence-based knowledge, behaviors and skills for social work practice with individuals, families, groups, organizations and communities. The concentration curriculum allows students to extend the basic knowledge gained in the foundation to a more focused advanced evidence-based practice with families and children or advanced evidence-based practice with adults and families. . Both the foundation and concentration portions of the program emphasize evidence-based practice and critical thinking skills.

To accommodate a wide range of student needs

To accommodate a wide range of student needs, the MSW program of study offers options for full-time (4 semesters of study; 60 credit hours) and extended study (6 to 8 semesters of study; 60 credit hours). Regardless of progression through the program, the educational components of each sequencing option are the same. The concentration curriculum is generally full-time (2 semesters), although students may choose to extend (3 to 5 semesters). All MSW students follow the same learning expectations for field education, take the same comprehensive exam at the conclusion of the program, and meet the same requirements for graduation. Courses are offered in the traditional classroom settings, on-line and in a hybrid format (combination of traditional classroom and on-line).

Students must follow a structured program of study that includes all of the following foundation courses (30 credit hours) (unless advanced standing):

SWRK 7001 - Skills Prof Pract SWRK

(3) The course covers the profession's unique mission, values, roles and typically practice used in the conduct of social work practice. It further examines theories of practice and generalist roles and skills. The course is designed to prepare students for their initial field experience in Field Placement I. The course introduces students to the Practice Wheel as a primary model for serving children and families.

SWRK 7002 - Individuals and Families

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with individuals and families. Foundation knowledge and skills are developed in the areas of theory, therapeutic alliance, risk assessment, case formulation, ethical decision-making, critical thinking and evidence-based practice. Particular emphasis is placed on social work practice with culturally diverse, vulnerable and high-risk populations.

SWRK 7003 - Groups

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with groups. The course emphasizes mezzo practice skills/ roles, evidence-based theories, problem-solving processes, group dynamics, phases of group development, needed for group work with organizations and community groups. Issues inherent to diversity, at-risk populations and social justice are integrated.

SWRK 7005 - Assessmnt,Diag,Psychopath

(3) A required concentration course designed to provide students with current information about the assessment and diagnosis of mental disorders utilizing the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) classification system. The course includes etiology, prevention, assessment and treatment approaches for a number of commonly diagnosed mental health disorders. Students will identify a range of risk and protective factors effecting individuals with a mental illness and compare/contrast theories and interventions. PREREQUISITE(S): 3.0 credit hours; SWRK 7021, SWRK 7022, SWRK 7002

SWRK 7021 - SW Across the Lifespan

(3) Course provides a multidimensional understanding of person and environment relationships. An ecological/ systems framework is paired with a developmental approach to provide an interactional understanding of human behavior. The course examines life span development from conception through older adulthood. Issues of human diversity (i.e. race, ethnicity, class, gender, sexual orientation) will be highlighted.

SWRK 7022 - Organizations and Communities

(3) A required foundation course designed to prepare students to apply evidence based interventions to social work practice with organizations and communities. The course emphasizes macro practice skills/ roles. The course stresses an eco-systems perspective and looks at social system malfunctions and inequities. The nature and dynamics of social service networks and social service network eco-systems perspective.

SWRK 7025 - Scientific Methods

(3) A required foundation course designed to teach research methods and the elements of evidence based practice. The course focuses on social work practice-focused quantitative and qualitative research knowledge and skills including critical evaluation of empirical literature, basic research methodology including construct operationalization, study

design, selection, development, implementation, measurement, specific instruments, data management and data analysis using statistical software.

SWRK 7030 - Social Welfare Policy/Services

(3) Examines local, state, national and international policies affecting social work practice; exploring the historical process leading to current welfare policy. Using rational and non-rational theoretical perspectives, it presents policy and service domains and the values and philosophies underlying welfare provision. Students explore NASW policy positions, social welfare policy in other countries and comparative policy.

SWRK 7051 - Field Placement I

(3) This course provides opportunities for students to integrate what they are learning in the classroom with practical experience in an agency that provides social work services. The first course prepares students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and increase their self-understanding.

SWRK 7052 - Field Placement II

(3) The first year of field placement is intended to prepare students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and ethical framework of the profession of social work, and to increase their self-understanding. Field Placement II builds on the learning foundation that was established in Field Placement I.

Upon successful completion of at least 8 of the 10 foundation courses

Upon successful completion of at least 8 of the 10 foundation courses students move to the concentration curriculum, which includes 30 credit hours in either the Advanced Practice with Children, Youth, and Families concentration or the Advanced Practice with Adults and Families concentration.

Advanced Practice with Children, Youth, and Families

SWRK 7016 - Adv. Individual Child/Youth

(3) The course covers advanced direct practice techniques with children and youth. Techniques include cognitive behavioral therapy and other evidence based techniques.

SWRK 7017 - Adv. Family Child/Youth

(3) The course covers prevention and intervention approaches with families of children and youth at an advanced level. Topics include wrap around models of care for children/ youth in mental health, disability, juvenile justice, child welfare, and family violence service systems and integration across systems of care.

SWRK 7032 - Adv. Community Child/Youth

(3) The course covers advanced community practice with children and youth. It examines public policies impacting children and youth. It covers the basics of program administration including budgeting and policy implementation in preparation for administrative practice.

SWRK 7026 - Evaluative Research

(3) A required concentration course designed to teach students hard skills in ethical program evaluation; statistical analysis techniques; and research findings dissemination and application from the micro to the macro levels and throughout diverse areas of practice. Must be repeated for a minimum of 12 hours credit (4 semesters).

SWRK 7053 - Field Placement III

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement III builds on the learning foundation that was established in Field Placement I and II.

SWRK 7054 - Field Placement IV

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement IV builds on the learning foundation that was established in Field Placement I, II, and III.

SWRK 7055 - Integrative Field Seminar I

(3) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

SWRK 7056 - Integrative Field Seminar II

(3) (6501) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

- Elective (3)
- Elective (3)

Retention Requirements

1. Students in the MSW program must comply with all retention standards of the Graduate School at the University of Memphis.
2. All students are required to maintain a cumulative GPA of at least 3.00. Should the student's cumulative GPA fall below that mark, a period of one semester will be allowed to correct the deficiency. At the discretion of the chair, the coordinator of graduate studies in the student's college, and the Assistant Vice Provost for Graduate Studies, this period may be extended one additional semester. Students failing to improve their GPA to an acceptable level in that time will be dismissed from the program.
3. No more than 6 hours of "C-," "C" or "C+" will be applied toward meeting degree requirements. No grade of a D+ or lower will count toward the degree.
4. All degree requirements for the Master of Social Work must be completed within 6 years of initial enrollment.

Program Requirements

All students seeking the Master of Social Work degree must:

1. Successfully complete all courses required in the program of study
2. Abide by the honor's statement which includes a commitment to engage in professional conduct appropriate for a Social Worker at all times in accordance with the Code of Ethics of the National Association of Social Workers (NASW).
3. Adhere to all graduate and University requirements as stated in The University of Memphis Graduate Catalog (available from the Graduate School).
4. Satisfactorily pass a written comprehensive examination in the final semester of study.

Social Work - Advanced Standing, (MSW)

Advanced Standing Program

The Advanced Standing Program allows outstanding graduates of undergraduate social work programs to complete the MSW in a 37 credit hour accelerated program. Students seeking admission into the Advanced Standing Program must: 1) meet all admissions requirements for the 60 credit hour program; 2) have obtained a BA/BSW degree from an undergraduate program accredited by the Council on Social Work Education (CSWE) within five years of making application to the MSW or be a Licensed Baccalaureate Social Worker (LBSW); 3) have an overall undergraduate GPA of 3.0 or higher; 4) have a GPA of 3.3 or higher in their undergraduate social work courses; 5) submit test scores on the Graduate Record Exam (GRE) or Praxis Core Academic Skills for Educators Writing Exam that demonstrate graduate level proficiency in writing.

New admissions for Advanced Standing students occur for summer session only. Deadline for application is March 1st, for scholarship/assistantship consideration and April 15th for regular admissions.

Students in the Advanced Standing Program

Students in the Advanced Standing Program complete seven credit hours of foundation content and all concentration content. Required coursework is as follows:

All of the following foundation courses:

SWRK 7005 - Assessmnt,Diag,Psychopath

(3) A required concentration course designed to provide students with current information about the assessment and diagnosis of mental disorders utilizing the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) classification system. The course includes etiology, prevention, assessment and treatment approaches for a number of commonly diagnosed mental health disorders. Students will identify a range of risk and protective factors effecting individuals with a mental illness and compare/contrast theories and interventions. PREREQUISITE(S): 3.0 credit hours; SWRK 7021, SWRK 7022, SWRK 7002

SWRK 7020 - Research & Policy Ad. Standing

(3) This required foundation course provides a comprehensive review of research methods and social welfare policy for the Advanced Standing program. It reviews quantitative and qualitative research knowledge and skills for evidence based practice and examines basic concepts in social welfare policy, including the history and philosophical foundations of current welfare policy, fundamental governmental structures, advocacy skills, and policy analysis methods.

SWRK 7050 - Advanced Standing Field

(1) (7420) The advanced standing field course connects generalist curriculum learned in undergraduate social work to the masters-level curriculum at the advanced level. Assignments encourage self-assessment, increase empathy towards populations served, and expose students to core competencies.

- Complete a concentration in either Advanced Practice with Children, Youth, and Families or Advanced Practice with Adults and Families.

Social Work - Non-Thesis Option, (MSW)

MSW Degree Program

Program Admission and Prerequisites

A faculty committee of no less than three members will determine admission to the Master of Social Work program. Admission will require a majority vote in favor of the candidate from members of the committee. The following is necessary for application:

1. A baccalaureate degree from an accredited college or university.
2. Generally a grade point average of at least 3.0 or better (A=4.0) for the final 60 semester hours or 90 quarter hours of undergraduate study is necessary for consideration.
3. Submission of GRE test scores or the Praxis – Core Academic Skills for Educators Writing Exam; admission is competitive.
4. Experience in a Social Work related field as a paid employee, volunteer or researcher is desirable.
5. A Professional Goal Statement (see the Department's website for specific instructions).
6. Provide a professional resume.
7. Provide three professional references.
    1. At least one must be from a former faculty member.
    2. Two of the three must be from sources familiar with your volunteer, internship, or paid work experience

The MSW Program accepts students for Fall and Spring admissions. The deadline for fall admissions is March 1st for scholarships/assistantships considerations and April 15th for regular admission. The deadline for Spring admissions is October 15th. Applications received after April 15th and October 15th will be considered if space is available.

Program Requirements

Students are required to complete a minimum of sixty (60) semester hours; thirty (30) hours are taken in the foundation curriculum and thirty (30) hours are required in the concentration curriculum.

Non-Thesis Option

- 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours), 18 semester hours of concentration-level coursework (18 semester hours) and field (6 semester hours) and field seminar (6 semester hours).
- All courses in the 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours) are required and must be taken with a passing grade before concentration-level coursework, elective semester hours, or independent study semester hours may be undertaken.
- 12 hours of concentration-level coursework, 6 hours of concentration-level field and 6 hours of concentration-level field seminar are required courses.
- 6 semester hours of electives or independent study must be taken with the non-thesis option.

- A passing score on the capstone Comprehensive Examination. The comprehensive examination for the Master of Social Work program consists of three components: 1) an evaluation of the student's ability to meet MSW program competencies in field placement; 2) a student self-assessment of her/his ability to meet all MSW program competencies; and 3) completion of a social work licensure practice examination with a score of 75 or higher.

The foundation curriculum

The foundation curriculum provides evidence-based knowledge, behaviors and skills for social work practice with individuals, families, groups, organizations and communities. The concentration curriculum allows students to extend the basic knowledge gained in the foundation to a more focused advanced evidence-based practice with families and children or advanced evidence-based practice with adults and families. . Both the foundation and concentration portions of the program emphasize evidence-based practice and critical thinking skills.

To accommodate a wide range of student needs

To accommodate a wide range of student needs, the MSW program of study offers options for full-time (4 semesters of study; 60 credit hours) and extended study (6 to 8 semesters of study; 60 credit hours). Regardless of progression through the program, the educational components of each sequencing option are the same. The concentration curriculum is generally full-time (2 semesters), although students may choose to extend (3 to 5 semesters). All MSW students follow the same learning expectations for field education, take the same comprehensive exam at the conclusion of the program, and meet the same requirements for graduation. Courses are offered in the traditional classroom settings, on-line and in a hybrid format (combination of traditional classroom and on-line).

Students must follow a structured program of study that includes all of the following foundation courses (30 credit hours) (unless advanced standing):

SWRK 7001 - Skills Prof Pract SWRK

(3) The course covers the profession's unique mission, values, roles and typically practice used in the conduct of social work practice. It further examines theories of practice and generalist roles and skills. The course is designed to prepare students for their initial field experience in Field Placement I. The course introduces students to the Practice Wheel as a primary model for serving children and families.

SWRK 7002 - Individuals and Families

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with individuals and families. Foundation knowledge and skills are developed in the areas of theory, therapeutic alliance, risk assessment, case formulation, ethical decision-making, critical thinking and evidence-based practice. Particular emphasis is placed on social work practice with culturally diverse, vulnerable and high-risk populations.

SWRK 7003 - Groups

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with groups. The course emphasizes mezzo practice skills/ roles, evidence-based theories, problem-solving processes, group dynamics, phases of group development, needed for group work with organizations and community groups. Issues inherent to diversity, at-risk populations and social justice are integrated.

SWRK 7005 - Assessmnt,Diag,Psychopath

(3) A required concentration course designed to provide students with current information about the assessment and diagnosis of mental disorders utilizing the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) classification system. The course includes etiology, prevention, assessment and treatment approaches for a number of commonly diagnosed mental health disorders. Students will identify a range of risk and protective factors effecting individuals with a mental illness and compare/contrast theories and interventions. PREREQUISITE(S): 3.0 credit hours; SWRK 7021, SWRK 7022, SWRK 7002

SWRK 7021 - SW Across the Lifespan

(3) Course provides a multidimensional understanding of person and environment relationships. An ecological/ systems framework is paired with a developmental approach to provide an interactional understanding of human behavior. The course examines life span development from conception through older adulthood. Issues of human diversity (i.e. race, ethnicity, class, gender, sexual orientation) will be highlighted.

SWRK 7022 - Organizations and Communities

(3) A required foundation course designed to prepare students to apply evidence based interventions to social work practice with organizations and communities. The course emphasizes macro practice skills/ roles. The course stresses an eco-systems perspective and looks at social system malfunctions and inequities. The nature and dynamics of social service networks and social service network eco-systems perspective.

SWRK 7025 - Scientific Methods

(3) A required foundation course designed to teach research methods and the elements of evidence based practice. The course focuses on social work practice-focused quantitative and qualitative research knowledge and skills including critical evaluation of empirical literature, basic research methodology including construct operationalization, study design, selection, development, implementation, measurement, specific instruments, data management and data analysis using statistical software.

SWRK 7030 - Social Welfare Policy/Services

(3) Examines local, state, national and international policies affecting social work practice; exploring the historical process leading to current welfare policy. Using rational and non-rational theoretical perspectives, it presents policy and service domains and the values and philosophies underlying welfare provision. Students explore NASW policy positions, social welfare policy in other countries and comparative policy.

SWRK 7051 - Field Placement I

(3) This course provides opportunities for students to integrate what they are learning in the classroom with practical experience in an agency that provides social work services. The first course prepares students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and increase their self-understanding.

SWRK 7052 - Field Placement II

(3) The first year of field placement is intended to prepare students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the

importance of the value base and ethical framework of the profession of social work, and to increase their self-understanding. Field Placement II builds on the learning foundation that was established in Field Placement I.

Upon successful completion of at least 8 of the 10 foundation courses

Upon successful completion of at least 8 of the 10 foundation courses students move to the concentration curriculum, which includes 30 credit hours in either the Advanced Practice with Children, Youth, and Families concentration or the Advanced Practice with Adults and Families concentration.

Advanced Practice with Children, Youth, and Families

SWRK 7016 - Adv. Individual Child/Youth

(3) The course covers advanced direct practice techniques with children and youth. Techniques include cognitive behavioral therapy and other evidence based techniques.

SWRK 7017 - Adv. Family Child/Youth

(3) The course covers prevention and intervention approaches with families of children and youth at an advanced level. Topics include wrap around models of care for children/ youth in mental health, disability, juvenile justice, child welfare, and family violence service systems and integration across systems of care.

SWRK 7032 - Adv. Community Child/Youth

(3) The course covers advanced community practice with children and youth. It examines public policies impacting children and youth. It covers the basics of program administration including budgeting and policy implementation in preparation for administrative practice.

SWRK 7026 - Evaluative Research

(3) A required concentration course designed to teach students hard skills in ethical program evaluation; statistical analysis techniques; and research findings dissemination and application from the micro to the macro levels and throughout diverse areas of practice. Must be repeated for a minimum of 12 hours credit (4 semesters).

SWRK 7053 - Field Placement III

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement III builds on the learning foundation that was established in Field Placement I and II.

SWRK 7054 - Field Placement IV

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement IV builds on the learning foundation that was established in Field Placement I, II, and III.

SWRK 7055 - Integrative Field Seminar I

(3) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

SWRK 7056 - Integrative Field Seminar II

(3) (6501) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

- Elective (3)
- Elective (3)

Advanced Practice with Adults and Families

SWRK 7018 - Adv. Individual Adults

(3) The course covers advanced direct practice with adults. Treatment techniques include cognitive behavioral therapy, motivational interviewing, and other evidence based practices.

SWRK 7019 - Adv. Family Adults

(3) The course covers prevention and intervention approaches with families at an advanced level. Topics include integrative and holistic models of care across a range of settings in adult mental health, substance abuse, disabilities, chronic conditions, long term care, violence, and criminal justice.

SWRK 7033 - Adv. Community Adults

(3) (7460) The course covers advanced community practice with adults. Students learn policies and administrative practices to serve adults and older adults, explore policy and program implementation programs, learn administration and budgeting basics, understand community practice models, and become prepared to assume leadership positions in social service agencies and organizations.

SWRK 7026 - Evaluative Research

(3) A required concentration course designed to teach students hard skills in ethical program evaluation; statistical analysis techniques; and research findings dissemination and application from the micro to the macro levels and throughout diverse areas of practice. Must be repeated for a minimum of 12 hours credit (4 semesters).

SWRK 7053 - Field Placement III

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement III builds on the learning foundation that was established in Field Placement I and II.

SWRK 7054 - Field Placement IV

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement IV builds on the learning foundation that was established in Field Placement I, II, and III.

SWRK 7055 - Integrative Field Seminar I

(3) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

SWRK 7056 - Integrative Field Seminar II

(3) (6501) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

- Elective (3)
- Elective (3)

Retention Requirements

1. Students in the MSW program must comply with all retention standards of the Graduate School at the University of Memphis.
2. All students are required to maintain a cumulative GPA of at least 3.00. Should the student's cumulative GPA fall below that mark, a period of one semester will be allowed to correct the deficiency. At the discretion of the chair, the coordinator of graduate studies in the student's college, and the Assistant Vice Provost for Graduate Studies, this period may be extended one additional semester. Students failing to improve their GPA to an acceptable level in that time will be dismissed from the program.
3. No more than 6 hours of "C-," "C" or "C+" will be applied toward meeting degree requirements. No grade of a D+ or lower will count toward the degree.
4. All degree requirements for the Master of Social Work must be completed within 6 years of initial enrollment.

Program Requirements

All students seeking the Master of Social Work degree must:

1. Successfully complete all courses required in the program of study
2. Abide by the honor's statement which includes a commitment to engage in professional conduct appropriate for a Social Worker at all times in accordance with the Code of Ethics of the National Association of Social Workers (NASW).
3. Adhere to all graduate and University requirements as stated in The University of Memphis Graduate Catalog (available from the Graduate School).
4. Satisfactorily pass a written comprehensive examination in the final semester of study.

Social Work - Thesis Option, (MSW)

MSW Degree Program

Program Admission and Prerequisites

A faculty committee of no less than three members will determine admission to the Master of Social Work program. Admission will require a majority vote in favor of the candidate from members of the committee. The following is necessary for application:

1. A baccalaureate degree from an accredited college or university.

2. Generally a grade point average of at least 3.0 or better (A=4.0) for the final 60 semester hours or 90 quarter hours of undergraduate study is necessary for consideration.
3. Submission of GRE test scores or the Praxis – Core Academic Skills for Educators Writing Exam; admission is competitive.
4. Experience in a Social Work related field as a paid employee, volunteer or researcher is desirable.
5. A Professional Goal Statement (see the Department's website for specific instructions).
6. Provide a professional resume.
7. Provide three professional references.
    1. At least one must be from a former faculty member.
    2. Two of the three must be from sources familiar with your volunteer, internship, or paid work experience

The MSW Program accepts students for Fall and Spring admissions. The deadline for fall admissions is March 1st for scholarships/assistantships considerations and April 15th for regular admission. The deadline for Spring admissions is October 15th. Applications received after April 15th and October 15th will be considered if space is available.

Program Requirements

Students are required to complete a minimum of sixty (60) semester hours; thirty (30) hours are taken in the foundation curriculum and thirty (30) hours are required in the concentration curriculum.

Thesis Option

- 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours), 24 semester hours of concentration-level coursework (18 semester hours) and field (6 semester hours), and a minimum of 6 semester hours of SWRK 7996 - Thesis.
- All courses in the 30 semester hours of foundation-level graduate coursework (24 semester hours) and field (6 semester hours) are required and must be taken with a passing grade before concentration-level coursework, elective semester hours, independent study semester hours, or thesis hours may be undertaken.
- 12 hours of concentration-level coursework and 12 hours of concentration-level field and field seminar are required courses.
- The 6 semester hours of SWRK 7996 replace 2 electives and must be taken in two consecutive semesters.
- A passing score on the capstone Comprehensive Examination. The comprehensive examination for the Master of Social Work program consists of three components: 1) an evaluation of the student's ability to meet MSW program competencies in field placement; 2) a student self-assessment of her/his ability to meet all MSW program competencies; and 3) completion of a social work licensure practice examination with a score of 75 or higher.

The foundation curriculum

The foundation curriculum provides evidence-based knowledge, behaviors and skills for social work practice with individuals, families, groups, organizations and communities. The concentration curriculum allows students to extend the basic knowledge gained in the foundation to a more focused advanced evidence-based practice with families and children or advanced evidence-based practice with adults and families. . Both the foundation and concentration portions of the program emphasize evidence-based practice and critical thinking skills.

To accommodate a wide range of student needs

To accommodate a wide range of student needs, the MSW program of study offers options for full-time (4 semesters of study; 60 credit hours) and extended study (6 to 8 semesters of study; 60 credit hours). Regardless of progression through the program, the educational components of each sequencing option are the same. The concentration

curriculum is generally full-time (2 semesters), although students may choose to extend (3 to 5 semesters). All MSW students follow the same learning expectations for field education, take the same comprehensive exam at the conclusion of the program, and meet the same requirements for graduation. Courses are offered in the traditional classroom settings, on-line and in a hybrid format (combination of traditional classroom and on-line).

Students must follow a structured program of study that includes all of the following foundation courses (30 credit hours) (unless advanced standing):

SWRK 7001 - Skills Prof Pract SWRK

(3) The course covers the profession's unique mission, values, roles and typically practice used in the conduct of social work practice. It further examines theories of practice and generalist roles and skills. The course is designed to prepare students for their initial field experience in Field Placement I. The course introduces students to the Practice Wheel as a primary model for serving children and families.

SWRK 7002 - Individuals and Families

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with individuals and families. Foundation knowledge and skills are developed in the areas of theory, therapeutic alliance, risk assessment, case formulation, ethical decision-making, critical thinking and evidence-based practice. Particular emphasis is placed on social work practice with culturally diverse, vulnerable and high-risk populations.

SWRK 7003 - Groups

(3) A required foundation course designed to prepare students to apply evidence-based interventions to social work practice with groups. The course emphasizes mezzo practice skills/ roles, evidence-based theories, problem-solving processes, group dynamics, phases of group development, needed for group work with organizations and community groups. Issues inherent to diversity, at-risk populations and social justice are integrated.

SWRK 7005 - Assessmnt,Diag,Psychopath

(3) A required concentration course designed to provide students with current information about the assessment and diagnosis of mental disorders utilizing the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) classification system. The course includes etiology, prevention, assessment and treatment approaches for a number of commonly diagnosed mental health disorders. Students will identify a range of risk and protective factors effecting individuals with a mental illness and compare/contrast theories and interventions. PREREQUISITE(S): 3.0 credit hours; SWRK 7021, SWRK 7022, SWRK 7002

SWRK 7021 - SW Across the Lifespan

(3) Course provides a multidimensional understanding of person and environment relationships. An ecological/ systems framework is paired with a developmental approach to provide an interactional understanding of human behavior. The course examines life span development from conception through older adulthood. Issues of human diversity (i.e. race, ethnicity, class, gender, sexual orientation) will be highlighted.

SWRK 7022 - Organizations and Communities

(3) A required foundation course designed to prepare students to apply evidence based interventions to social work practice with organizations and communities. The course emphasizes macro practice skills/ roles. The course stresses an eco-systems perspective and looks at social system malfunctions and inequities. The nature and dynamics of social service networks and social service network eco-systems perspective.

SWRK 7025 - Scientific Methods

(3) A required foundation course designed to teach research methods and the elements of evidence based practice. The course focuses on social work practice-focused quantitative and qualitative research knowledge and skills including critical evaluation of empirical literature, basic research methodology including construct operationalization, study design, selection, development, implementation, measurement, specific instruments, data management and data analysis using statistical software.

SWRK 7030 - Social Welfare Policy/Services

(3) Examines local, state, national and international policies affecting social work practice; exploring the historical process leading to current welfare policy. Using rational and non-rational theoretical perspectives, it presents policy and service domains and the values and philosophies underlying welfare provision. Students explore NASW policy positions, social welfare policy in other countries and comparative policy.

SWRK 7051 - Field Placement I

(3) This course provides opportunities for students to integrate what they are learning in the classroom with practical experience in an agency that provides social work services. The first course prepares students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and increase their self-understanding.

SWRK 7052 - Field Placement II

(3) The first year of field placement is intended to prepare students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and ethical framework of the profession of social work, and to increase their self-understanding. Field Placement II builds on the learning foundation that was established in Field Placement I.

Upon successful completion of at least 8 of the 10 foundation courses

Upon successful completion of at least 8 of the 10 foundation courses students move to the concentration curriculum, which includes 30 credit hours in either the Advanced Practice with Children, Youth, and Families concentration or the Advanced Practice with Adults and Families concentration.

Advanced Practice with Children, Youth, and Families

SWRK 7016 - Adv. Individual Child/Youth

(3) The course covers advanced direct practice techniques with children and youth. Techniques include cognitive behavioral therapy and other evidence based techniques.

SWRK 7017 - Adv. Family Child/Youth

(3) The course covers prevention and intervention approaches with families of children and youth at an advanced level. Topics include wrap around models of care for children/ youth in mental health, disability, juvenile justice, child welfare, and family violence service systems and integration across systems of care.

SWRK 7032 - Adv. Community Child/Youth

(3) The course covers advanced community practice with children and youth. It examines public policies impacting children and youth. It covers the basics of program administration including budgeting and policy implementation in preparation for administrative practice.

SWRK 7026 - Evaluative Research

(3) A required concentration course designed to teach students hard skills in ethical program evaluation; statistical analysis techniques; and research findings dissemination and application from the micro to the macro levels and throughout diverse areas of practice. Must be repeated for a minimum of 12 hours credit (4 semesters).

SWRK 7053 - Field Placement III

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement III builds on the learning foundation that was established in Field Placement I and II.

SWRK 7054 - Field Placement IV

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement IV builds on the learning foundation that was established in Field Placement I, II, and III.

SWRK 7055 - Integrative Field Seminar I

(3) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

SWRK 7056 - Integrative Field Seminar II

(3) (6501) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

- Elective (3)
- Elective (3)

Advanced Practice with Adults and Families

SWRK 7018 - Adv. Individual Adults

(3) The course covers advanced direct practice with adults. Treatment techniques include cognitive behavioral therapy, motivational interviewing, and other evidence based practices.

SWRK 7019 - Adv. Family Adults

(3) The course covers prevention and intervention approaches with families at an advanced level. Topics include integrative and holistic models of care across a range of settings in adult mental health, substance abuse, disabilities, chronic conditions, long term care, violence, and criminal justice.

SWRK 7033 - Adv. Community Adults

(3) (7460) The course covers advanced community practice with adults. Students learn policies and administrative practices to serve adults and older adults, explore policy and program implementation programs, learn administration and budgeting basics, understand community practice models, and become prepared to assume leadership positions in social service agencies and organizations.

SWRK 7026 - Evaluative Research

(3) A required concentration course designed to teach students hard skills in ethical program evaluation; statistical analysis techniques; and research findings dissemination and application from the micro to the macro levels and throughout diverse areas of practice. Must be repeated for a minimum of 12 hours credit (4 semesters).

SWRK 7053 - Field Placement III

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement III builds on the learning foundation that was established in Field Placement I and II.

SWRK 7054 - Field Placement IV

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement IV builds on the learning foundation that was established in Field Placement I, II, and III.

SWRK 7055 - Integrative Field Seminar I

(3) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

SWRK 7056 - Integrative Field Seminar II

(3) (6501) Course covers preparation for advanced social work practice and preparation for the social work licensure exam.

- Elective (3)
- Elective (3)

Retention Requirements

1. Students in the MSW program must comply with all retention standards of the Graduate School at the University of Memphis.
2. All students are required to maintain a cumulative GPA of at least 3.00. Should the student's cumulative GPA fall below that mark, a period of one semester will be allowed to correct the deficiency. At the discretion of the chair, the coordinator of graduate studies in the student's college, and the Assistant Vice Provost for

Graduate Studies, this period may be extended one additional semester. Students failing to improve their GPA to an acceptable level in that time will be dismissed from the program.
3. No more than 6 hours of "C-," "C" or "C+" will be applied toward meeting degree requirements. No grade of a D+ or lower will count toward the degree.
4. All degree requirements for the Master of Social Work must be completed within 6 years of initial enrollment.

Program Requirements

All students seeking the Master of Social Work degree must:

1. Successfully complete all courses required in the program of study
2. Abide by the honor's statement which includes a commitment to engage in professional conduct appropriate for a Social Worker at all times in accordance with the Code of Ethics of the National Association of Social Workers (NASW).
3. Adhere to all graduate and University requirements as stated in The University of Memphis Graduate Catalog (available from the Graduate School).
4. Satisfactorily pass a written comprehensive examination in the final semester of study.

Sociology, (MA)

MA Degree Program

Graduate students who select sociology as a major should consult with the graduate coordinator.

Program Admission

Multiple criteria are taken into account when considering applicant admission, including, but not necessarily limited to, GPA for the last 60 hours of the undergraduate degree, letters of reference, GRE scores, the writing sample, and the availability of stipends. In addition, applicants must have satisfactorily completed courses in research methods, sociological theory, and statistics, or demonstrate equivalency.

Program Requirements

1. Students may choose one of two degree programs:
    1. The thesis program requires thirty (30) semester hours of graduate level work, which includes 3-6 hours of SOCI 7996 - Thesis. Students may not enroll for more than six hours of Sociology 7996 until they have successfully defended their thesis proposal to their thesis committee. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
        1. At least 24 semester hours of course work must be in sociology.
        2. The oral defense of the thesis counts as a comprehensive examination.
    2. The non-thesis program requires thirty-three (33) semester hours of graduate level work and the passing of both written and oral comprehensive examinations.
        1. At least 27 semester hours must be in sociology.
        2. The student must remove all grades of incomplete from his or her record before taking the comprehensive examination.
    3. The successful completion of the following courses is required of all majors: SOCI 6312, SOCI 7210, SOCI 7320. A minimum grade of "3.0" is required in each.

4. No more than 6 semester hours of SOCI 7912 - Directed Indiv Study, may be counted toward the degree without permission from the graduate coordinator.
5. A graduate student whose cumulative grade point average in sociology drops below 3.00 will be placed on departmental review. Being on departmental review at the conclusion of a subsequent semester may result in suspension. Conditions under which continuation in the program beyond two or more semesters on departmental review will be granted must be recommended by the department's graduate committee and the department chair. If, in the opinion of the graduate committee, the chair, the College of Arts and Sciences' Associate Dean of Graduate Programs and Research, and the Vice Provost for Graduate Programs, the student is not making satisfactory progress toward degree completion, the student will be dismissed from the degree program. Students are ineligible for graduate assistantships while on departmental review, but may apply/reapply for an assistantship once their departmental review status has been removed.
6. According to Graduate School policy, students must complete the requirements to remove a grade of "I" (incomplete) within 90 days from the end of the semester or summer term in which it was received or the "I" changes to an "F." If unusual circumstances prevent the student from removing the "I" within 90 days, a 45-day extension may be granted. It is the student's responsibility to request an extension. The department will allow students who received a grade of "I" that changes to an "F" to submit a written request to the graduate committee for a grade change. The request must be made after the student has completed requirements for the course in which the "F" was received and must spell out the reasons why the student was unable to complete the requirements for the course prior to the "I" becoming an "F." In addition, the request must be made within one year of the beginning of the semester or term in which the student enrolled in the course. If the faculty member from which the student received the "I" and the graduate committee agree that extraordinary circumstances prevented the student from completing requirements for the course before the "I" changed to an "F," they will recommend to the department chair that the student's "F" be changed. If the chair agrees with the recommendation of the faculty member and the graduate committee, the chair will recommend to the Vice Provost for Graduate Studies that the student's grade be changed.

Special Education - Comprehensive (K-12) Licensure, (MAT)

Master of Arts in Teaching (MAT) Degree Program

MAT Program Admission

Applicants must complete admissions requirements to be admitted. **All admissions requirements must be met prior to being admitted into the MAT program.** MAT admission requirements are designed to be both competitive and selective, to be knowledge and performance-based, to be clear and consistent, to maintain diversity, and to meet or exceed undergraduate requirements and minimum state requirements.

To be admitted to the MAT program a candidate must:

1. Take and pass the Core Academics Skills for Educations (CORE) Writing. If the GRE has been taken, the student may have the CORE waived if the scores are appropriate (verbal 143, quantitative 138, writing 3.5) and are less than 5 years old.
2. Take and pass the Praxis II Content Knowledge Exam required for the teacher candidate's licensure area. Please refer to http://www.tn.gov/education/section/licensing to verify what exam should be taken.

   Submit an electronic Graduate Admissions Application and include the following:
   1. An official transcript reflecting an earned bachelor's degree with a 3.0 or higher grade point average from an accredited institution. Applicants with a successful professional career may appeal this grade point average requirement. Documentation of a "successful professional career" is necessary

and may include, but is not limited to, items such as an administrators' letter of recommendation, teacher evaluations, lesson plans, teaching video, etc.
    2. Passing scores on the CORE Academic Skills for Educators: Writing (162)
    3. Passing scores on the Praxis II Content Knowledge Exam for the teacher candidate's licensure area they plan to teach.
3. Submit the ICL department MAT application (http://www.memphis.edu/icl/docs/mat-application.doc) to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152) along with copies of the CORE and Praxis II Content Knowledge scores.

Teacher Education Program (TEP) Admission

1. Students who plan to pursue a graduate program of studies leading to teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). Students are encouraged to apply for admission into TEP as soon as they enroll in any College of Education courses.
2. TEP admissions deadlines are September 15 for fall and January 31 for spring.
3. Requirements for provisional admission into TEP include:
    1. A grade point average of 3.25 at the graduate level and undergraduate grade point average of 3.0 or higher;
    2. Pass all sections of the CORE Academic Skills for Educators;
    3. Pass the Praxis II Content Knowledge Exam required by the State of Tennessee for the licensure area being pursued.
    4. TBI Background Check
    5. Completion of teacher aptitude survey
4. Requirements for full admission to TEP must be completed prior to the Clinical Teaching Semester and/or the semester candidates enroll in ICL 7993. They include:
    1. 3.25 graduate grade point average
    2. Passed Praxis II licensure exams

Passing scores on all required Praxis II Licensure Exams for Licensure and Graduation: Candidates participating in the Clinical Teaching Semester and/or ICL 7993 must submit a successful Teacher Performance Assessment (edTPA). Candidates who seek a Practitioner License must have a composite of 3.0 on the Teacher Evaluation used in their employing district.

Students must be provisionally admitted to the Teacher Education Program (TEP) before completing all Level I courses and starting Level II courses. (Level I Professional Core courses provide requisite foundations for teaching and should be completed before taking Level II Professional Specialization courses that focus on specialized strategies for teaching and learning in educational environments).

Students who do not apply to TEP or fail to maintain criteria during the program will not be allowed to continue in the program.

NOTE: MAT admission, TEP admission, and Graduate School admission are separate procedures.

Program Requirements

Students seeking licensure and the MAT degree must take a minimum of 30-46 graduate semester hours, depending on program and licensure area. Minimum hours may increase depending on licensure requirements. Students who are employed by a school district on a Practitioner License may have the Level III (clinical teaching semester) waived if they provide the necessary documentation to verify one year of successful teaching experience in their area of licensure with a composite Teacher Evaluation Score of 3.0 or higher. Students in this category should contact the Teacher Education Office in 202 Ball Hall for specific requirements. Please note that all initial licensure candidates, including candidates who on a Job-Embedded Practitioners License, must take ICL 7993, either along with clinical teaching semester or the last semester before applying for license if working on a Practitioner License. This course serves as the

culminating experience and will require successful completion of the Teacher Performance Assessment (edTPA) to be able to be recommended for licensure.

Special Education Licensure Program Requirements

Students seeking Special Education Licensure and the MAT degree must complete the following requirements:

Special Education Level I Licensure Requirements:

EDPR 7110 - Erly Chldhd Dvlpmnt

(3) Introduction to contemporary theories, research and issues in young children's physical, cognitive, social, and emotional development with an emphasis on the cultural nature of development.

or

EDPR 7111 - Child Psyc App To Educ **

(3) (EDPS 7111-8111) Major theories of child psychology and their implications for educational practices with the preschool and elementary school child.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

or

SPED 7001 - Test Meas Excp Chl/Adul **

(3) Overview of psychoeducational assessment practices and issues with emphasis on educational and psychological tests used in special education; focus on informed interpretation of test data and implications for instructional practice. Field experience: Required. PREREQUISITE(S): SPED 7000

or

PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

ICL 7105 - Lang/Comm Inclusive Classrm **

(3) Instructing students with typical and exceptional communication needs. Includes interpreting speech/language assessment reports and designing instruction. Also use of augmentative and alternative communication devices and working with non-native English speaking students. Field Experience: Required. PREREQUISITE(S): SPED 7000 or equivalent

ICL 7106 - Prof/Eth Prac Inclusive Class **

(3) Education policy and practice: accountability, ethics, advocacy, and social challenges. Working with families and community stakeholders is highlighted. Instructional planning includes creating individual education plans, individual family service plans and transition planning. PREREQUISITE(S): SPED 7000 or equivalent.

Special Education Level II and III Licensure Requirements:

SPED 7211 - Academic Instruct Sped **

(3) Academic methods, remediation, and educational planning for individuals with disabilities. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7212 - Content Methods in Special Edu **

(3) Study of best practices and methods for mathematics, social studies and science instruction presently being used in special education and inclusive settings. Also curriculum for transition and daily living skills. The use of assistive technology for education is included. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7221 - Behavior Mgmt Spec Ed **

(3) Methods of changing behaviors of individuals with mild to severe disabilities in various educational settings. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7241 - Superv Practicm In Sped

(3-9) Enhanced practicum experience in settings with individuals who have disabilities. PREREQUISITE(S): Permission of instructor. Grades of S, U, or I will be given.

or

PSYC 7808 - Psychoed Assessmnt III

(3) Introduction to psychoeducational assessment of preschool children; includes issues surrounding early assessment, skill development with preschool instruments, and related report writing, conferencing.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Comprehensive (K-12) Program Requirements

SPED 6000 - Meth/Mat Modrt/Sevr Dis

(3) Curriculum, methods, and materials applicable to special educational needs of moderately/severly disabled learners, emphasizing educational and vocational skills that facilitate normalization and independent living.

SPED 6601 - Student Phys/Health Dis

(3) Emphasizes physical and educational modifications to facilitate learning and vocational skills; examines accessibility, movement patterns, prosthetic and augmentative communication devices, and supportive medical procedures. Includes practicum with students with physical/health impairments.

SPED 7042 - Fld Exp/Comprehen Sped

(3-6) Supervised experience(s) with individuals with moderate to severe disabilities in cooperation with university, local, state, and/or national education personnel. PREREQUISITE(S): Permission of instructor. Grades of S, U, or I will be given.

MAT Degree Requirements:

In addition to the above:

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Other Requirements

1. All students seeking teacher licensure must successfully pass clinical teaching semester or must document successful completion of professional experience in lieu of clinical teaching semester.
    1. Students who are employed by a school district on a Practitioner License issued by the State of Tennessee may have the Level III clinical teaching semester waived if they provide the necessary documentation to verify one year of successful teaching experience and composite score of 3 or higher on the Teacher Evaluation used by their employing district. They must also be successful with the Teacher Performance Assessment (edTPA) to be recommended for licensure. Students in this category should contact the Licensure Coordinator for specific requirements.
    2. Students must enroll in the appropriate clinical teaching semester course during clinical teaching semester.
    3. Applications for clinical teaching semester must be filed one semester before clinical teaching semester.
    4. Application for documenting successful completion of professional experience in lieu of clinical teaching semester must be filed at the beginning of the first month of the semester in which the candidate plans to complete the approved academic program leading to final licensure. The Teacher Performance Assessment (edTPA) must be completed during the semester the candidate on a Practitioner License plans to apply for their Professional License.
2. Licensure in Tennessee requires acceptable scores on specified Praxis II Tests of pedagogy and teaching content knowledge.
3. Validation of methods courses is not permitted.

Retention

To remain in the Master of Arts in Teaching (MAT) and the Teacher Education Program (TEP) the student must maintain a graduate grade point average of 3.25. Failure to maintain a 3.25 GPA will result in termination of a candidate's TEP status and will result in academic probation in the MAT program.

Special Education - Early Childhood (PreK-1) Licensure, (MAT)

Master of Arts in Teaching (MAT) Degree Program

MAT Program Admission

Applicants must complete admissions requirements to be admitted. **All admissions requirements must be met prior to being admitted into the MAT program.** MAT admission requirements are designed to be both competitive and selective, to be knowledge and performance-based, to be clear and consistent, to maintain diversity, and to meet or exceed undergraduate requirements and minimum state requirements.

To be admitted to the MAT program a candidate must:

1. Take and pass the Core Academics Skills for Educations (CORE) Writing. If the GRE has been taken, the student may have the CORE waived if the scores are appropriate (verbal 143, quantitative 138, writing 3.5) and are less than 5 years old.
2. Take and pass the Praxis II Content Knowledge Exam required for the teacher candidate's licensure area. Please refer to http://www.tn.gov/education/section/licensing to verify what exam should be taken.

   Submit an electronic Graduate Admissions Application and include the following:
   1. An official transcript reflecting an earned bachelor's degree with a 3.0 or higher grade point average from an accredited institution. Applicants with a successful professional career may appeal this grade point average requirement. Documentation of a "successful professional career" is necessary and may include, but is not limited to, items such as an administrators' letter of recommendation, teacher evaluations, lesson plans, teaching video, etc.
   2. Passing scores on the CORE Academic Skills for Educators: Writing (162)
   3. Passing scores on the Praxis II Content Knowledge Exam for the teacher candidate's licensure area they plan to teach.
3. Submit the ICL department MAT application (http://www.memphis.edu/icl/docs/mat-application.doc) to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152) along with copies of the CORE and Praxis II Content Knowledge scores.

Teacher Education Program (TEP) Admission

1. Students who plan to pursue a graduate program of studies leading to teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). Students are encouraged to apply for admission into TEP as soon as they enroll in any College of Education courses.
2. TEP admissions deadlines are September 15 for fall and January 31 for spring.
3. Requirements for provisional admission into TEP include:
   1. A grade point average of 3.25 at the graduate level and undergraduate grade point average of 3.0 or higher;
   2. Pass all sections of the CORE Academic Skills for Educators;

3. Pass the Praxis II Content Knowledge Exam required by the State of Tennessee for the licensure area being pursued.
4. TBI Background Check
5. Completion of teacher aptitude survey

4. Requirements for full admission to TEP must be completed prior to the Clinical Teaching Semester and/or the semester candidates enroll in ICL 7993. They include:
    1. 3.25 graduate grade point average
    2. Passed Praxis II licensure exams

Passing scores on all required Praxis II Licensure Exams for Licensure and Graduation: Candidates participating in the Clinical Teaching Semester and/or ICL 7993 must submit a successful Teacher Performance Assessment (edTPA). Candidates who seek a Practitioner License must have a composite of 3.0 on the Teacher Evaluation used in their employing district.

Students must be provisionally admitted to the Teacher Education Program (TEP) before completing all Level I courses and starting Level II courses. (Level I Professional Core courses provide requisite foundations for teaching and should be completed before taking Level II Professional Specialization courses that focus on specialized strategies for teaching and learning in educational environments).

Students who do not apply to TEP or fail to maintain criteria during the program will not be allowed to continue in the program.

NOTE: MAT admission, TEP admission, and Graduate School admission are separate procedures.

Program Requirements

Students seeking licensure and the MAT degree must take a minimum of 30-46 graduate semester hours, depending on program and licensure area. Minimum hours may increase depending on licensure requirements. Students who are employed by a school district on a Practitioner License may have the Level III (clinical teaching semester) waived if they provide the necessary documentation to verify one year of successful teaching experience in their area of licensure with a composite Teacher Evaluation Score of 3.0 or higher. Students in this category should contact the Teacher Education Office in 202 Ball Hall for specific requirements. Please note that all initial licensure candidates, including candidates who on a Job-Embedded Practitioners License, must take ICL 7993, either along with clinical teaching semester or the last semester before applying for license if working on a Practitioner License. This course serves as the culminating experience and will require successful completion of the Teacher Performance Assessment (edTPA) to be able to be recommended for licensure.

Special Education Licensure Program Requirements

Students seeking Special Education Licensure and the MAT degree must complete the following requirements:

Special Education Level I Licensure Requirements:

EDPR 7110 - Erly Chldhd Dvlpmnt

(3) Introduction to contemporary theories, research and issues in young children's physical, cognitive, social, and emotional development with an emphasis on the cultural nature of development.

or

EDPR 7111 - Child Psyc App To Educ **

(3) (EDPS 7111-8111) Major theories of child psychology and their implications for educational practices with the preschool and elementary school child.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

or

SPED 7001 - Test Meas Excp Chl/Adul **

(3) Overview of psychoeducational assessment practices and issues with emphasis on educational and psychological tests used in special education; focus on informed interpretation of test data and implications for instructional practice. Field experience: Required. PREREQUISITE(S): SPED 7000

or

PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

ICL 7105 - Lang/Comm Inclusive Classrm **

(3) Instructing students with typical and exceptional communication needs. Includes interpreting speech/language assessment reports and designing instruction. Also use of augmentative and alternative communication devices and working with non-native English speaking students. Field Experience: Required. PREREQUISITE(S): SPED 7000 or equivalent

ICL 7106 - Prof/Eth Prac Inclusive Class **

(3) Education policy and practice: accountability, ethics, advocacy, and social challenges. Working with families and community stakeholders is highlighted. Instructional planning includes creating individual education plans, individual family service plans and transition planning. PREREQUISITE(S): SPED 7000 or equivalent.

Special Education Level II and III Licensure Requirements:

SPED 7211 - Academic Instruct Sped **

(3) Academic methods, remediation, and educational planning for individuals with disabilities. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7212 - Content Methods in Special Edu **

(3) Study of best practices and methods for mathematics, social studies and science instruction presently being used in special education and inclusive settings. Also curriculum for transition and daily living skills. The use of assistive technology for education is included. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7221 - Behavior Mgmt Spec Ed **

(3) Methods of changing behaviors of individuals with mild to severe disabilities in various educational settings. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7241 - Superv Practicm In Sped

(3-9) Enhanced practicum experience in settings with individuals who have disabilities. PREREQUISITE(S): Permission of instructor. Grades of S, U, or I will be given.

or

PSYC 7808 - Psychoed Assessmnt III

(3) Introduction to psychoeducational assessment of preschool children; includes issues surrounding early assessment, skill development with preschool instruments, and related report writing, conferencing.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Early Childhood (PreK-1) Program Requirements

SPED 6601 - Student Phys/Health Dis

(3) Emphasizes physical and educational modifications to facilitate learning and vocational skills; examines accessibility, movement patterns, prosthetic and augmentative communication devices, and supportive medical procedures. Includes practicum with students with physical/health impairments.

SPED 7121 - Ed Prog Presc Ed/Disbl

(3) Methods involved in developmental assessment and educational planning for children with disabilities in pre-school years. PREREQUISITE(S): SPED 7000 OR SPED 7101-SPED 8101

SPED 7141 - Field Exper Early Child

(3-6) Observation and supervised experience in early childhood special education settings. PREREQUISITE(S): ECED 6540 and SPED 7121-SPED 8121 Grades of S, U, or I will be given.

MAT Degree Requirements:

In addition to the above:

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Other Requirements

1. All students seeking teacher licensure must successfully pass clinical teaching semester or must document successful completion of professional experience in lieu of clinical teaching semester.
    1. Students who are employed by a school district on a Practitioner License issued by the State of Tennessee may have the Level III clinical teaching semester waived if they provide the necessary documentation to verify one year of successful teaching experience and composite score of 3 or higher on the Teacher Evaluation used by their employing district. They must also be successful with the Teacher Performance Assessment (edTPA) to be recommended for licensure. Students in this category should contact the Licensure Coordinator for specific requirements.
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    3. Applications for clinical teaching semester must be filed one semester before clinical teaching semester.
    4. Application for documenting successful completion of professional experience in lieu of clinical teaching semester must be filed at the beginning of the first month of the semester in which the candidate plans to complete the approved academic program leading to final licensure. The Teacher Performance Assessment (edTPA) must be completed during the semester the candidate on a Practitioner License plans to apply for their Professional License.
2. Licensure in Tennessee requires acceptable scores on specified Praxis II Tests of pedagogy and teaching content knowledge.
3. Validation of methods courses is not permitted.

Retention

To remain in the Master of Arts in Teaching (MAT) and the Teacher Education Program (TEP) the student must maintain a graduate grade point average of 3.25. Failure to maintain a 3.25 GPA will result in termination of a candidate's TEP status and will result in academic probation in the MAT program.

Special Education - Interventionist Licensure, (MAT)

Master of Arts in Teaching (MAT) Degree Program

MAT Program Admission

Applicants must complete admissions requirements to be admitted. **All admissions requirements must be met prior to being admitted into the MAT program.** MAT admission requirements are designed to be both competitive and selective, to be knowledge and performance-based, to be clear and consistent, to maintain diversity, and to meet or exceed undergraduate requirements and minimum state requirements.

To be admitted to the MAT program a candidate must:

1. Take and pass the Core Academics Skills for Educations (CORE) Writing. If the GRE has been taken, the student may have the CORE waived if the scores are appropriate (verbal 143, quantitative 138, writing 3.5) and are less than 5 years old.
2. Take and pass the Praxis II Content Knowledge Exam required for the teacher candidate's licensure area. Please refer to http://www.tn.gov/education/section/licensing to verify what exam should be taken.

   Submit an electronic Graduate Admissions Application and include the following:
   1. An official transcript reflecting an earned bachelor's degree with a 3.0 or higher grade point average from an accredited institution. Applicants with a successful professional career may appeal this grade point average requirement. Documentation of a "successful professional career" is necessary and may include, but is not limited to, items such as an administrators' letter of recommendation, teacher evaluations, lesson plans, teaching video, etc.
   2. Passing scores on the CORE Academic Skills for Educators: Writing (162)
   3. Passing scores on the Praxis II Content Knowledge Exam for the teacher candidate's licensure area they plan to teach.
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Teacher Education Program (TEP) Admission

1. Students who plan to pursue a graduate program of studies leading to teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). Students are encouraged to apply for admission into TEP as soon as they enroll in any College of Education courses.
2. TEP admissions deadlines are September 15 for fall and January 31 for spring.
3. Requirements for provisional admission into TEP include:
   1. A grade point average of 3.25 at the graduate level and undergraduate grade point average of 3.0 or higher;
   2. Pass all sections of the CORE Academic Skills for Educators;
   3. Pass the Praxis II Content Knowledge Exam required by the State of Tennessee for the licensure area being pursued.
   4. TBI Background Check
   5. Completion of teacher aptitude survey
4. Requirements for full admission to TEP must be completed prior to the Clinical Teaching Semester and/or the semester candidates enroll in ICL 7993. They include:
   1. 3.25 graduate grade point average
   2. Passed Praxis II licensure exams

Passing scores on all required Praxis II Licensure Exams for Licensure and Graduation: Candidates participating in the Clinical Teaching Semester and/or ICL 7993 must submit a successful Teacher Performance Assessment (edTPA). Candidates who seek a Practitioner License must have a composite of 3.0 on the Teacher Evaluation used in their employing district.

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NOTE: MAT admission, TEP admission, and Graduate School admission are separate procedures.

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Students seeking licensure and the MAT degree must take a minimum of 30-46 graduate semester hours, depending on program and licensure area. Minimum hours may increase depending on licensure requirements. Students who are employed by a school district on a Practitioner License may have the Level III (clinical teaching semester) waived if they provide the necessary documentation to verify one year of successful teaching experience in their area of licensure with a composite Teacher Evaluation Score of 3.0 or higher. Students in this category should contact the Teacher Education Office in 202 Ball Hall for specific requirements. Please note that all initial licensure candidates, including candidates who on a Job-Embedded Practitioners License, must take ICL 7993, either along with clinical teaching semester or the last semester before applying for license if working on a Practitioner License. This course serves as the culminating experience and will require successful completion of the Teacher Performance Assessment (edTPA) to be able to be recommended for licensure.

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Students seeking Special Education Licensure and the MAT degree must complete the following requirements:

Special Education Level I Licensure Requirements:

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(3) Introduction to contemporary theories, research and issues in young children's physical, cognitive, social, and emotional development with an emphasis on the cultural nature of development.

or

EDPR 7111 - Child Psyc App To Educ **

(3) (EDPS 7111-8111) Major theories of child psychology and their implications for educational practices with the preschool and elementary school child.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

or

SPED 7001 - Test Meas Excp Chl/Adul **

(3) Overview of psychoeducational assessment practices and issues with emphasis on educational and psychological tests used in special education; focus on informed interpretation of test data and implications for instructional practice. Field experience: Required. PREREQUISITE(S): SPED 7000

or

PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

ICL 7105 - Lang/Comm Inclusive Classrm **

(3) Instructing students with typical and exceptional communication needs. Includes interpreting speech/language assessment reports and designing instruction. Also use of augmentative and alternative communication devices and working with non-native English speaking students. Field Experience: Required. PREREQUISITE(S): SPED 7000 or equivalent

ICL 7106 - Prof/Eth Prac Inclusive Class **

(3) Education policy and practice: accountability, ethics, advocacy, and social challenges. Working with families and community stakeholders is highlighted. Instructional planning includes creating individual education plans, individual family service plans and transition planning. PREREQUISITE(S): SPED 7000 or equivalent.

Special Education Level II and III Licensure Requirements:

SPED 7211 - Academic Instruct Sped **

(3) Academic methods, remediation, and educational planning for individuals with disabilities. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7212 - Content Methods in Special Edu **

(3) Study of best practices and methods for mathematics, social studies and science instruction presently being used in special education and inclusive settings. Also curriculum for transition and daily living skills. The use of assistive technology for education is included. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7221 - Behavior Mgmt Spec Ed **

(3) Methods of changing behaviors of individuals with mild to severe disabilities in various educational settings. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7241 - Superv Practicm In Sped

(3-9) Enhanced practicum experience in settings with individuals who have disabilities. PREREQUISITE(S): Permission of instructor. Grades of S, U, or I will be given.

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PSYC 7808 - Psychoed Assessmnt III

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ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Interventionist Licensure Program Requirements

LITL 7553 - Literacy Dev K-4

(3) Teaching and assessing literacy development in grades K-4 with focus on major theories and current research. Additional field hours required. Restricted to students seeking licensure. PREREQUISITE(S): TEP admission.

Students in the Interventionist Licensure program are required

Students in the Interventionist Licensure program are required to complete a minimum of 116 clock hours of clinical/field experience during the day in special education settings prior to clinical teaching semester. Students in the Comprehensive and Early Childhood licensure programs are required to complete a minimum of 124 clock hours of clinical/field experience during the day in special education settings prior to clinical teaching semester. These field experiences will be incorporated into courses required for licensure.

MAT Degree Requirements:

In addition to the above:

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Other Requirements

1. All students seeking teacher licensure must successfully pass clinical teaching semester or must document successful completion of professional experience in lieu of clinical teaching semester.
    1. Students who are employed by a school district on a Practitioner License issued by the State of Tennessee may have the Level III clinical teaching semester waived if they provide the necessary documentation to verify one year of successful teaching experience and composite score of 3 or higher on the Teacher Evaluation used by their employing district. They must also be successful with the Teacher Performance Assessment (edTPA) to be recommended for licensure. Students in this category should contact the Licensure Coordinator for specific requirements.
    2. Students must enroll in the appropriate clinical teaching semester course during clinical teaching semester.
    3. Applications for clinical teaching semester must be filed one semester before clinical teaching semester.
    4. Application for documenting successful completion of professional experience in lieu of clinical teaching semester must be filed at the beginning of the first month of the semester in which the candidate plans to complete the approved academic program leading to final licensure. The Teacher Performance Assessment (edTPA) must be completed during the semester the candidate on a Practitioner License plans to apply for their Professional License.

2. Licensure in Tennessee requires acceptable scores on specified Praxis II Tests of pedagogy and teaching content knowledge.
3. Validation of methods courses is not permitted.

Retention

To remain in the Master of Arts in Teaching (MAT) and the Teacher Education Program (TEP) the student must maintain a graduate grade point average of 3.25. Failure to maintain a 3.25 GPA will result in termination of a candidate's TEP status and will result in academic probation in the MAT program.

Special Education Licensure, (MAT)

Master of Arts in Teaching (MAT) Degree Program

MAT Program Admission

Applicants must complete admissions requirements to be admitted. **All admissions requirements must be met prior to being admitted into the MAT program.** MAT admission requirements are designed to be both competitive and selective, to be knowledge and performance-based, to be clear and consistent, to maintain diversity, and to meet or exceed undergraduate requirements and minimum state requirements.

To be admitted to the MAT program a candidate must:

1. Take and pass the Core Academics Skills for Educations (CORE) Writing. If the GRE has been taken, the student may have the CORE waived if the scores are appropriate (verbal 143, quantitative 138, writing 3.5) and are less than 5 years old.
2. Take and pass the Praxis II Content Knowledge Exam required for the teacher candidate's licensure area. Please refer to http://www.tn.gov/education/section/licensing to verify what exam should be taken.

   Submit an electronic Graduate Admissions Application and include the following:
   1. An official transcript reflecting an earned bachelor's degree with a 3.0 or higher grade point average from an accredited institution. Applicants with a successful professional career may appeal this grade point average requirement. Documentation of a "successful professional career" is necessary and may include, but is not limited to, items such as an administrators' letter of recommendation, teacher evaluations, lesson plans, teaching video, etc.
   2. Passing scores on the CORE Academic Skills for Educators: Writing (162)
   3. Passing scores on the Praxis II Content Knowledge Exam for the teacher candidate's licensure area they plan to teach.
3. Submit the ICL department MAT application (http://www.memphis.edu/icl/docs/mat-application.doc) to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152) along with copies of the CORE and Praxis II Content Knowledge scores.

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1. Students who plan to pursue a graduate program of studies leading to teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). Students are encouraged to apply for admission into TEP as soon as they enroll in any College of Education courses.
2. TEP admissions deadlines are September 15 for fall and January 31 for spring.
3. Requirements for provisional admission into TEP include:

1. A grade point average of 3.25 at the graduate level and undergraduate grade point average of 3.0 or higher;
2. Pass all sections of the CORE Academic Skills for Educators;
3. Pass the Praxis II Content Knowledge Exam required by the State of Tennessee for the licensure area being pursued.
4. TBI Background Check
5. Completion of teacher aptitude survey

4. Requirements for full admission to TEP must be completed prior to the Clinical Teaching Semester and/or the semester candidates enroll in ICL 7993. They include:
    1. 3.25 graduate grade point average
    2. Passed Praxis II licensure exams

Passing scores on all required Praxis II Licensure Exams for Licensure and Graduation: Candidates participating in the Clinical Teaching Semester and/or ICL 7993 must submit a successful Teacher Performance Assessment (edTPA). Candidates who seek a Practitioner License must have a composite of 3.0 on the Teacher Evaluation used in their employing district.

Students must be provisionally admitted to the Teacher Education Program (TEP) before completing all Level I courses and starting Level II courses. (Level I Professional Core courses provide requisite foundations for teaching and should be completed before taking Level II Professional Specialization courses that focus on specialized strategies for teaching and learning in educational environments).

Students who do not apply to TEP or fail to maintain criteria during the program will not be allowed to continue in the program.

NOTE: MAT admission, TEP admission, and Graduate School admission are separate procedures.

Program Requirements

Students seeking licensure and the MAT degree must take a minimum of 30-46 graduate semester hours, depending on program and licensure area. Minimum hours may increase depending on licensure requirements. Students who are employed by a school district on a Practitioner License may have the Level III (clinical teaching semester) waived if they provide the necessary documentation to verify one year of successful teaching experience in their area of licensure with a composite Teacher Evaluation Score of 3.0 or higher. Students in this category should contact the Teacher Education Office in 202 Ball Hall for specific requirements. Please note that all initial licensure candidates, including candidates who on a Job-Embedded Practitioners License, must take ICL 7993, either along with clinical teaching semester or the last semester before applying for license if working on a Practitioner License. This course serves as the culminating experience and will require successful completion of the Teacher Performance Assessment (edTPA) to be able to be recommended for licensure.

Special Education Licensure Program Requirements

Students seeking Special Education Licensure and the MAT degree must complete the following requirements:

Special Education Level I Licensure Requirements:

EDPR 7110 - Erly Chldhd Dvlpmnt

(3) Introduction to contemporary theories, research and issues in young children's physical, cognitive, social, and emotional development with an emphasis on the cultural nature of development.

or

EDPR 7111 - Child Psyc App To Educ **

(3) (EDPS 7111-8111) Major theories of child psychology and their implications for educational practices with the preschool and elementary school child.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

or

SPED 7001 - Test Meas Excp Chl/Adul **

(3) Overview of psychoeducational assessment practices and issues with emphasis on educational and psychological tests used in special education; focus on informed interpretation of test data and implications for instructional practice. Field experience: Required. PREREQUISITE(S): SPED 7000

or

PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

ICL 7105 - Lang/Comm Inclusive Classrm **

(3) Instructing students with typical and exceptional communication needs. Includes interpreting speech/language assessment reports and designing instruction. Also use of augmentative and alternative communication devices and working with non-native English speaking students. Field Experience: Required. PREREQUISITE(S): SPED 7000 or equivalent

ICL 7106 - Prof/Eth Prac Inclusive Class **

(3) Education policy and practice: accountability, ethics, advocacy, and social challenges. Working with families and community stakeholders is highlighted. Instructional planning includes creating individual education plans, individual family service plans and transition planning. PREREQUISITE(S): SPED 7000 or equivalent.

Special Education Level II and III Licensure Requirements:

SPED 7211 - Academic Instruct Sped **

(3) Academic methods, remediation, and educational planning for individuals with disabilities. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7212 - Content Methods in Special Edu **

(3) Study of best practices and methods for mathematics, social studies and science instruction presently being used in special education and inclusive settings. Also curriculum for transition and daily living skills. The use of assistive technology for education is included. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7221 - Behavior Mgmt Spec Ed **

(3) Methods of changing behaviors of individuals with mild to severe disabilities in various educational settings. Field Experience Required. PREREQUISITE(S): SPED 7000 or equivalent.

SPED 7241 - Superv Practicm In Sped

(3-9) Enhanced practicum experience in settings with individuals who have disabilities. PREREQUISITE(S): Permission of instructor. Grades of S, U, or I will be given.

or

PSYC 7808 - Psychoed Assessmnt III

(3) Introduction to psychoeducational assessment of preschool children; includes issues surrounding early assessment, skill development with preschool instruments, and related report writing, conferencing.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Licensure areas (choose one):

Interventionist:

LITL 7553 - Literacy Dev K-4

(3) Teaching and assessing literacy development in grades K-4 with focus on major theories and current research. Additional field hours required. Restricted to students seeking licensure. PREREQUISITE(S): TEP admission.

Comprehensive (K-12):

SPED 6000 - Meth/Mat Modrt/Sevr Dis

(3) Curriculum, methods, and materials applicable to special educational needs of moderately/severly disabled learners, emphasizing educational and vocational skills that facilitate normalization and independent living.

SPED 6601 - Student Phys/Health Dis

(3) Emphasizes physical and educational modifications to facilitate learning and vocational skills; examines accessibility, movement patterns, prosthetic and augmentative communication devices, and supportive medical procedures. Includes practicum with students with physical/health impairments.

SPED 7042 - Fld Exp/Comprehen Sped

(3-6) Supervised experience(s) with individuals with moderate to severe disabilities in cooperation with university, local, state, and/or national education personnel. PREREQUISITE(S): Permission of instructor. Grades of S, U, or I will be given.

Early Childhood (PreK-1):

SPED 6601 - Student Phys/Health Dis

(3) Emphasizes physical and educational modifications to facilitate learning and vocational skills; examines accessibility, movement patterns, prosthetic and augmentative communication devices, and supportive medical procedures. Includes practicum with students with physical/health impairments.

SPED 7121 - Ed Prog Presc Ed/Disbl

(3) Methods involved in developmental assessment and educational planning for children with disabilities in pre-school years. PREREQUISITE(S): SPED 7000 OR SPED 7101-SPED 8101

SPED 7141 - Field Exper Early Child

(3-6) Observation and supervised experience in early childhood special education settings. PREREQUISITE(S): ECED 6540 and SPED 7121-SPED 8121 Grades of S, U, or I will be given.

Students in the Interventionist Licensure program are required

Students in the Interventionist Licensure program are required to complete a minimum of 116 clock hours of clinical/field experience during the day in special education settings prior to clinical teaching semester. Students in the Comprehensive and Early Childhood licensure programs are required to complete a minimum of 124 clock hours of clinical/field experience during the day in special education settings prior to clinical teaching semester. These field experiences will be incorporated into courses required for licensure.

MAT Degree Requirements:

In addition to the above:

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

ICL 7993 - Professional Seminar **

(3) An integrative capstone seminar for advanced post-baccalaureate teacher certification students; students will apply reflective, analytical, and critical thinking to selected issues regarding school curriculum, teaching methods, professional ethics, legal issues, leadership and advocacy, professional relations, communication, and problem solving.

Other Requirements

1. All students seeking teacher licensure must successfully pass clinical teaching semester or must document successful completion of professional experience in lieu of clinical teaching semester.
    1. Students who are employed by a school district on a Practitioner License issued by the State of Tennessee may have the Level III clinical teaching semester waived if they provide the necessary documentation to verify one year of successful teaching experience and composite score of 3 or higher on the Teacher Evaluation used by their employing district. They must also be successful with the Teacher Performance Assessment (edTPA) to be recommended for licensure. Students in this category should contact the Licensure Coordinator for specific requirements.
    2. Students must enroll in the appropriate clinical teaching semester course during clinical teaching semester.
    3. Applications for clinical teaching semester must be filed one semester before clinical teaching semester.
    4. Application for documenting successful completion of professional experience in lieu of clinical teaching semester must be filed at the beginning of the first month of the semester in which the candidate plans to complete the approved academic program leading to final licensure. The Teacher Performance Assessment (edTPA) must be completed during the semester the candidate on a Practitioner License plans to apply for their Professional License.
2. Licensure in Tennessee requires acceptable scores on specified Praxis II Tests of pedagogy and teaching content knowledge.
3. Validation of methods courses is not permitted.

Retention

To remain in the Master of Arts in Teaching (MAT) and the Teacher Education Program (TEP) the student must maintain a graduate grade point average of 3.25. Failure to maintain a 3.25 GPA will result in termination of a candidate's TEP status and will result in academic probation in the MAT program.

Speech-Language Pathology, (MA)

MA Degree Program

Program Admission

1. The admissions committee will review all completed applications. The deadline for applications is February 1 each year for the follow Fall semester. Students with background in Communication Sciences and Disorders are admitted in the fall semester only. Students with background in other areas are admitted in the summer semester. Applicants should have a GPA of 3.00 (on a 4 point system). GRE scores are required (General Test). Application instructions are available online at www.memphis.edu/csd/programs/profapply.php. Applicants should follow the application instructions on the website for current procedures.

2. Applicants should submit recommendations from at least three individuals familiar with the applicant's academic background and aptitude for graduate work in Speech-Language Pathology and submit a personal statement describing his/her professional goals and preparation for study in Speech-Language Pathology.

3. Students are expected to understand and use English proficiently.

Background Requirements

1. To be considered for admission, all applicants must have completed or be in the process of completing a baccalaureate degree from an accredited institution of higher learning. Previous academic preparation in audiology/speech-language pathology is not a requirement for admission.
2. Non-CSD basic science coursework necessary to meet U of M graduation, ASHA certification, and State Licensure includes:
    - Biological Science (3)
    - Statistics (3)
    - Behavioral/Social Science (6)
    - Physical Science (3)

If college-level credits for these courses have not been earned upon enrollment, they will need to be completed during the MA graduate program.

General Program Requirements

1. Students must complete a minimum of 60 credit hours and meet the academic and practicum requirements for the Certificate of Clinical Competence of the American Speech-Language-Hearing Association. Additional coursework will be required for those students without undergraduate preparation in audiology/speech-language pathology.
2. Full time study requires enrollment in clinical practicum, and students must obtain a 3.00 or above in at least 9 semester hours of clinical practicum, and must obtain a 3.00 or above in their last two semesters of clinical practicum. A minimum of 14 credit hours of AUSP 7200 and AUSP 7208/AUSP 8208 must be taken, but more hours may be required in order to meet certification standards.

3. A thesis or non-thesis option is available. Students choosing the non-thesis option must take a minimum of 3 credits of either AUSP 7990 - Special Projects or AUSP 7991 - Clinical-Research Colloquium or a combination of both. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

4. All students must successfully complete written comprehensive examinations.

Retention Requirements

All students enrolled in the School of Communication Sciences and Disorders are expected to attain high academic achievement and maintain professional and ethical conduct. In addition to Graduate School policy the criteria listed below will be used to determine the retention status of students enrolled in the School.

General Academic Performance:

1. Grades of less than 2.0 in required courses are considered unacceptable and must be repeated with a minimum grade of 2.00 in order to meet graduation requirements.
2. A student may count two grades of 2.00 toward their degree.Students have the option of repeating two courses in which a grade of 2.00 or less was earned. The student will be dismissed at the end of the semester in which a third grade of 2.00 or less has been earned.
3. Students are expected to maintain a cumulative grade point average of 3.00 at the end of each semester of enrollment at the University of Memphis. A GPA below 3.00 across two consecutive semesters may be grounds for dismissal.

Professional Performance:

1. Because the MA in Speech-Language Pathology is a professional practice degree, satisfactory acquisition of knowledge and skills for certification as prescribed by the American Speech-Language-Hearing Association is required. Failure to achieve any of these standards for clinical performance may result in dismissal from the program.
2. The cumulative grade of the first two semesters of clinical practicum (7200/7208) must be a B- (2.67) or greater. A cumulative clinic grade for the last five semesters must be at least 3.00. Students must obtain a B (3.00) or better in each of their last 2 semesters.
3. Students may be dismissed for any of the following:

- Failure to maintain appropriate standards of academic integrity or CSD Policies.
- Failure to follow the ASHA Code of Ethics.
- Failure to follow HIPAA guidelines.
- Failure to meet essential functions as specified in CSD Policy Number E-120.
- A grade of 1.67 or lower in clinic practicum will mandate a review within the School and may be grounds for dismissal.

Specific Requirements

Professional Background Coursework (6 hours, may be taken at the University of Memphis):

1. Audiology: Hearing Disorders/Evaluation (3),
2. Habilitation/Rehabilitation (3)

Speech-Language Pathology Minimum Degree Requirements:

(Required courses are marked with *, all others are electives)

Basic Communication Processes (15 hours minimum):

AUSP 7000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

AUSP 7002 - Sem Comm Sciences

(1-3) Advanced study of selected aspects of basic sciences related to hearing, speech, or language; with different content, may be repeated for up to 6 hours credit at 7000 level or up to 12 hours at 8000 level. PREREQUISITE(S): Permission of instructor.

AUSP 7003 - Anat Phys Spch Mech

(3) Structure and function of bodily organs related to the processes of speech production.

AUSP 7005 - Language Sample Analysis

(1) Covers procedures for collecting and interpreting language samples using specialized software and other methods.

AUSP 7006 - Lang & Speech Devel

(3) Normal acquisition and maintenance of speech and language, theoretical formulations about language and speech behavior, and approaches to its study. Students observe and describe the language of children of various ages whose development is within normal range.

AUSP 7007 - Commun Interaction

(3) Concepts and processes fundamental to communicative interaction; emphasis on application of such concepts and processes to the student's own communicative interactions.

AUSP 7008 - Acoustic/Percept Phonetics

(3) Survey of experimental phonetics: acoustic phonetic theory; speech perception theory and research; techniques of acoustic analysis and synthesis. PREREQUISITE(S): Permission of instructor.

AUSP 7010 - Neurol Bases Comm

(2) Review of the neuroanatomy of the central and peripheral nervous systems and the physiology of nerves and muscles; attention on cortical and subcortical structures and on neuropsychological processes that are attributed to speech and/or language functions. This course builds on fundamental concepts in language, speech and hearing.

AUSP 7011 - Psycholinguistics

(3) Historical and recent trends in linguistics; relationship between brain, language, and cognition; knowledge and processes involved in speaking and listening; topics include nature of mental representations and organization of knowledge; speech perception; lexical, sentence, and discourse processing; speech and language production.

AUSP 7016 - Sociocultrl Base Comm

(3) Influences of socio-cultural factors such as age, religion, ethnicity, socioeconomic status, and geographic region, on communication; emphasis on cross-cultural communication in educational and health-care settings.

Speech Disorders (6 hours minimum):

AUSP 7201 - Clft Palate/Craniofcl Dis

(3) Cleft palate speech with emphasis on articulatory, resonance, and phonatory aspects as well as medical and habilitative and rehabilitative principles. PREREQUISITE(S): AUSP 7003 and AUSP 7200 or permission of instructor.

AUSP 7202 - Motor Speech Dis/Child

(3) Speech deficits attributable to developmental neuromuscular disorder; etiologies and classifications of cerebral palsy, hormonal disturbances, myopathologies, and various genetic disorders; review of contemporary approaches to diagnosis and management of developmental dysarthria and apraxia; special problems associated with treating profoundly- and multiply-handicapped child. PREREQUISITE(S): AUSP 7003/AUSP 8003 and AUSP 7010/AUSP 8010 or permission of instructor.

AUSP 7203 - Voice Disorders

(3) In depth review of voice disorders by patterns of deviation, etiology, and techniques of intervention. Opportunity for original papers and/or projects. PREREQUISITE(S): AUSP 7003/AUSP 8003 or permission of instructor.

AUSP 7204 - Disorders Phonology/Articulatn

(3) Current research in disorders of phonology and articulation, including assessment, production, and remediation procedures.

AUSP 7205 - Fluency Disorders

(3) A discussion of the nature, assessment, and treatment of fluency problems including developmental stuttering, cluttering, and acquired fluency disorders. Clinical rationales and protocols for children, adolescents, and adults are presented along with a review of the critical variables that contribute to a successful therapeutic outcome.

AUSP 7206 - Developmental and Acquired Speech Motor Disorders

(3) Advanced study of the neurological and speech production characteristics associated with the dysarthrias and apraxia of speech that occur across the lifespan. This course will also provide students with strategies and tools for the assessment, differential diagnosis, classification, and interdisciplinary clinical management of these speech disorders in children and adults. PREREQUISITE(S): AUSP 7003/AUSP 8003 andAUSP 7010/AUSP 8010 or permission of instructor.

AUSP 7209 - Dysphagia/Related Disor

(3) Anatomy and physiology of normal deglutition; nature and characteristics of swallowing disorders; methods of evaluation and management of dysphagia in adults and children; and consideration of medical conditions such as aspiration pneumonia, tracheostomy, and other complicating factors associated with dysphagia. PREREQUISITE(S): AUSP 7003/AUSP 8003 and AUSP 7010/AUSP 8010 or permission of instructor.

AUSP 7210 - Sem Speech Pathology

(1-3) Selected areas of speech or language disorders. With different content, may be repeated for up to 6 hours at the 7000 level or for up to 12 hours at the 8000 level.

AUSP 7309 - Sp Rehab/Head-Neck Path

(3) Etiology, disordered anatomy, and physiology resulting from cancer of head and neck; ways in which cancer, surgery, and other medical treatments affect speech and voice functioning and swallowing; diagnostic and treatment approaches.

Language Disorders (6 hours minimum):

AUSP 7300 - Lang Dis In Children

(3) Perceptual, social, and cognitive correlates of language disorders associated with specific language impairment, phonological disorders, mental retardation, autism, and hearing impairment; assessment, diagnosis, and treatment of language disorders in young children (0-6 years).

AUSP 7302 - Lang Disordrs/Adults I

(4) This course addresses communicative and cognitive deficits associated with focal and non-focal neurological disease; differential diagnosis, assessment, and management of adults with aphasia and right hemisphere communication disorders; traumatic brain injury, dementia, and other disorders. PREREQUISITE(S): AUSP 7003/AUSP 8003 and AUSP 7010/AUSP 8010, or permission of instructor.

AUSP 7303 - Lang Disordrs/Adults II

(3) Communicative and cognitive deficits associated with nonfocal neurological disease; differential diagnosis, assessment, and management of individuals with traumatic brain injury, dementia, and other disorders. PREREQUISITE(S): AUSP 7003/AUSP 8003 andAUSP 7010/AUSP 8010 or permission of instructor

AUSP 7304 - Sem Lang Disorders

(1-3) Detailed study of selected topics in language disorders in children and adults. With different content, may be repeated for up to 6 hours at the 7000 level or 12 hours at the 8000 level. PREREQUISITE(S): Permission of instructor.

AUSP 7305 - Language Learning Disabilities

(3) Assessment and treatment of spoken and written language disorders in school-age children and adolescents with special emphasis on the collaborative role of the speech-language pathologist in school-based settings; attentional and social deficits associated with language-learning disabilities.

AUSP 7212 - Autism Spect Disord/Rel Disabl

(3) Review of characteristics and etiology of autism spectrum disorders, including strategies for language and communication evaluation, assessment, and intervention with children, adolescents and adults with autism spectrum disorders and related severe communicative disabilities.

Clinical Practicum (14 hours minimum):

AUSP 7200 - Intro Clin Pract

(2) Introduction to clinical practicum in speech and language disorders. For students without prior practical graduate experience in communication disorders. Normally taken concurrently with AUSP 7501.

AUSP 7208 - Clin Exp Spch Lang Path

(1-3) Supervised clinical practice with clients. Designed to meet student's individual needs. May be repeated as often as desired Grades of A-F, or IP will be given.

Other Courses (8 hours required):

AUSP 7500 - Eval Resrch Comm Disord

(1-3) A discussion of concepts and skills that prepare students to be intelligent consumers of research. Topics include the interpretation of basic statistical concepts, forms of empirical research, threats to internal and external validity,

research designs, and issues related to evidence based practice, the publishing process, the protection of research participants, and writing with precision.

AUSP 7501 - Phonetic Transcript

(1) Broad and narrow transcription techniques and opportunities for transcription practice with normal and disordered populations.

AUSP 7207 - Clinical Instrumentation

(1-3) Principles and procedures for measurement of speech and voice function and dysfunction; standardization, validity, and reliability of instrumental procedures; hands-on experience with acquisition and interpretation of acoustic and physiologic data for speech pathologies.

AUSP 7505 - Interprofessional Educ & Pract

(1-3) Provides Interprofessional Education and Practice (IPE/IPP) training focused on communication and collaboration through team-based approaches to the planning and delivery of person-centered care. Students learn IPE/IPP principles, review case studies, and engage in clinic- and community-based IPE/IPP experiences. Grades of S,U, or I will be given.

Certification and State Licensure

School degree requirements meet the academic and clinical training requirements for certification by the American Speech-Language-Hearing Association, teacher certification, and state licensure.

Sport and Hospitality Management – Hospitality Management Concentration, (MS)

MS Degree Program

Program objectives are: (1) to recognize the diverse nature of subject matter embodied within the respective program disciplines; (2) to prepare students to serve in management and leadership positions in the sport or hospitality industry (3) to understand the research findings and theoretical constructs undergirding the respective disciplines; and (4) to understand the critical role of diversity in delivering inclusive hospitality or sport science services.

Admission Requirements

1. Prospective students must apply to both the Graduate School and the the Kemmons Wilson School of Hospitality and Resort Management (KWS). In both cases, the applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an applicant seeking admission is not required to submit GRE scores. However, official GRE, GMAT, LSAT, or other standardized test scores may be requested by KWS faculty or submitted to support an application.
2. An applicant must also submit the following to the department: 1) KWS Graduate Admission Application Form, 2) two letters of recommendation, 3) an updated resume or curriculum vita, and 4) a 300-500 word statement of goals. (Contact the school's academic services coordinator for application forms. The KWS application forms are also available on-line.

3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5.

4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses in sport management, hospitality, culinary, casino management, economics, finance, marketing, public relations, communications, commercial recreation, event management, resort management, and/or tourism.

5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.

6. Student admissions to the Sport and Hospitality Management (SHM) major are differentially restricted to enable Graduate Faculty to closely mentor their students. To ensure maximum consideration for admission into the major, the SHM admissions committee abides by the Graduate School's established timeline for application (domestic and international). The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE/GMAT/LSAT scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

The required number of credit hours is 33.

Program Core (6 hours):

SPRT 7010 - Research&Data Analysis in SHM **

(3) Overview of systematic, structured problem solving for decision making in sport and hospitality management services. Overview of research concepts, ethical issues, and process. Includes introduction to qualitative and quantitative research designs, data collection, analysis, and dissemination of findings.

SPRT 7321 - Theoretical Foundations **

(3) Influence of historical, philosophical, and social elements upon sport and leisure management policies, practices, and programs.

Hospitality Management Concentration Requirements (15 hours):

HPRM 7111 - Hospitality Grad Study Seminar

(1) (7029) The course will consist of readings, projects, case studies, and Restricted by program or permit required. Required of all School Psychology doctoral candidates. PREREQUISITE(S): Psychology graduate student or permission of instructor.

HPRM 7200 - Hospitality Studies Seminar

(2) This seminar is designed to provide an orientation for new graduate students who have been admitted to the Hospitality management program about graduate studies. Most students in this course are either beginning MS students in the hospitality management program. The focus of all course activities, therefore, is on familiarizing the student with graduate studies and requirements for a MS degree in hospitality management.

HPRM 7320 - Advanced Hospitality Marketing

(3) (7030) The course provides an overview of the function of marketing as it relates to the hospitality industry. Important topics include marketing concepts, service characteristics, marketing environment and intelligence, marketing research, marketing mix, segmentation, targeting positioning, distribution channels, and new media marketing techniques. Special emphasis will be placed on the analysis of the marketing environment and the diversity of marketing practices used by hospitality marketers in today's global market place.

HPRM 7331 - Hospitality Services Op Mgmt

(3) Theory, application, and understanding of hospitality services operations, methods and practices. Integration of new trends and technology encompassing a global perspective.

HPRM 7340 - Strategic Pricing & Revnue Max

(3) (7039) Strategies and tactics employed in pricing of hospitality goods and services. Principles and concepts of strategic pricing and strategic financial management for revenue maximization. PREREQUISITE(S): PSYC 7302 or equivalent.

HPRM 7442 - Adv Strtg Mgmt in Hosp

(3) Capstone experience with strategic decision-making principles in hospitality/tourism. Application of skills, knowledge and understanding of areas of concern for formulating and implementing operational strategies.

Successful completion of an oral or written comprehensive examination

Successful defense of the Applied Project or Thesis may serve this purpose.

Consult Graduate School Calendar for submission deadlines.

Guided electives selected with approval of the advisor (6-9 hours)

Culminating Experience (3-6 hours)

Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

HPRM 7996 - Thesis

(1-6) Application for writing a thesis must be filled out on an approved form after consultation with the major professor and filed with the Coordinator of Graduate Programs. Grades of S, U, or IP will be given.

or

HPRM 7911 - Hospitality Grad Internship

(3) Hospitality Internship is a specialized class where graduate students enrich their education through experiential learning at a hospitality organization or sites approved by the KWS. Prior to beginning the internship, students must complete the required internship application form, submit a detailed description of their planned activities and educational objectives for the internship, and make arrangements with an internship site to host them for the internship. In order to pass the internship, students must fulfill their original educational objectives, receive a favorable review from their internship supervisor, and submit all required assignments.

or

HPRM 7950 - Applied Project in Hospitality

(3) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee. PREREQUISITE(S): Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of instructor.

Intent to Graduate submission deadlines

Consult Graduate School Calendar for Intent to Graduate submission deadlines.

Program Retention Policy

All MS degree students are regularly monitored for completion of any entry-level deficiencies by graduate faculty.

Program retention committees, comprised of selected graduate faculty within the corresponding programs of study, monitor the academic progress of all MS degree candidates in the respective programs. Each committee determines whether or not the student is making sufficient progress and, in case of deficiencies, may recommend additional work or the dismissal of the student from the program. For any student recommended for dismissal, an appeals process is available.

Sport and Hospitality Management – Sport Commerce Concentration, (MS)

MS Degree Program

Program objectives are: (1) to recognize the diverse nature of subject matter embodied within the respective program disciplines; (2) to prepare students to serve in management and leadership positions in the sport or hospitality industry (3) to understand the research findings and theoretical constructs undergirding the respective disciplines; and (4) to understand the critical role of diversity in delivering inclusive hospitality or sport science services.

Admission Requirements

1. Prospective students must apply to both the Graduate School and the the Kemmons Wilson School of Hospitality and Resort Management (KWS). In both cases, the applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an applicant seeking admission is not required to submit GRE scores. However, official GRE, GMAT, LSAT, or other standardized test scores may be requested by KWS faculty or submitted to support an application.
2. An applicant must also submit the following to the department: 1) KWS Graduate Admission Application Form, 2) two letters of recommendation, 3) an updated resume or curriculum vita, and 4) a 300-500 word statement of goals. (Contact the school's academic services coordinator for application forms. The KWS application forms are also available on-line.

3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5.

4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses in sport management, hospitality, culinary, casino management, economics, finance, marketing, public relations, communications, commercial recreation, event management, resort management, and/or tourism.

5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.

6. Student admissions to the Sport and Hospitality Management (SHM) major are differentially restricted to enable Graduate Faculty to closely mentor their students. To ensure maximum consideration for admission into the major, the SHM admissions committee abides by the Graduate School's established timeline for application (domestic and international). The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE/GMAT/LSAT scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

The required number of credit hours is 33.

Program Core (6 hours):

SPRT 7010 - Research&Data Analysis in SHM **

(3) Overview of systematic, structured problem solving for decision making in sport and hospitality management services. Overview of research concepts, ethical issues, and process. Includes introduction to qualitative and quantitative research designs, data collection, analysis, and dissemination of findings.

SPRT 7321 - Theoretical Foundations **

(3) Influence of historical, philosophical, and social elements upon sport and leisure management policies, practices, and programs.

Sport Commerce Concentration Requirements:

SPRT 7031 - Sport Finance

(3) Provides an understanding of the current financial status of the various sectors of the sport industry as well as the strategies frequently implemented by financial managers within the industry.

SPRT 7420 - Sport Marketing **

(3) Basic market concepts with applications to sport and leisure organizations, including urban sport and leisure market consumer behavior, strategic market planning, marketing mix component integration, and market information management PREREQUISITE(S): PREREQUISITE: MKTG 3010 and 4901 (or equivalents); or MKTG 7060; or permission of instructor.

SPRT 7440 - Promotions in Sport Commerce **

(3) A study of marketing communication principles and practices as they relate to sport and leisure from a theoretical, as well as practical perspective; special emphasis on building and maintaining effective media relations, advertising, sponsorship, licensing, public relations, sales, and after-marketing tactics.

SPRT 7503 - Strat Mgmt Sprt Cmrce Org

(3) Analysis of theoretical and practical issues relevant to management and administration of sport and leisure organizations; application of organizational analysis, managing change and external environments; understanding and managing power and organizational culture of sport commerce.

Guided electives selected with approval of the advisor (9-12 hours)

Culminating Experience (3-6 hours)

Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

HPRM 7996 - Thesis

(1-6) Application for writing a thesis must be filled out on an approved form after consultation with the major professor and filed with the Coordinator of Graduate Programs. Grades of S, U, or IP will be given.

or

SPRT 7605 - Practicum in SPRT **

(3) Culminating experience allows students to demonstrate knowledge and skills in an appropriate professional setting based on their training and skills. Should be conducted after all other course work is complete. Grades of S, U, or IP will be given.

or

SPRT 7950 - Applied Project in SPRT

(1-6) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee. PREREQUISITE(S): PREREQUISITE: Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of instructor. Grades of S, U, or IP will be given.

Successful completion of an oral or written comprehensive examination

Successful defense of the Applied Project or Thesis may serve this purpose.

Consult Graduate School Calendar for submission deadlines.

Intent to Graduate submission deadlines

Consult Graduate School Calendar for Intent to Graduate submission deadlines.

Program Retention Policy

All MS degree students are regularly monitored for completion of any entry-level deficiencies by graduate faculty.

Program retention committees, comprised of selected graduate faculty within the corresponding programs of study, monitor the academic progress of all MS degree candidates in the respective programs. Each committee determines whether or not the student is making sufficient progress and, in case of deficiencies, may recommend additional work or the dismissal of the student from the program. For any student recommended for dismissal, an appeals process is available.

Theatre - Design and Technical Production Concentration, (MFA)

MFA Degree Program

Program Admission

Admission to the program is competitive and is not automatic upon meeting minimum admission requirements. Students are selected from the pool of qualified applicants; the number of students admitted yearly depends on the availability of program resources required to maintain a high level of student/faculty contact and professional training.

Program Requirements

1. Admission to the Graduate School. Note that the Department of Theatre and Dance requires a grade point average of at least 2.5 from an accredited undergraduate institution. As well, the department will require evidence of suitable academic preparation, typically demonstrated by performance in course work in the undergraduate major and/or a writing sample.
2. Submission of a separate departmental application identifying prior theatre education and experience and professional goals. Departmental applications are available from the Department of Theatre and Dance website: http://www.memphis.edu/theatre/
3. An interview with appropriate program faculty either at the university or at a regional or national conference.

Degree Requirements (21 hours)

1. Successful completion of a minimum of 60 semester hours of graduate credit approved by the student's Graduate Advisory Committee. A minimum of 70% (42 hours) of the total required hours must be 7000 level courses. A minimum GPA of 3.0 is required for graduation.
2. All students in the program must take the following core courses:

THEA 7564 - Thea Collab & Style

(3) Exploration of elements of style as they pertain to concept development for theatrical production; engagement in dynamics of the collaborative process.

THEA 7581 - Sem Drama Theory/Crit

(3) Major documents in dramatic theory and criticism from Aristotle to present. Offered alternate years.

THEA 7582 - Analysis Dramatic Lit

(3) The dramatic text as basis for unified and purposeful production concept; advanced techniques of director and scenographer used to solve artistic/practical problems of specific plays. Offered alternate years.

THEA 7600 - Internship

(1-6) Supervised work completed in a professional setting. Repeatable for a maximum of 6 hours.

THEA 7995 - Production Practicum

(3-6) Creative performance or production project suitable for public presentation and/or a practical application. Project to be determined in consultation with and directed by the student's supervisory committee. Grades of S, U, or I will be given.

Design and Technical Production Group (39 hours)

Each 2 credit course must be taken with 1-credit 7300 level.

THEA 6511 - Automation & Mechanization

(2) Training in the typical applications of pneumatic, hydraulic, and motorized systems as well as electronic and automated controls of these systems. NOTE: Offered alternate years.

THEA 6513 - Digital Fabrication

(2) Training in digital fabrication equipment such as a laser cutter, 3D printer and CNC router to improve the student's knowledge and skill level. Outcomes include proficiency in 3D drafting, 3D scale model creation and layout techniques. NOTE: Offered alternate years.

THEA 6516 - Technical Direction

(2) Lecture/laboratory for theatre technicians to include production organization and safety, engineering, rigging, materials control, and supply ordering. NOTE: Offered alternate years.

THEA 6517 - Scenic Painting II

(2) Examination of advanced scenic art techniques including additive and subtractive sculpting in the creation of dimensional objects such as cartouches, relief carvings, sculptures, and other dimensional scenic elements. PREREQUISITE(S): THEA 3561.

THEA 6555 - Scenic Technology

(2) Lecture/laboratory using traditional and contemporary materials and scenic technologies including rigging, metals and welding, wood working, and plastics. NOTE: Offered alternate years. May be repeated for maximum of 4 credit hours with permission of instructor. PREREQUISITE(S): Permission of instructor.

THEA 6556 - Lighting and Sound Technolgy

(2) The examination theatre technology, with an emphasis on technical projects as associated with the responsibilities of a production electrician and sound engineer. Topics include instrumentation and equipment, electricity and

electronic, control and mixing systems, operational and maintenance principles and procedures for stage electricians and audio engineers. NOTE: Offered alternate years.

THEA 6557 - Costume Technology I

(2) Topics in costume construction techniques employing both traditional and experimental methods. Emphasis on professional entertainment portfolio development. Topics include: pattern and fit for the designer, dyeing, painting, and fabric modification costume crafts. May be repeated for a maxmium of 6 hours credit. PREREQUISITE(S): Permission of instructor.

THEA 6592 - Thtr Arch/Facilty Plan

(3) Processes and techniques employed by theatre planners in design and construction/renovation of theatrical spaces and structures; includes survey of theatre forms, historical development of theatrical structures and spaces, programming methods and procedures, specification, renovation techniques, multi-use structure concepts, and consultation procedures and practices. Offered alternate years.

THEA 7312 - Rigging Studio

(1) Designed to build upon the student's existing basic rigging skills and knowledge of equipment with primary focus on safety for the various production areas of theatre. NOTE: Offered alternate years.

THEA 7314 - Collaborative Models for Theatre Professionals

(1) An examination of how to navigate the various theatre models (LORT, Not-for-profit, etc...) and work with the key collaborative players (producers, artistic directors, various designers) and bridge the gap between graduate student and theatre professional. NOTE: Offered alternate years.

THEA 7315 - Prof Tech Manage Prac

(1) The investigation and application of management skills for prospective supervisory positions in production work in theatre. Topics include hiring practices; planning, organizing and scheduling of production seasons; resource management; and supervision and effective use of crews. NOTE: Offered alternate years.

THEA 7316 - CAD for Theatre

(1) Advanced application of CAD to production areas in theatre. Emphasis on industry standards and expectations through realized projects and working documents. NOTE: Offered alternate years.

Thea 7317 - Production Seminar

(1) Seminar discussion on the active design research on the technical aspects of design (e.g. Set, Lights, Costume, or Sound) work. Season and classroom work will be presented based on production and class deadlines. Topics dependent on concentrated area of discussion. NOTE: Offered alternate years.

THEA 7546 - Visual History I

(3) Visual history up to the pre-Victorian era. The first half of the semester will examine the subject through a scenic design lens: external (architectural) and internal (interior design) from the Paleolithic to Romanticism, while the second

half will focus on costume design. The information will provide a common knowledge base to aid in the theatrical collaboration between a director/designer or design team members. NOTE: Offered alternate years.

THEA 7547 - Visual History II

(3) Visual history from the Victorian era to Modern day. The first half of the semester will examine the subject through a scenic design lens: external (architectural) and internal (interior design), while the second half will focus on costume design. The information will provide a common knowledge base to aid in the theatrical collaboration between a director/designer or design team members. NOTE: Offered alternate years.

THEA 7561 - Scenic Design I

(2) The use of theatrical rendering as the primary communication tool between a director and designer. Topics include examination of performance spaces, rendering techniques and presentation practices. NOTE: Offered alternate years. PREREQUISITE(S): Permission of instructor.

THEA 7562 - Lighting Design I

(2) Investigation of the art of theatrical lighting design; script analysis, creative design processes and aesthetics, cue techniques, design styles and forms, procedures and practices for working designers and criticism of lighting design. Research work and staged scenes required. NOTE: Offered alternate years.

THEA 7563 - Costume Design I

(2) Exploration/application of aesthetic principles and practical production concerns of costume design; special consideration to interpretation of dramatic text through design and fabrication, employing a variety of rendering processes in the studio environment. Emphasis on professional practice for the entertainment industry, and portfolio development. NOTE: Offered alternate years. PREREQUISITE(S): Permission of instructor.

THEA 7565 - Costume Design II

(2) An advanced course in costume design study with emphases on design process and executive expectations/solutions. Topics to include: Composition, Styling, Fit, Period Style, Fabrications and Creative Invention. NOTE: Offered alternate years. May be repeated up to 4 credits with permission of instructor.

THEA 7566 - Sound Design I

(2) Investigation of the art of theatrical sound design; script analysis, creative design processes and aesthetics, cue techniques, design styles and forms, procedures and practices for working designers and criticism of sound design. NOTE: Offered alternate years.

THEA 7567 - Scenic Design II

(2) Scenic design will be explored through in depth exercises, specifically theatrical model building, that are intended to develop, critical thinking, priority analysis, design skills, and presentation technique. NOTE: Offered alternate years. PREREQUISITE(S): Permission of instructor. COREQUISITE(S): THEA 7313.

THEA 7569 - Lighting Design II

(2) Advanced investigation of the art of lighting design; alternate design events, creative design processes, aesthetics and programming techniques. NOTE: Offered alternate years.

THEA 7592 - Professional Theatre Practice

(3) Procedures and practices for career success in several aspects of professional theatre: job searching, interviewing, self-promotion, theatrical production management, and grant writing.

- Elective (2)
- Elective (2)

Graduation Requirements

1. Successful completion of a minimum of 60 semester hours of graduate credit approved by the student's Graduate Advisory Committee. A minimum of 70% (42 hours) of the total required hours must be 7000 level courses. A minimum GPA of 3.0 is required for graduation.
2. All students with a specialization in Design and Technical Production must take an additional thirty-nine hours of courses determined in consultation with their graduate advisory committee.
3. All students studying Design and Technical Production must read and annotate between 22 and 28 faculty mandated texts pertinent to the degree prior to their Comprehensive Examination. There are 22 texts required of all Design and Technical Production students. Each area of focus (lighting, sound, set, costume, technical production) within the specialization requires its students to read a number of texts (in addition to the 22 texts) pertinent to their particular focus - (lighting 6 texts, sound 4 texts, set 4 texts, costume 4 texts and technical production 3 texts).
4. All M.F.A. candidates must complete:

    - **Plan of Study.** Complete a proposed Plan of Study for the initial Advisory Committee meeting. When approved, place a paper copy in the student's file.

    - **M.F.A. Internship**. To be approved, scheduled, and evaluated by the student's Advisory Committee.

    - **Practicum Project.** To be approved, scheduled, and evaluated by the student's Advisor Committee.

Other Requirements

Satisfactory completion of a comprehensive examination.

Graduate Advisory Committee

Each student will have a Graduate Advisory Committee. The functions of the committee shall be:

- To approve the three-year Plan of Study (which may include remedial work).
- To monitor academic and artistic progress.
- To monitor quality and quantity of participation in the theatre production program.
- To approve and evaluate production projects, the Production Practicum Project, the internship, and the comprehensive examination.

Annual Progress Review

Progress in the MFA program involves more than the successful completion of academic course work. Artistic progress and engagement in the theatre production program of the department are also required.

1. MFA Portfolio Review: Each year all design students will meet with the design faculty and all directing students with the directing faculty for Portfolio Review. At that time, the student's competencies, artistic progress, and professional presentational skills will be evaluated.
2. Graduate Review: Following each semester's Graduate Advisory Committee meeting with the student, the full faculty will meet to review the status and progress of each student. Possible outcomes of the evaluation process include:
    1. continuance in the program without condition;
    2. continuance in the program with conditions; or
    3. non-continuance in the program.
3. Note: A more detailed discussion of program requirements may be found in the Department of Theatre and Dance Graduate Handbook available from the department office.

Theatre - Directing Concentration, (MFA)

MFA Degree Program

Program Admission

Admission to the program is competitive and is not automatic upon meeting minimum admission requirements. Students are selected from the pool of qualified applicants; the number of students admitted yearly depends on the availability of program resources required to maintain a high level of student/faculty contact and professional training.

Program Requirements

1. Admission to the Graduate School. Note that the Department of Theatre and Dance requires a grade point average of at least 2.5 from an accredited undergraduate institution. As well, the department will require evidence of suitable academic preparation, typically demonstrated by performance in course work in the undergraduate major and/or a writing sample.
2. Submission of a separate departmental application identifying prior theatre education and experience and professional goals. Departmental applications are available from the Department of Theatre and Dance website: http://www.memphis.edu/theatre/
3. An interview with appropriate program faculty either at the university or at a regional or national conference.

Degree Requirements (21 hours)

1. Successful completion of a minimum of 60 semester hours of graduate credit approved by the student's Graduate Advisory Committee. A minimum of 70% (42 hours) of the total required hours must be 7000 level courses. A minimum GPA of 3.0 is required for graduation.
2. All students in the program must take the following core courses:

THEA 7564 - Thea Collab & Style

(3) Exploration of elements of style as they pertain to concept development for theatrical production; engagement in dynamics of the collaborative process.

THEA 7581 - Sem Drama Theory/Crit

(3) Major documents in dramatic theory and criticism from Aristotle to present. Offered alternate years.

THEA 7582 - Analysis Dramatic Lit

(3) The dramatic text as basis for unified and purposeful production concept; advanced techniques of director and scenographer used to solve artistic/practical problems of specific plays. Offered alternate years.

THEA 7600 - Internship

(1-6) Supervised work completed in a professional setting. Repeatable for a maximum of 6 hours.

THEA 7995 - Production Practicum

(3-6) Creative performance or production project suitable for public presentation and/or a practical application. Project to be determined in consultation with and directed by the student's supervisory committee. Grades of S, U, or I will be given.

All students with a concentration in Directing must take the following courses:

THEA 7521 - Stage Direction

(3) Processes of stage direction from script interpretation to rehearsal and performance with emphasis on the collaborative interplay between stage director and designer; traditional and non-traditional theatrical modes; directing projects required.

THEA 7526 - Directing Studio

(3) Seminar/practicum investigation of advanced techniques of the stage director; styles of production, creative interpretation of established dramatic literature and/or creation of original work for the stage. Directing project required. Repeatable for a maximum of 9 hours.

THEA 7526 - Directing Studio (2nd year Project)

THEA 7553 - Styles Of Directing

(3) Exploration of directing styles as influenced by environments of historical periods or genres. Topics may change. Directing projects required. NOTE: Offered alternate years. Repeatable for a maximum of 6-hours with permission of instructor.

THEA 7554 - Seminar In Directing

(3) Conceptual and practical studies in stage direction with emphasis on the collaborative interplay between stage director and actor. Directing projects required. Repeatable for a maximum of 6 hours with permission of instructor.

THEA 7546 - Visual History I

(3) Visual history up to the pre-Victorian era. The first half of the semester will examine the subject through a scenic design lens: external (architectural) and internal (interior design) from the Paleolithic to Romanticism, while the second

half will focus on costume design. The information will provide a common knowledge base to aid in the theatrical collaboration between a director/designer or design team members. NOTE: Offered alternate years.

THEA 7547 - Visual History II

(3) Visual history from the Victorian era to Modern day. The first half of the semester will examine the subject through a scenic design lens: external (architectural) and internal (interior design), while the second half will focus on costume design. The information will provide a common knowledge base to aid in the theatrical collaboration between a director/designer or design team members. NOTE: Offered alternate years.

One of the History / Literature Courses:

THEA 6544 - Gay and Lesbian Dramatic Literature

(3) An overview of the theatre and dramatic literature reflecting the gay and lesbian experience in America during the 20th and 21st centuries. NOTE: Offered alternate years.

THEA 6548 - Musical Theatre History

(3) Survey of the shaping forces, history, art and craft of American musical. (Offered alternate years)

THEA 6549 - Theatre History

(3) Shaping forces and theatrical forms from early civilization to the present time, with an emphasis on Western culture. Offered alternate years.

THEA 6539 - Contemporary Theatre History

(3) An examination of the movement and trends in theatre during the 20th and 21st centuries.

Graduation Requirements

1. Successful completion of a minimum of 60 semester hours of graduate credit approved by the student's Graduate Advisory Committee. A minimum of 70% (42 hours) of the total required hours must be 7000 level courses. A minimum GPA of 3.0 is required for graduation.
2. All students studying Directing must read and annotate 45 bibliographies that have been selected by the faculty for the specific area of study. The bibliographies must be read and annotated prior to the Comprehensive Examination date.
3. All M.F.A. candidates must complete:
    - **Plan of Study.** Complete a proposed Plan of Study for the initial Advisory Committee meeting. When approved, place a paper copy in the student's file.
    - **M.F.A. Internship**. To be approved, scheduled, and evaluated by the student's Advisory Committee.
    - **Practicum Project.** To be approved, scheduled, and evaluated by the student's Advisory Committee.

Other Requirements

Satisfactory completion of a comprehensive examination.

Graduate Advisory Committee

Each student will have a Graduate Advisory Committee. The functions of the committee shall be:

- To approve the three-year Plan of Study (which may include remedial work).
- To monitor academic and artistic progress.
- To monitor quality and quantity of participation in the theatre production program.
- To approve and evaluate production projects, the Production Practicum Project, the internship, and the comprehensive examination.

Annual Progress Review

Progress in the MFA program involves more than the successful completion of academic course work. Artistic progress and engagement in the theatre production program of the department are also required.

1. MFA Portfolio Review: Each year all design students will meet with the design faculty and all directing students with the directing faculty for Portfolio Review. At that time, the student's competencies, artistic progress, and professional presentational skills will be evaluated.
2. Graduate Review: Following each semester's Graduate Advisory Committee meeting with the student, the full faculty will meet to review the status and progress of each student. Possible outcomes of the evaluation process include:
    1. continuance in the program without condition;
    2. continuance in the program with conditions; or
    3. non-continuance in the program.
3. Note: A more detailed discussion of program requirements may be found in the Department of Theatre and Dance Graduate Handbook available from the department office.

Audiology, (AuD)

AuD Program

Program Admission

1. The admissions committee will review all completed applications. The deadline for applications is February 1 each year for the following Fall semester. Students with background in Communication Sciences and Disorders are admitted in the fall semester only. Students with background in other areas are admitted in the summer semester. Students should have a GPA of 3.00 (on a 4-point system). GRE scores are required (General Test). Application instructions are available online at www.memphis.edu/csd/programs/profapply.php. Applicants should follow the application instructions on the website for current procedures.

2. Applicants should submit recommendations from at least three individuals familiar with the applicant's academic background and aptitude for graduate work in Audiology and submit a personal statement describing his/her professional goals and preparation for study in Audiology.

3. Students are expected to understand and use English proficiently.

Assumed Background

1. To be considered for admission, all applicants must have completed or be in the process of completing a baccalaureate degree from an accredited institution of higher learning. Previous academic preparation in audiology/speech-language pathology is not a requirement for admission.
2. The AuD program assumes that students have basic coursework in the biological, physical, mathematical, and social/behavioral sciences, as shown below, by the time of graduation. In addition, students are required to have completed two courses in speech-language development/disorders in order to meet program graduation requirements. This coursework should be completed at the undergraduate level. However, if not, this coursework may be taken during the AuD program at the University of Memphis and is not required for admission.

   Biological Science (3)
   Mathematical Science (3)
   Physical Sciences (3)
   Behavioral Sciences (3)
   Speech-Language Development (3)
   Speech-Language Disorders (3)

General Program Requirements

1. Students must complete a minimum of 99 credit hours and meet the academic and practicum requirements for certification in audiology. Additional coursework will be required for those students without undergraduate preparation in audiology/speech-language pathology.
2. A maximum of 24 credit hours in AUSP 8104 and a maximum of 6 credit hours in AUSP 8125 may be counted toward meeting the 99 credit hour graduation requirement.
3. Students must achieve a grade of 3.00 or better in AUSP 8104 in their last two semesters in residence.
4. All students must complete an individual research project (AUSP 8121) for a minimum of 4 hours credit.
5. All students must successfully complete an oral qualifying examination.
6. All students must successfully complete a comprehensive examination containing both written and oral components.

Retention Requirements

All students enrolled in the School of Communication Sciences and Disorders are expected to attain high academic achievement and maintain professional and ethical conduct. In addition to Graduate School policy, the criteria listed below will be used to determine the retention status of students enrolled in the School.

1. Grades of less than 2.00 in a required course are considered unacceptable. These courses must be repeated with a minimum grade of 2.00 in order to meet graduation requirements.
2. A student may count two grades of 2.00 toward their degree. Students have the option of repeating two courses in which a grade of 2.00 or less was earned. The student will be dismissed at the end of the semester in which a third grade of 2.00 or less has been earned.
3. Students are expected to maintain a cumulative grade point average of 3.00 at the end of each semester of enrollment at the University of Memphis. A GPA below 3.00 across two consecutive semesters may be grounds for dismissal.
4. Students may be dismissed for any of the following:
    - Failure to maintain appropriate standards of academic integrity or CSD Policies.
    - Failure to follow the ASHA and AAA Codes of Ethics.
    - Failure to follow HIPAA guidelines.
    - Failure to pass the oral qualifying examination.
    - Failure to pass the comprehensive examination (including both written and oral components).
    - Failure to meet essential functions as specified in CSD Policy Number E-120.
    - A grade of less than 2.00 in clinic practicum will mandate a review within the School and may be grounds for dismissal.

Externship in Audiology

All students will complete an externship during the fourth year of the program, which is consistent with current accreditation requirements. To be eligible for the externship the student must have completed all academic coursework, including the research project, and successfully passed the comprehensive examination. Externship placement is obtained in coordination with the Director of Clinical Services in Audiology. Successful completion of the externship must include the approval of the Director of Clinical Services in Audiology and the Associate Dean of Graduate Studies. The externship provides a comprehensive training environment for students to expand and sharpen their clinical skills. Externships may be in either paid or unpaid positions.

Specific Requirements

AuD Degree Requirements (99 hours):

Basic Science Coursework (18 Hours):

AUSP 8001 - Psychoacoustics

(3) Basic acoustics, psychoacoustical methods, and psychoacoustical findings presented with emphasis on matters of greatest importance for foundations of audiological practice.

AUSP 8007 - Commun Interaction

(3) Concepts and processes fundamental to communicative interaction; emphasis on application of such concepts and processes to the student's own communicative interactions.

AUSP 8008 - Acoustic/Percept Phonetics

(3) Survey of experimental phonetics: acoustic phonetic theory; speech perception theory and research; techniques of acoustic analysis and synthesis. PREREQUISITE(S): Permission of instructor.

AUSP 8013 - Instr, Calib, & Hear Conserv

(3) Professional and legal roles and responsibilities of audiologists with regard to clinical instrumentation, equipment calibration, measurement of signals in clinical audiology, and implementation of hearing conservation programs.

AUSP 8019 - Anat/Phys Aud Sys I

(3) Basic anatomy and physiology of the outer ear, middle ear, and inner ear; embryologic origins and development of structures related to body systems.

AUSP 8020 - Anat/Phys Aud Sys II

(3) The nervous system, visual and proprioceptive systems as they relate to hearing and balance. PREREQUISITE(S): AUSP 8019 or permission of instructor.

Major Area Coursework (39 Hours):

AUSP 8101 - Audiol Concepts

(3) Basic audiological concepts and their applicability to clinical procedures; topics include pure-tone air and bone conduction procedures, clinical masking, speech threshold and recognition testing, acoustic immittance, and acoustic reflex testing; weekly laboratory exercises included.

AUSP 8103 - Diag/Medical Audiology

(3) Differential diagnosis of hearing loss including behavioral and acoustic (otoacoustic emissions) tests and introduction to electrophysiologic tests; clinical decision analysis; medical audiology; cerumen management. PREREQUISITE(S): AUSP 8019, AUSP 7101/AUSP 8101 or permission of instructor. COREQUISITE(S): AUSP 7104/AUSP 8104

AUSP 8105 - Vestibular Assmt/Rehab

(3) Evaluation of balance function using a test battery approach according to cross-check principles; interpretation of test results and rehabilitation of balance disorders. PREREQUISITE(S): AUSP 7103/AUSP 8103 , or permission of instructor.

AUSP 8107 - Auditory Implant Technology

(3) Cochlear implant technology, signal processing, candidacy, surgery, speech perception performance, and follow-up for adults and children; implantable hearing devices, such as middle ear implants and bone-anchored hearing aids.

AUSP 8110 - Studebaker Lectures

(1-3) Lecture series covering broad range of topics presented by nationally and internationally recognized scholars in the areas of audiology, hearing science, and medicine. Grades of A-F, or IP will be given.

AUSP 8113 - Intro to Audiologic Rehab

(3) Roles of auditory, visual, and bisensory cues in communication: effects of hearing impairment on speech and language development; communication strategies; psychology of deafness and deal culture; prosthetic devices. PREREQUISITE(S): AUSP 8101,AUSP 6106,AUSP 7106 or permission of instructor.

AUSP 8114 - Intro Hearing Aids

(3) Performance and measurement of wearable hearing aids; characteristics of hearing aids, standard and nonstandard hearing aid performance measurements, earmold acoustics, laboratory exercises. PREREQUISITE(S): AUSP 7101 or permission of instructor.

AUSP 8115 - Pediatric Audiology

(3) Audiologic procedures in pediatric assessment; special test techniques for hospital and school settings and central auditory processing; hearing loss due to birth defects. PREREQUISITE(S): AUSP 8020,AUSP 8103, or permission of instructor. COREQUISITE(S): AUSP 8104

AUSP 8116 - Hearing Aid Provision

(3) Examination of multi-step process of hearing aid provision for children and adults; covers theoretical bases and practical implementations with contemporary hearing aids; laboratory exercises required. PREREQUISITE(S): AUSP 7114/AUSP 8114 or permission of instructor.

AUSP 8118 - Electrophys Assessmnt

(3) Methods for assessing auditory system integrity from the periphery through the central nervous system using evoked bioelectric signals; normal and disordered function will be examined. PREREQUISITE(S): AUSP 8020,AUSP 8103 or permission of instructor.

AUSP 8127 - Adult Audiologic Rehab & Aging

(3) Study of qualitative and quantitative methods to assess communicative function in adult individuals with hearing impairment; use of assessment tools for identifying intervention goals and for measuring outcomes; review and evaluation of current rehabilitative programs and strategies. PREREQUISITE(S): AUSP 7101/AUSP 8101 and AUSP 7104/AUSP 8104 (3 hours), or permission of instructor.

AUSP 8128 - Evidenc-Based Pract Ampl

(3) Seminar emphasizing the principles of evidence-based practice, with applications in recent literature concerning effectiveness of amplification-based approaches to audiological rehabilitation. PREREQUISITE(S): AUSP7116/AUSP 8116.

AUSP 8129 - Psychosoc Adj Hrng Impr

(3) Seminar on facilitation of psychosocial and behavioral adjustment to hearing impairment and impact of cognitive status, general health and stigma on functional communication and social interaction of aging adults and their families; emphasis on exploration of appropriate counseling skills and strategies in both individual and group settings. PREREQUISITE(S): AUSP 7007/AUSP 8007 or permission of instructor.

Clinical Practicum (30 Hours):

AUSP 8104 - Clinicl Exper Audiology

(1-6) Supervised clinical experience in the evaluation and/or management of clients with hearing impairments; designed to meet student's individual needs. May be repeated as often as desired Grades of A-F, or IP will be given.

AUSP 8125 - Clinical Extrnshp Audio

(2-6) Fourth year clinical placement. Minimum of two credits in each of three semesters. Placement site selected in coordination with Director of Clinical Services in Audiology; approval of Director of Graduate Studies required. PREREQUISITE(S): Successful completion of written and oral comprehensive examination.

Other Courses (12 Hours):

- Statistics: (3 credits required)

AUSP 8121 - Ind Proj Audiology

(1-6) Students pursue individual research projects under the direction of a member of the graduate faculty in audiology. May be repeated for a maximum of 6 credit hours. Grades of A-F, or IP will be given.

Elective (5 credits required)

- AUSP 7505 - Interprofessional Educ & Pract (IPE/IPP) Or AUSP 8505 - Interprofessional Educ & Pract (IPE/IPP)
- AUSP 6205 - ASL for Speech, Audio, & Educ
- AUSP 6206 - Deaf Culture & Deaf History

Biological Sciences, (PhD)

PhD Degree Program

Program objectives are: (1) understand biological principles, concepts, and theories, and in-depth knowledge in a chosen specialty; (2) develop expertise in experimental design, data analysis, and oral and written presentation of research results; and (3) become competitive for professional positions in the biological sciences.

Program Admission

1. Application to The University of Memphis Graduate School. Application can be made on-line (http://apply.memphis.edu/ and http://www.memphis.edu/biology/graduate/).
2. Official transcripts of all previous academic coursework must be sent directly to The University of Memphis Graduate Admissions from the issuing institution. Prospective doctoral students must hold either an MS or a BS from an accredited institution. An overall minimum grade point average of 3.00 (on a 4.0 scale) for students with a BS or MS degree is usually competitive. Applicants whose highest degree is from a foreign institution must have their credentials evaluated by any credentialing agency listed on the National Association of Credential Evaluation Services' website. The course-by-course report is required.
    1. Applicants must have satisfactorily completed ("C" or better) four upper division courses within the following six areas: Ecology, Genetics, Cell Biology, Microbiology, Physiology, and Evolution.
    2. Applicants must also have satisfactorily completed ("C" or better) seven courses within the following nine areas: General Chemistry I, General Chemistry II, Organic Chemistry I, Organic Chemistry II, Biochemistry, Physics I, Physics II, Calculus, and Statistics. Other courses in the sciences may substitute for these requirements.
3. The Graduate Record Exam (GRE) is required and scores for the Verbal, Quantitative, and Analytical Writing sections are an important factor in the admission process. GRE scores should be submitted directly to The University of Memphis Graduate Admissions by the testing agency.
4. Department of Biological Sciences Graduate School Application, to be submitted in an online fillable form (http://www.memphis.edu/biology/graduate/graduate-application.php).
5. A written letter from a prospective advisor within the Department of Biological Sciences that states that he/she will accept the applicant and how the student will be funded while in the program must be submitted to the Department of Biological Sciences. Applicants for the doctoral degree are expected to have made prior contact with potential research advisors in the department's graduate program. This is a critical first step; no applicants will be accepted to the Department without an advisor. Faculty research interests are listed on the departmental website; applicants are encouraged to interact directly with those faculty members who have research interests that match their own interests.
6. Two letters of recommendation from persons capable of assessing the applicant's suitability for graduate work in biology must be submitted to the Department of Biological Sciences.
7. International students for whom English is not their native language must submit proof that they have taken the Test of English as a Foreign Language (TOEFL); acceptable minimums are 550 for paper-based (PBT) and 79 for internet-based (IBT) exams. International applicants for Graduate Teaching Assistantships in the

Department of Biological Sciences must obtain a score of 26 or higher on the spoken English component of the TOEFL iBT. Alternatively, applicants must take the SPEAK test (Speaking Proficiency English Assessment Kit) and obtain a score of 50 or higher in order to be appointed as a Teaching Assistant. The SPEAK test is The University of Memphis version of the TSE (Test of Spoken English), which was produced by Educational Testing Service.

Program Requirements

1. A minimum of three academic years (72 credit hours) beyond the baccalaureate degree is required. A student entering the PhD program with a MS degree may be awarded 30 semester hours toward the 72 hours requirement. A minimum of 30 semester hours must be taken in residence.
2. BIOL 8000, BIOL 8004, BIOL 8004, BIOL 8092, BIOL 8103, BIOL 8200, BIOL 8600, and BIOL 9000. BIOL 8000 must be completed during the first year of residence. Attendance at departmental seminars is mandatory. Up to nine hours of BIOL 8092, and five hours of BIOL 8200 can be counted toward the degree requirements. Eighteen credit hours of BIOL 9000 must be completed during the program; no more than 18 hours will be counted toward the degree.
3. Foreign Language and Research - Students are required to demonstrate competence in a foreign language or research tool, or both. Completion of this requirement will be determined by each student's advisory committee.
4. Becoming a Ph.D. Candidate is a two-step process that is usually completed by the end of the third year.
    1. A written and oral presentation of the student's Research Prospectus will be made. Details of the plan of research must be approved by the advisory committee prior to collection of data.
    2. All students are required to take and pass a written and oral Comprehensive Examination administered by the student's advisory committee before the end of their sixth semester in residence. The scope of the examination is broad and includes a review of general biological principles.
5. A dissertation will be required of all candidates for the doctoral degree. The dissertation must show a mastery of the techniques of scientific research, and it must be a distinct and new contribution to the body of scientific knowledge. The student's Advisory Committee must approve the topic, prospectus, and the final dissertation. At least 18 hours of research and dissertation credit (BIOL 9000) must be completed during the graduate program; no more than 18 hours will be counted toward the degree. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
6. A minimum of one published or fully accepted paper in a national or international peer reviewed scientific journal approved by the advisory committee is required.
7. Dissertation Defense and Final Examination - The final examination will be conducted by the student's advisory committee. The committee will consist, insofar as possible, of the same persons involved in the specialized knowledge examination. The final examination will be an oral defense of the dissertation and will be announced and open to the public. Upon successful completion of the examination and all degree requirements, the committee will recommend awarding the PhD.

Biomedical Engineering, (PhD)

PhD Degree Program

The Department of Biomedical Engineering at The University of Memphis and the Department of Orthopaedic Surgery and Biomedical Engineering at The University of Tennessee Health Science Center, Memphis, participate in the Joint Graduate Program in Biomedical Engineering. The Joint Program offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in Biomedical Engineering. Students may elect courses of study in the following areas:

- Biomechanics, Movement Science, and Rehabilitation

- Biomaterials, Drug Delivery and Regenerative Technology
- Biosensors and Electrophysiology
- Cellular Biomechanical Responses

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements for Graduate Academic Programs) and the program requirements of the degree being pursued. The Joint Graduate Program uses an application website hosted at: https://uthsc.liaisoncas.com/applicant-ux/#/login.

ENTRANCE EXAMINATION

Applicants must have taken the ETS® GRE® revised General Test within five years of the application date. The GRE revised General Test is a third-party evaluative tool administered by the ETS (Educational Testing Service) organization. Test scores must be sent directly to Graduate Admissions from the testing agency. For the Joint Graduate Program in Biomedical Engineering, use the UTSHC code number for reporting GRE and TOEFL scores: 1850.

TRANSCRIPTS and LETTERS OF RECOMMENDATION

All college transcripts and test score information should also be sent directly to Graduate Admissions. The programs in the academic Joint Graduate Program in Biomedical Engineering, a collaboration between the University of Tennessee Health Science Center and the University of Memphis, require three (3) three letters of recommendation from separate evaluators attesting to qualifications for successfully undertaking graduate studies in order to consider your application complete.

The evaluators/faculty members who you choose should be individuals that you believe are best able to comment objectively on your intellectual and professional achievements and potential.

We may call or write your recommenders for more information.

INTERNATIONAL APPLICANTS

Evaluation of Credentials: Applicants whose highest degree is from a foreign university must have their credentials evaluated. Evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org) are acceptable. A course-by course report is required and must be sent directly to Graduate Admissions from the credentialing agency.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into graduate programs. Conditional admission may be granted depending on individual academic departmental policy. If English conditional admission is offered, students will need to register for English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived depending on specific academic department policy. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (http://www.memphis.edu/graduateadmissions).

Please note that a student cannot be a graduate assistant (GA) until she/he has been fully admitted to the Biomedical Engineering graduate program. Questions can be directed to the program's graduate coordinator. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Admission Requirements

In addition to meeting the minimum admission requirements of the two universities and the Herff College of Engineering, applicants should meet the following criteria:

1. An appropriate bachelor's degree (biomedical, chemical, electrical, mechanical, or others as defined by the Joint Program);

2. An undergraduate GPA of at least 3.00 from an accredited college or university;

3. It is recommended to obtain a GRE score above 300 (combined verbal reasoning and quantitative reasoning) including a minimum 154 on the quantitative reasoning;

4. Applicants whose native language is other than English and who have earned neither a bachelor's nor a master's degree from a college or university in an English-speaking country must have achieved a TOEFL score of at least 213/79 on the computerbased/Internetbased exam or an IELTS score of 6.5 (earned within 2 years prior to application). Any applicant whose first language is not English but who has earned a baccalaureate or master's degree from a college or university in an English-speaking country where instruction was in English may be exempted from the requirement for the TOEFL or IELTS examination.

These are the minimum program admission requirements. Meeting minimum requirements does not guarantee admission into the Joint Program. Applicants are further advised that the department reserves the right to deny some applications for admission because of limited availability of faculty, funding or physical facilities to accommodate the applicant's research interests. In unusual circumstances where the above admission requirements cannot be met, an applicant may seek exceptions by contacting the Coordinator of Graduate Studies for the Joint Program.

Graduation Requirements

Students admitted to the PhD program with a bachelor's degree

Students admitted to the PhD program will complete 72 hours of work after the BS degree. The generic distribution of those hours is 30 credits in early doctoral education, i.e., master's degree level, another 18 credits at late graduate (8000) level, 24 credit hours of dissertation research (BIOM 9000), and a noteworthy dissertation, which is typically demonstrated by peer-reviewed publications. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide.

Students admitted to the PhD program with a bachelor's degree must complete a master's degree as part of their degree plan. Though an appeal process for direct progress to the PhD exists, few should expect to bypass the MS.

BIOM 9000 - Dissertation

(1-12) Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Students admitted to the PhD program with a master's degree

Students admitted to the PhD program with a master's degree must complete an additional 42 credit hours. This will be composed of 15 credit hours of elective focus area courses (core and elective focus area courses approved by project advisory committee), 3 credit hours of project (BIOM 8991), 24 credit hours of dissertation research (BIOM 9000), and a noteworthy dissertation, which is typically demonstrated by peer-reviewed publications. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide.

Students admitted to the PhD program with a master's degree from any other program must work with the graduate program coordinators and their dissertation committee to develop the required degree plan.

BIOM 8991 - Project I

(1-3) Independent study in Biomedical Engineering on topic selected in conjunction with instructor. Oral and written reports required. May be used for curricular training as a part of an internship program. Grades of A-F, or IP will be given. Grades of S, U, or IP will be given.

BIOM 9000 - Dissertation

(1-12) Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Requirements for all PhD students

- The exact designation of courses for particular PhD students is left to the faculty committee, graduate coordinator, and chair.
- All PhD students are required to complete a comprehensive examination with at least a minimum passing score on the written portion and a satisfactory performance on the oral portion of the exam. A second and final attempt to pass this examination may be granted by the student's advisory committee; failure to pass this exam will result in dismissal from the program.
- All PhD students are required to complete a proposal defense examination (written proposal and oral defense) as administered by the dissertation faculty committee.
- A Final Oral Examination is required with optional oral and written questions related to the dissertation presented, after notice of date and time per rules of Graduate School, to the faculty committee and visitors.
- Publication of portions of the dissertation are expected; numbers and types are set by the individual's faculty committee and are expected to be in concert with typical counts and types for that section of biomedical engineering.

Professional Development Requirements

1. PhD degree seeking students are required to attend Joint Program weekly seminars as scheduled each semester while enrolled as a full-time student.
2. Each semester after the first semester, each PhD student is to meet with their faculty committee; he or she will review progress to date, note planned dates for exams and presentations, and discuss research efforts for the dissertation.
3. PhD degree seeking students must complete ethics and professional training offered by the Joint Program.

Retention Policy

1. Students who have been admitted to the program on the condition that they complete prerequisite course work must make satisfactory progress toward this goal each semester of enrollment. Failure to make satisfactory progress may result in dismissal from the program.
2. All students are required to maintain a grade point average (GPA) of at least 3.00. Failure to maintain the minimum GPA is considered sufficient cause for being dismissed from the program. In addition, a student whose GPA falls below 3.0 is ineligible for a graduate assistantship.
3. No more than seven (7) hours of C, C+, or C- grades will be counted toward degree requirements. Grades of D or F are not accepted for credit for graduation purposes, but the grades are computed in the overall cumulative GPA. Students will be evaluated by the Joint Program faculty at the end of the semester in which a third grade C, C+, or C- or lower is earned for possible dismissal from the program.
4. Passing the proposal defense examination within 18-24 months upon matriculating into the PhD degree program (completion of the master's degree).

Business Administration - Accounting Concentration, (PhD)

The goal of the Ph.D. concentration in Accounting is to develop the next generation of committed scholars and excellent teachers by providing an active and stimulating intellectual environment. The Accounting Ph.D. program prepares doctoral students for research-oriented academic positions at well-regarded universities and colleges that demand solid teaching skills. We train doctoral students in classroom management and the development of solid teaching skills. Research in the School of Accountancy focuses on economic based issues of importance to the accounting and business community such as the impact of accounting information on capital market participants as well as other firm stakeholders.

Reflecting the research orientation of the faculty, development of research and academic writing skills is continually emphasized throughout the Ph.D. program. The faculty goal for matriculation is four years. In seminars, doctoral students are encouraged to start working on the framework for the dissertation early in the first year aligned with research experts in the field. In the first two years, students focus on their coursework, are involved in a research workshop, and work closely with faculty on a research project. Students take their comprehensive examinations at the beginning of the third year. In their third and fourth years of study, students develop and present their thesis proposal, then complete and defend the dissertation.

A major strength of the Ph.D. program in accounting is that its graduate faculty members are student-oriented. Research with faculty is encouraged and fostered in a highly collegial environment. We emphasize a close faculty-doctoral student interaction. Only a few students are admitted into the doctoral program each year and they are encouraged to work closely as a team cohort. Doctoral students are involved in all phases of faculty research, including co-authorship of research papers and presentations at professional meetings. Most of the current doctoral students are CPAs with business experience at the most prestigious corporate accounting and public accounting firms.

Our graduate faculty members have published books and received academic honors that include chaired professorships. The accounting faculty publish their research in the top tier accounting journals such as The Accounting Review, Contemporary Accounting, Research, Journal of Accounting and Economics as well as the highly regarded journals of the American Accounting Association in sub-discipline fields, among others.

For admission, prerequisites, and program information, see the college website at: http://www.memphis.edu/fcbephd/

Business Administration - Business Information and Technology Concentration, (PhD)

The PhD program in BIT at the University of Memphis aims at preparing students for a successful academic career as scholars. The BIT department prides itself on maintaining a supportive research and teaching atmosphere. PhD students are encouraged to actively get involved in research with faculty right from the first semester. Our program nurtures students' innate curiosity while providing them with mentoring and support to train them for independent research and professional responsibilities.

BIT courses include topics such as information systems management, business database systems, systems analysis and design, business intelligence, data communications and networks, information assurance and data security. In research seminars students review the core topics in information systems, with an emphasis on current research. Students also take four courses related to research methodology, as well as two courses related to research in the field of information systems.

BIT faculty publishes applied and theoretical research in the top tier MIS academic journals, focusing on the AIS-6 journals: *MIS Quarterly, Information Systems Research, Journal of MIS, Journal of the AIS, European Journal of Information Systems,* and *Information Systems Journal*. Our faculty's research spans multiple lines of inquiry including managerial, behavioral and technical topics and we employ empirical approaches, modeling, experimental, qualitative, design science and econometric methodologies.

Our PhD program in BIT benefits from a mix of junior faculty members complementing our existing strong cadre of senior faculty. This brings opportunity for the students to work in diverse research areas like information value, IS service quality, strategic information management, outsourcing and the use of open source, system testing and management, social networks, online consumer behavior, business value of IT, information assurance management, global IS issues, knowledge management, technology in the supply chain, healthcare IS, ethics and philosophy of IT, innovation & strategy, and IT leadership.

Our doctoral students actively participate in and benefit from the various initiatives the department is involved in such as weekly MIS research colloquium, the Systems Testing Excellence Program (STEP), and the Center for Innovation Technology Management.

For admission, prerequisites, and program information, see the college website at: http://www.memphis.edu/fcbephd/.

Business Administration - Economics Concentration, (PhD)

The objective of the PhD in Business Administration with a concentration in Economics is to prepare candidates for a successful academic or professional career in economics and business. Through an intensive, advanced level training in both economic theory and quantitative methods, students learn to conduct independent research and prepare for various responsibilities of a professional career. The Economics Department has an outstanding faculty with a strong orientation in applied as well as theoretical research. For admission, program content, and financial aid information, see the departmental website at: economics.memphis.edu/acad_index.html

Business Administration - Finance Concentration, (PhD)

The required course work for the Ph.D. concentration in Finance includes corporate finance, investments, and market micro-structure theory and applications. Market microstructure is the study of trading. The student body is comprised of promising scholars from across the U.S. and around the world.

Doctoral students are involved in all phases of faculty research, including co-authorship of research papers and presentations at professional meetings. The research tools and opportunities available to our doctoral students are impressive. Students use financial databases such as CRSP and COMPUSTAT and data on all trades and quotes, time to the microsecond or even nanosecond.

Research interests of the doctoral faculty in Finance include: capital market theory, futures prices, capital budgeting and dividend policy, interest rates, international stock market returns, corporate debt policy, and domestic versus multinational risk and return. The faculty has a special focus on market microstructure.

The doctoral finance faculty have published in leading scholarly journals, including: *Journal of Finance, Journal of Financial Economics, Journal of Financial and Quantitative Analysis, Review of Economics and Statistics, Journal of Financial Markets, Journal of Financial Research, Financial Review, Journal of Futures Markets, Journal of Banking and Finance, Journal of Business Finance and Accounting, Journal of Portfolio Management, Financial Analysts Journal, and Management Science.*

The program is quantitative and the course work includes a number of courses in economics such as econometrics.

For admission, prerequisites, and program information, see the college website at: www.memphis.edu/fcbephd/.

Business Administration - Management Concentration, (PhD)

See the beginning of the College section for admission, prerequisite, and program requirements. Students are expected to be enrolled in the program on a full-time basis during their course work and one year during their dissertation stage. Doctoral candidates must register for dissertation credit each academic semester until the dissertation is completed in

order to remain in active status. This commitment is expected to require three to four years of full-time study. Course work should be completed within two to three years, depending upon a student's prior academic background.

In addition to these requirements, PhD students are expected to develop a high level of skills in both research and teaching. Doctoral students are provided ample opportunity to develop these skills through class work, seminars, and assistantships.

Business Administration - Marketing Concentration, (PhD)

See the beginning of this College section for admission, prerequisites, and program requirements.

In addition to these requirements, the following are an integral part of expectations for students in the PhD program with a concentration in Marketing.

1. Research: Students are exposed to a variety of methodological courses designed to enhance their capability to design, implement and conduct research studies which address relevant marketing problems. Students are expected to complete their Ph.D. programs of study with some record of success in publishing their research efforts through conference papers and/or journal manuscripts.
2. Teaching: Developing teaching skills is a major component of the PhD program. In the course of the program, doctoral students are provided with a balanced teaching and research assistantship. Student evaluations as well as faculty input (by observing doctoral students teach) are used to assess teaching skills. If teaching skills are found inadequate, the PhD candidate will be advised an appropriate course of action.
3. GPA Requirement: Marketing doctoral students are required to maintain a minimum of 3.50 GPA in the marketing courses.

Business Administration, (PhD)

The mission of the PhD program in Business Administration is to prepare students primarily for academic careers in research-oriented institutions of higher education and secondarily for research careers in organizations.

Program objectives are: (1) an acquisition of an advanced level of knowledge in one or more functional areas of business or in applied economics and an expert level of knowledge in one or more subfields of a business function or economics; (2) ability to conduct significant, independent research that extends the knowledge base in a business function or economics; (3) capacity to teach effectively within the business or economics discipline; (4) capacity to communicate advanced-level knowledge to others in the academic and professional community; and (5) ability to compete effectively for faculty positions in respected colleges and universities or other high-level professional positions.

Students with master's or professional degrees in business administration, public administration, economics, law, engineering, mathematics, computer science, psychology, sociology, and the physical sciences will find this background provides important preparation for entering the PhD program.

The University has the academic resources to provide the doctoral applicant with a balanced education that provides both the qualitative and quantitative skills required of the modern business education professional.

The PhD student at the Fogelman College must select a concentration from one of six departments: accounting, economics, finance, management, management information systems, and marketing.

Visit this website for more information: www.memphis.edu/fcbephd.

Program Admission and Prerequisites

Individuals meeting the general requirements for admission to the Graduate School for doctoral-level programs shall be eligible to apply for admission to the PhD in Business Administration program. Applicants must indicate their area of concentration when filing their initial application.

Admission to the PhD program may be granted to qualifying applicants who show high promise of success in doctoral business study. The principal criterion for admission is evidence of superior achievement in prior academic work, coupled with outstanding promise for future contributions as a business scholar. The concentration department and the Associate Dean of Academic Programs will review and evaluate each applicant. **Some concentrations may not admit students to the doctoral program every year. Interested applicants should contact the departmental PhD coordinators before applying to the program**.

Criteria used for admission consideration is competitive based on the applicant's:

1. **Academic record**. Applicant's grade point average should be 3.2 or higher on a 4.0 basis.
2. **Testing**. Applicants must present an acceptable score on a recent (five years or less) Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE).
3. **Recommendations**. Three letters of recommendation are required from former professors, colleagues, and/or business executives.
4. **Personal Statement and Resume**. Applicants **must submit** a written statement of career plans and objectives no more than two-pages in length, and a current resume of academic and professional experiences.
5. **Mathematics**. Applicants must submit a transcript indicating the successful completion of a course in calculus.
6. **Interview**. Applicants may appear before the departmental admission committee for a personal interview.

Prerequisites in the functional areas of business are determined by the department. A typical applicant has completed a master's degree in business, economics, or other relevant discipline.

Following admission, a student will be assigned to a department program committee composed of faculty members from the student's department of concentration. The program committee is responsible for planning and approving the program requirements, and for guiding and monitoring the progress of the student through the program.

Program Requirements

A minimum of 72 hours beyond the bachelor's degree is required. A minimum of 39 hours of the curriculum below must be completed at the University of Memphis after admission to the program. Most concentrations require more than 39 hours.

Residency: Students enrolled in the doctoral program must also meet the university residency requirements as defined in the Minimum Degree Requirements section of this catalog.

Course Requirements

Research Core (at least 12 semester hours): Includes courses designed to develop and improve research skills. Students may be required to acquire competence using research tools and techniques beyond and above what is required with the research core. Courses in the Research Core must be approved by the student's departmental PhD coordinator.

Concentration (at least 30 semester hours): A minimum of 12 hours of 7/8000 level courses is required in the student's chosen concentration. Possible concentrations are Accountancy, Economics, Finance, Management, Management Information Systems, or Marketing. Additional supporting coursework may be selected from these concentrations or from approved areas outside the college. Courses graded an S or U may not be used to satisfy the minimum hours required for Research Core or Concentration.

Dissertation (minimum of 6 but not more than 18 semester hours): Major research of an original and creative nature is required and must meet the requirements of the Graduate School. The dissertation is the research capstone of the PhD

program and must be a significant contribution to the study of Business Administration. The student will register for dissertation credit hours every semester after passing the comprehensive examinations. Students planning to graduate in the summer must be registered for dissertation credit. The student must show satisfactory progress over a 2-year period of time. Unsatisfactory progress towards dissertation completion will be grounds for dismissal from the program. After the dissertation committee approves the dissertation proposal, the candidate will be given a final oral examination primarily dealing with the dissertation. The dissertation committee will conduct this examination and all members must be present at the examination. If the student's performance on this examination is satisfactory as judged by the committee, all requirements for the degree will be complete. **In the Fogelman College, no credit earned more than 10 years prior to the student's date of completion of the doctoral degree will be applied toward satisfying requirements of the doctoral degree**. Students should note that the 10-year time limit is more stringent than the University Graduate School policy. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Comprehensive Examinations

Each student will have comprehensive examinations in the concentration. Comprehensive examinations in the concentration should be taken as soon as all of the course work required for the PhD degree has been successfully completed. Exceptions can be made at the discretion of the Associate Dean for Academic Programs. After satisfactorily completing the written comprehensive examinations, each student must pass an oral examination integrating all work. The student's program committee will organize and administer the oral examination. Some concentrations require qualifying examinations covering specific courses or content, typically given after the first or second year of coursework, which must be successfully completed prior to sitting for the comprehensive exam. Passing of the qualifying exam can allow students in the Economics concentration to apply some course work towards the MA degree before continuing with the doctoral degree requirements. Failure to pass the qualifying exam after two attempts will result in termination from the program.

Expenses

Credit Hour Surcharge

A surcharge of $35 per credit hour for graduate students has been approved by the Tennessee Board of Regents. The purpose of the surcharge on these business courses is to facilitate the continuous improvement of the college and compliance with the standards of the Association to Advance Collegiate Schools of Business International (AACSB International).

Financial Assistance

A number of doctoral and master's graduate assistantships are available to full-time students. Doctoral assistantships may be available to those students with strong GMAT or GRE scores. Graduate assistants provide part-time assistance to the concentration in teaching and/or research. Current compensation for doctoral students can range from $9,000 to $15,000 per academic year, for master's students a minimum of $6,000 per academic year, in addition to a full tuition waiver. The Fogelman College also has a limited number of doctoral fellowships available.

Chemistry, (PhD)

PhD Degree Program

Program objectives are: (1) competence in a common core of material in the major area of specialization; (2) proficiency in a minor area of specialization outside of the major; (3) development of expertise in experimental design,

data analysis, and oral and written presentation of research results; (4) competitive for professional positions in the chemical sciences.

Program Admission

See MS admission requirements.

Program Requirements

Diagnostic Examinations

Before registering for the first time, incoming graduate students will take a series of six standardized examinations, chosen from general, analytical, biochemistry, inorganic, organic, and physical chemistry. The examinations are at a level equivalent to completion of the following undergraduate courses at The University of Memphis: CHEM 4111 (inorganic), 4211 (analytical), 3310 and 3511 (organic), 4411 (physical), and 4512 (biochemistry). A doctoral candidate must make at least 50th percentile on four of the upper-level tests (analytical, biochemistry, inorganic, organic, and physical tests) or must take four of the equivalent classes (CHEM 6111, CHEM 6211, CHEM 6311, CHEM 6411, CHEM 6511). A candidate for the PhD degree must make at least 70th percentile on the general chemistry test to remain in the program. Students should note that a score of 75th percentile on the test or a "B" or better in the course is prerequisite to higher level graduate courses in each area.

CHEM 6111 - Intermediate Inorganic CHEM

(3) Theoretical and applied inorganic chemistry, stressing the relationship of structure and bonding to the properties of elements and compounds; topics include introductory molecular orbital theory, coordination compounds and organometallics, ligand field theory, nonaqueous solvent systems, and reaction mechanisms. PREREQUISITE(S): CHEM 3111 , or permission of the instructor.

CHEM 6211 - Instrumntl Analysis

(3) Topics in modern analytical instrumental analysis; atomic and molecular spectroscopy, mass spectrometry, electroanalytical chemistry and chromatograhpy. Three lectures hours per week. PREREQUISITE(S): CHEM 3211 with at least C-.

CHEM 6311 - Physical Organic Chemistry

(3) Theory of electronic structure organic compounds, relation between structure and reactivity of organic compounds, mechanisms of common organic reactions. Three lecture hours per week. PREREQUISITE(S): CHEM 3310 and 3511 with at least a C-. Repeat no more than two times.

CHEM 6411 - Advanced Physical Chem

(3) Advanced topics in physical chemistry, including statistical mechanics and thermodynamics plus selected topics in kinetic theory of gases, condensed phases, and non-equilibrium processes. PREREQUISITE(S): CHEM 3411 or permission of instructor.

CHEM 6511 - Biochemistry I

(3) (Same as BIOL 6511) (Same as BIOL 6511). Chemistry of amino acids and proteins as related to their properties in biochemical systems; protein conformation studies; enzymology; coenzymes and their functions; importance of pH and bioenergetics in catalysis; protein and carbohydrate metabolism. Three lecture hours per week. PREREQUISITE(S): CHEM 3511 with at least a C-.

Course Work Requirements

The doctoral degree program includes the requirement of the satisfactory completion of a minimum of 72 semester hours of graduate credit beyond the BS degree. The 72-hour total is subject to the following restrictions:

No more than 12 hours

No more than 12 hours of credit at the 6000 level may be counted towards the doctoral degree. At least 12 hours must be in courses numbered CHEM 7100-7899 (8100-8899; however, a maximum of 1 hour of Presentation (CHEM 7911) may be combined into this total), with at least two areas of chemistry represented.

A maximum of 32 hours

A maximum of 32 hours credit for CHEM 8001 - Directed Research and CHEM 9000 - Dissertation combined can be applied toward the 72-hour total.

CHEM 8001 - Directed Research

(1-10) An original investigation undertaken with the supervision of a member of the graduate staff to be the basis of a contribution to the chemical literature. May be repeated for a maximum of 30 credit hours. May be repeated for a maximum of 30 credit hours.

CHEM 9000 - Dissertation

(1-10) A maximum of 32 dissertation hours is permitted. A minimum of 6 credit hours is required for the doctoral degree. Grades of S, U, or IP will be given.

A maximum of 12 hours

A maximum of 12 hours of CHEM 7910 - Spec Prob In Chem/CHEM 8910 - Spec Prob In Chem may be credited toward the total hour requirement.

CHEM 7910 - Spec Prob In Chem

(1-12) Individual investigation and report under the guidance of the student's major advisor. Grades of S, U, or IP will be given.

CHEM 8910 - Spec Prob In Chem

(1-12) Individual investigation and report under the guidance of the student's major advisor. Grades of S, U, or IP will be given.

A maximum of 12 hours

A maximum of 12 hours of course work may be included in a field related to chemistry (physical or biological sciences, mathematical sciences, or engineering). Courses taken in related areas must be numbered 6000 or above. However, these related courses cannot substitute for the more than six of the twelve hours of required CHEM 7/8000-level courses for the PhD Degree.

Presentation

Presentation (CHEM 7911) and Advanced Presentation (CHEM 8911) are required. A maximum of 4 semester hours from some combination of CHEM 7911, CHEM 8911, and CHEM 7913/CHEM 8913 may be used to meet the 72 semester-hour requirement.

CHEM 7911 - Presentation

(1) Preparation and presentation of a short talk or lecture based on a laboratory or library project. Topic chosen in consultation with advisor. Grades of S, U, or IP will be given.

CHEM 8911 - Advanced Presentation

(1) Preparation and presentation of one-hour lecture as regularly scheduled department seminar. Topic chosen in consultation with advisor. Grades of S, U, or IP will be given.

CHEM 7913 - Chemistry Seminar

(1) Formal meetings, presentation, and discussion of current topics of interest; students, faculty, and visiting scientists participate. Required of all regularly enrolled graduate students. A maximum of 4 credit hours from a combination of CHEM 6911, 7911, 8911, and 7-8913 may be counted toward the degree. Grades of S, U, or IP will be given.

CHEM 8913 - Chemistry Seminar

(1) Formal meetings, presentation, and discussion of current topics of interest; students, faculty, and visiting scientists participate. Required of all regularly enrolled graduate students. A maximum of 4 credit hours from a combination of CHEM 6911, 7911, 8911, and 7-8913 may be counted toward the degree. Grades of S, U, or IP will be given.

A maximum of 30 hours

A maximum of 30 hours of graduate course credit completed at the University or other accredited institution (including credit applied on an MS degree) may be applied to the 72-hour requirement subject to the approval of the student's Advisory Committee and the Department's Graduate Studies Committee. Considering all other requirements are met, a minimum of 9 hours in graduate courses other than CHEM 7910/CHEM 8910, CHEM 7911/CHEM 8911, CHEM 7913/CHEM 8913, and CHEM 8001/CHEM 9000 must be completed at the university.

CHEM 7910 - Spec Prob In Chem

(1-12) Individual investigation and report under the guidance of the student's major advisor. Grades of S, U, or IP will be given.

CHEM 8910 - Spec Prob In Chem

(1-12) Individual investigation and report under the guidance of the student's major advisor. Grades of S, U, or IP will be given.

CHEM 7911 - Presentation

(1) Preparation and presentation of a short talk or lecture based on a laboratory or library project. Topic chosen in consultation with advisor. Grades of S, U, or IP will be given.

CHEM 8911 - Advanced Presentation

(1) Preparation and presentation of one-hour lecture as regularly scheduled department seminar. Topic chosen in consultation with advisor. Grades of S, U, or IP will be given.

CHEM 7913 - Chemistry Seminar

(1) Formal meetings, presentation, and discussion of current topics of interest; students, faculty, and visiting scientists participate. Required of all regularly enrolled graduate students. A maximum of 4 credit hours from a combination of CHEM 6911, 7911, 8911, and 7-8913 may be counted toward the degree. Grades of S, U, or IP will be given.

CHEM 8913 - Chemistry Seminar

(1) Formal meetings, presentation, and discussion of current topics of interest; students, faculty, and visiting scientists participate. Required of all regularly enrolled graduate students. A maximum of 4 credit hours from a combination of CHEM 6911, 7911, 8911, and 7-8913 may be counted toward the degree. Grades of S, U, or IP will be given.

CHEM 8001 - Directed Research

(1-10) An original investigation undertaken with the supervision of a member of the graduate staff to be the basis of a contribution to the chemical literature. May be repeated for a maximum of 30 credit hours. May be repeated for a maximum of 30 credit hours.

CHEM 9000 - Dissertation

(1-10) A maximum of 32 dissertation hours is permitted. A minimum of 6 credit hours is required for the doctoral degree. Grades of S, U, or IP will be given.

Residence

Of the total semester-hour requirement, a minimum of 24 hours must be earned while the student is at The University of Memphis. This requirement cannot be met wholly by attendance at Summer Sessions and must include at least one academic year of full-time student status.

Comprehensive Examinations

The student must begin the written part of the comprehensive examinations in the third semester and take up to eight consecutive tests. These are described in the summary of the administration of the graduate program. A student pursuing the doctoral degree must obtain a total of at least twelve points. Any student who has not amassed twelve points at the completion of eight tests is automatically terminated from the doctoral degree program. Written permission from the student's Advisory Committee is required to delay beginning the tests or to delay continuing once

the student has begun taking tests. Within one year of obtaining the required twelve points, students should complete the oral part of the comprehensive examinations. The student will prepare a Research Prospectus on his or her thesis research problem, to be presented orally to the Advisory Committee in an open meeting and in a written form to the Advisory Committee and the Graduate Studies Committee. The oral comprehensive examination can be repeated only once. A student who changes major professors must present a new Research Prospectus within one semester after the change is made.

Students who enter the PhD program and already hold the MS degree

Students who enter the PhD program and already hold the MS degree in chemistry should begin taking the cumulative examinations at the first opportunity after initial enrollment if a satisfactory score is made on the diagnostic examinations.

Seminar

Participation in Seminar is required during each semester of residence (excluding summer terms).

The Advisory Committee

Upon admission to the Graduate School, the student will be advised by the Department's Graduate Studies Committee. A student must choose a major professor from the graduate faculty before the end of the first semester following enrollment. The major professor, in consultation with the student, will recommend faculty members to be appointed to the student's Advisory Committee. This committee, which is appointed after the student's First Year Conference, must be composed of at least five members, with the major professor serving as chair. Of the members of this committee, at least one is to be from a different area of specialization from that in which the student intends to work. Upon appointment, the committee will review the student's progress to date and outline an appropriate program tailored to the student's interests to enable fulfillment of the degree requirements.The student will be regularly evaluated by their Advisor and Advisory Committee. In the unlikely event that a student changes major professors, a new Advisory Committee must be appointed.

Admission to Candidacy

In order to apply for candidacy, the student must have an Advisory Committee and must have successfully completed the departmental comprehensive examination requirement. The written and oral portions of the comprehensive examinations (the oral exam replaces the research prospectus) collectively satisfy the comprehensive examination requirement of the Graduate School. The test scores, transcripts, and other pertinent data will be examined by the student's Advisory Committee, and their recommendation, with the approval of the Graduate Studies Committee and the Department Chair, will be forwarded to the Graduate School.

Doctoral Research and Dissertation

A minimum of six hours of CHEM 9000 is required for the doctoral degree. Registration for nine semester hours of CHEM 9000 and CHEM 8001 combined is required of all doctoral candidates before the dissertation will be considered. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Final Examination

The student's Advisory Committee will administer a final oral examination on the student's dissertation and related material after completion of all course requirements and the dissertation. This examination will be held two weeks or

more after the student has distributed copies of the dissertation to the members of the Advisory Committee; which must be done at least five weeks before the end of the semester in which the student expects to graduate. If the final oral examination is unsatisfactory, it must be repeated within one year. It may not be repeated more than once.

Retention

A student pursuing the doctoral degree program may be terminated for any of the following reasons:

1. Failure to maintain a grade point average of 3.0 or above. A student who has a cumulative grade point average below 3.0 will be placed on probation. The Assistant Vice Provost for Graduate Studies must approve continuation in graduate school. Any person whose continuation is denied may appeal the decision to the University Council for Graduate Studies.
2. Accumulation of more than six hours of graduate credit with grades of C or below.
3. Failure to accumulate the requisite number of points on the departmental comprehensive examinations. (See Comprehensive Examinations Section).
4. Failure to make satisfactory progress towards the degree in a timely fashion, as determined by the Departmental Program Retention Committee.
5. Failure to satisfy the Advisory Committee on the final oral examination. (See Final Examination Section).

Communication Sciences and Disorders - Hearing Sciences and Disorders Concentration, (PhD)

PhD Program

Program Admission

1. All completed applications are reviewed by the admissions committee. Students should have a GPA of at least 3.0 (on a 4 point scale). GRE scores are required (General Test). Applications will be accepted throughout the year for the PhD program. However, applications submitted by February 1st of each year will be considered for funding. Decisions about financial assistance are typically made each year shortly after the February 1 deadline. Decisions about financial assistance through research grants, however, can be made for applications received at any time.
2. Applicants should submit recommendations from at least three individuals familiar with the applicant's academic background and aptitude for PhD work in Audiology or Speech-Language Pathology. The letters should specify in detail the applicant's capabilities for PhD study.
3. Applicants also need to submit a resume/vita describing all educational and work experience and a letter describing research interests and professional goals.
4. In addition, applicants must have an interview with U of M faculty in the student's major area of concentration.
5. Most applicants will have a master's or AuD degree upon admission but this is not a requirement.
6. Students are expected to understand and use English proficiently.

Graduation Requirements

1. For students entering with a bachelor's degree, a minimum of 81 graduate hours, not including dissertation, is required for the PhD degree in Communication Sciences and Disorders.
2. For students who have completed a master's degree in Audiology or Speech-Language Pathology, a minimum of 57 graduate hours, not including dissertation, will be required for the PhD degree.

3. For students who have completed a master's degree in a field related to Audiology or Speech-Language Pathology, a minimum of 69 graduate hours, not including dissertation, will be required for the PhD degree.
4. For students who have completed an AuD degree, a minimum of 33 hours, not including dissertation, will be required for the PhD degree.
5. A minimum of 9 hours is required for the dissertation. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the dissertation.
6. Additional coursework, beyond the minimum, may be required at the discretion of the advising committee. Course credit for clinical practicum may not be counted toward the PhD degree.

Areas of Concentration:

Two areas of concentration are offered, (1) Hearing Sciences and Disorders and (2) Speech-Language Sciences and Disorders. A minimum of 24 credit hours must be taken in the student's area of concentration and at least 21 of these hours must be within the School of Communication Sciences and Disorders. This requirement is waived for post-AuD students in the Audiology concentration.

Core Requirements

Core Requirements are designed to ensure that all PhD students will acquire knowledge of the acoustic phonetic structure of speech signals, speech acoustics, professional issues, and the neuroanatomy/neurophysiology related to communication sciences and disorders: All PhD students are required to complete the following:

AUSP 8000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

OR

AUSP 8001 - Psychoacoustics

(3) Basic acoustics, psychoacoustical methods, and psychoacoustical findings presented with emphasis on matters of greatest importance for foundations of audiological practice.

AUSP 8021 - Prof Prep/Scientists

(1) Preparation of early PhD students for the role of scientist in the academic and clinical community; rotating themes include ethics, the publication and review process, teaching strategies and techniques, mentoring, grant preparation, and presentation of research. May be repeated for a maximum of 6 credit hours.

AUSP 8400 - Teaching Experience

(1-3) Mentored university teaching experience as either an assistant to an instructor of record or as instructor of an undergraduate course offered by the School of Communication Sciences and Disorders. PREREQUISITE(S): Approval from the PhD student's Planning Committee. Grades of S/U, or IP will be given.

AUSP 8010 - Neurol Bases Comm

(2) Review of the neuroanatomy of the central and peripheral nervous systems and the physiology of nerves and muscles; attention on cortical and subcortical structures and on neuropsychological processes that are attributed to speech and/or language functions.

or

AUSP 8020 - Anat/Phys Aud Sys II

(3) The nervous system, visual and proprioceptive systems as they relate to hearing and balance. PREREQUISITE(S): AUSP 8019 or permission of instructor.

Note:

Other courses may include those in instrumentation, grant preparation, and computer technology.

Research tools

- Research Tool—15 credit hours, of which 9 hours must be in statistics and/or research design.

Collateral Area:

A minimum of 9 semester hours will be required from a collateral area. A collateral area is defined as a combination of courses based on substantive commonality. This collateral coursework must be taken outside the School of Communication Sciences and Disorders. The collateral area requirement can be waived for a student entering with a master's degree in a field related to Audiology or Speech-Language Pathology or if the student's outside work is considered sufficient by the Planning Committee.

Pre-Candidacy Research Project:

All PhD students will be required to satisfactorily complete a data-based research project prior to candidacy. Students will submit an approved written version of the completed project to the academic advisor and orally present the completed project to a departmental colloquium.

Additional Requirements

1. All PhD students are expected to be active in research collaboratively with members of the School faculty each semester they are enrolled.
2. Students may be permitted to complete the requirements for clinical certification with the approval of their planning committee.

General Program Requirements

Advisors:

Upon admission each student will be assigned an advisor by the Associate Dean of Graduate Studies in consultation with the student. This advisor will serve as the chair of the student's planning committee. The advisor shall be a full member of the graduate faculty of The University of Memphis.

Planning Committee:

The planning committee's charge is to evaluate the student's academic needs and assist in the planning of the student's academic program. Students who have completed a master's or AuD degree will be assessed for currency of knowledge

in their concentration to assist in the planning of their academic program. This requirement will not apply to those students who have completed a master's or AuD degree within the School of Communication Sciences and Disorders. The academic program will be tailored to accommodate the individual student's academic interests, background, and professional goals. Within the concentration area, each student will identify an area of special focus. The committee will recommend to the Graduate School those courses, if any, to be transferred toward the PhD, provided that the credit meets general university requirements. The committee, all of whom must be members of the graduate faculty, shall number no less than three, at least two of whom shall be from the student's area of concentration. The student, in conjunction with the committee, will develop a final academic plan to be in written form and filed in the dean's office. This plan is to be signed by each member of the committee and the PhD student. The plan must be filed no later than the middle of the second semester. The student or a planning committee member may propose changes after the plan has been filed. However, any resulting change in the student's plan will require written approval of the committee and the PhD student.

Retention Requirements

All students enrolled in the School of Communication Sciences and Disorders are expected to attain high academic achievement in all courses taken. In addition to Graduate School policy the criteria listed below will be used to determine the retention status of students enrolled in the School.

1. Continuation in the program is contingent upon a satisfactory annual review.
2. Grades of less than 2.00 in a required course are considered unacceptable and must be repeated in order to meet graduation requirements.
3. Students must maintain a cumulative grade point average of 3.00 at the end of each semester of enrollment in all coursework at the University of Memphis. Any student not meeting these conditions will be placed on academic probation by the School.
4. Any student who is placed on academic probation for a third time during his/her academic program will be dismissed before enrolling in another semester.
5. Students have the option of repeating two courses in which a grade of 2.00 or less was earned. After exhausting this option, students are permitted to count only two grades of 2.00 toward graduation. A student will be dismissed at the end of the semester in which a third grade of 2.00 or less is earned.
6. Students must pass the comprehensive examination (including both written and oral components).

Comprehensive Examination Committee

The comprehensive examination committee will consist of members selected by the student in conjunction with the advisor and the planning committee. The committee will be made up of at least three members from the School of Communication Sciences and Disorders and one from an academic unit outside the School of Communication Sciences and Disorders.

Comprehensive Examination

The comprehensive examination will consist of a written and oral examination. The written examination will typically entail 24 hours of writing within a 10-day period, though up to 6 hours may be completed in an alternative manner (e.g., practical laboratory examination or scholarly paper). The purpose of the comprehensive examination is to determine adequate knowledge of the field (AUD or SLP), research tools, the collateral area, and mastery of the area of special focus. Examiners will consider the student's ability to synthesize, integrate, and critique information and ideas. Although there will usually be a relationship between doctoral coursework and the comprehensive examination, the examination is not restricted to course content. The oral examination date shall be within three weeks of the conclusion of the written examination regardless of the student's performance on the written examination. The oral examination is a supplement to the written examination and is intended to ensure that the goals of the comprehensive examination have been met. All of the faculty committee members from within the School and at least one from outside the School must be present at the oral examination.

The comprehensive examination may be taken upon completion of the PhD student's academic plan or within the last semester of completing his or her academic requirements. This examination will be administered any time within the specified semester subject to the discretion of the comprehensive examination committee. The committee shall determine the student's status relative to the comprehensive examination after the oral examination. No more than one dissenting vote may be cast for a student to pass. The committee has the authority to specify further stipulations aimed at remedying any deficiencies reflected in the student's comprehensive examination including retaking the entire written and oral examination, enrolling for additional coursework, and preparing one or more scholarly papers. The committee chair shall file in the dean's office a decision in writing concerning the student's comprehensive examination within two weeks after the oral examination.

Candidacy

After completion of all academic requirements and successful completion of the comprehensive examination, a PhD student may apply for candidacy.

Dissertation Committee

The dissertation committee will consist of a minimum of four faculty members selected by the student in consultation with the dissertation advisor. At least half of the members must be from the School and at least one member must be from a department outside the School of Communication Sciences and Disorders. The chairperson of the dissertation committee must be from the School and must be a full member of the graduate faculty.

Dissertation

The student will develop a prospectus in conjunction with the dissertation committee chairperson. The prospectus will be reviewed for approval by the committee. After approval the student will conduct the work set forth in the prospectus. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write. The completed dissertation will be defended by the student. The oral defense will be open to the University community, with voting on the acceptability of the defense restricted to dissertation committee members. All members of the committee must be present at the dissertation defense. An affirmative decision will be based on the unanimous decision of the examining committee. After successful defense, any required revision, retyping, and resubmission of the dissertation to the committee chair must be completed prior to awarding of the degree.

Completion of both Research (PhD) and Professional (MA or AuD) Programs

Students applying to the PhD program may also wish to meet the academic and practicum requirements for a professional degree in either Speech-Language Pathology or Audiology. PhD applicants may request consideration of a combined degree plan in consultation with prospective mentors. PhD admission requirements must be met as stated above. Combined degree plans require approval by the PhD admissions committee as well as the clinical admissions committee. For MA-PhD students, all degree requirements for both programs remain in effect as specified in the Graduate Catalog for each degree , and for AuD-PhD students, all degree requirements for both programs remain in effect as specified inthe Graduate Catalog for each degree program.

Communication Sciences and Disorders - Neuroscience, (PhD)

PhD Program

Program Admission

1. All completed applications are reviewed by the admissions committee. Students should have a GPA of at least 3.0 (on a 4 point scale). GRE scores are required (General Test). Applications will be accepted throughout the year for the PhD program. However, applications submitted by February 1st of each year will be considered for funding. Decisions about financial assistance are typically made each year shortly after the February 1 deadline. Decisions about financial assistance through research grants, however, can be made for applications received at any time.
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AUSP 8010 - Neurol Bases Comm

(2) Review of the neuroanatomy of the central and peripheral nervous systems and the physiology of nerves and muscles; attention on cortical and subcortical structures and on neuropsychological processes that are attributed to speech and/or language functions.

or

AUSP 8020 - Anat/Phys Aud Sys II

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Candidacy

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Dissertation Committee

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Completion of both Research (PhD) and Professional (MA or AuD) Programs

Students applying to the PhD program may also wish to meet the academic and practicum requirements for a professional degree in either Speech-Language Pathology or Audiology. PhD applicants may request consideration of a combined degree plan in consultation with prospective mentors. PhD admission requirements must be met as stated above. Combined degree plans require approval by the PhD admissions committee as well as the clinical admissions committee. For MA-PhD students, all degree requirements for both programs remain in effect as specified in the Graduate Catalog for each degree , and for AuD-PhD students, all degree requirements for both programs remain in effect as specified inthe Graduate Catalog for each degree program.

Neuroscience Concentration

CSD Neuro Courses

AUSP 8000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

AUSP 8001 - Psychoacoustics

(3) Basic acoustics, psychoacoustical methods, and psychoacoustical findings presented with emphasis on matters of greatest importance for foundations of audiological practice.

AUSP 8010 - Neurol Bases Comm

(2) Review of the neuroanatomy of the central and peripheral nervous systems and the physiology of nerves and muscles; attention on cortical and subcortical structures and on neuropsychological processes that are attributed to speech and/or language functions.

AUSP 8011 - Psycholinguistics

(3) Historical and recent trends in linguistics; relationship between brain, language, and cognition; knowledge and processes involved in speaking and listening; topics include nature of mental representations and organization of knowledge; speech perception; lexical, sentence, and discourse processing; speech and language production.

AUSP 8019 - Anat/Phys Aud Sys I

(3) Basic anatomy and physiology of the outer ear, middle ear, and inner ear; embryologic origins and development of structures related to body systems.

AUSP 8020 - Anat/Phys Aud Sys II

(3) The nervous system, visual and proprioceptive systems as they relate to hearing and balance. PREREQUISITE(S): AUSP 8019 or permission of instructor.

AUSP 8105 - Vestibular Assmt/Rehab

(3) Evaluation of balance function using a test battery approach according to cross-check principles; interpretation of test results and rehabilitation of balance disorders. PREREQUISITE(S): AUSP 7103/AUSP 8103 , or permission of instructor.

AUSP 8118 - Electrophys Assessmnt

(3) Methods for assessing auditory system integrity from the periphery through the central nervous system using evoked bioelectric signals; normal and disordered function will be examined. PREREQUISITE(S): AUSP 8020,AUSP 8103 or permission of instructor.

AUSP 8212 - Autism Spect Disord/Rel Disabl

(3) Review of characteristics and etiology of autism spectrum disorders, including strategies for language and communication evaluation, assessment, and intervention with children, adolescents and adults with autism spectrum disorders and related severe communicative disabilities.

AUSP 8112 - Sem Audiology

(3) Detailed study of selected topics in audiology. With different content, may be repeated for up to 6 hours at the 7000 level or 12 hours at the 8000 level. PREREQUISITE(S): permission of instructor.

Other Units

BIOM 6720 - Bioelectricity

(4) Biolelectricity, including calculations of potential fields resulting from cardiac or neural electrogeneration, treatment of how heart and nerves generate and propagate electrical signals.

- PSYC 827 - Functional Neuroanatomy (UTHSC)
- ANT 821 - Neuroscience Seminar (UTHSC)

BIOL 8140 - Receptors & Signaling

(3) Develops state-of-the-art understanding of issues in cell receptors and signaling, covering receptor-ligand interactions including methods of identification and quantification; emphasizes specific characteristics of G protein-coupled receptors, receptor tyrosine kinases, and ligand-activate transcription factors including mechanisms of action and signaling pathways activated by each receptor. Three lecture hours per week.

BIOL 8338 - Biological Clocks

(3) A consideration of the biological clocks that generate daily, lunar, seasonal and annual rhythms in various animals including people. Emphasis on neuroendocrine substrates, development and adaptive significance of reproductive cycles, feeding rhythms, sleep-wakefulness cycles, hibernation cycles, body weight and migratory cycles. Three lecture hours per week. PREREQUISITE(S): Graduate standing and Permission of instructor.

BIOL 8345 - Animal Communication

(3) Examination of the relationship between evolutionary ecology and animal communication to investigate how animal interactions with conspecifics affect their behavior. A rudimentary knowledge of animal behavior, animal psychology, or ecology is recommended. Three lecture hours per week. Three lecture hours per week.

BIOL 8350 - Evolutionary Ecology

(3) Provides the basic foundation for applying genetic and evolutionary theory to the ecology of plants and animals; emphasis on genetic and phenotypic adaptations of plants and animals to their environment. Three lecture hours per week. Three lecture hours per week.

BIOL 8031 - Cell Physiology

(3) (MMCS 7031-8031) (MMCS 7031-8031). Cellular thermodynamics, membrane transport systems, ion channels, oxidative phosphorylation, electron transport, cytoskeleton and mechanochemical coupling systems.Three lecture hours per week. PREREQUISITE(S): Permission of instructor.

PHD Experimental Psychology-Behavioral Neuroscience Concentration Requirements

Biological Bases of Behavior:

PSYC 8701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 8705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

PSYC 8441 - Psyc/Medical Illness

(3) Addresses application of psychological principles to promote coping with medical disability and optimal healing; diagnostic interviewing and medical consulting skills emphasized; psychological and cognitive impact on various medical diseases and disorders reviewed; biological bases of behavior emphasized. Restricted by Program or by Permit.

Cognitive-Affective Bases of Behavior:

PSYC 8407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 8222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 8208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 8211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

Communication Sciences and Disorders - Speech-Language Sciences and Disorders Concentration, (PhD)

PhD Program

Program Admission

1. All completed applications are reviewed by the admissions committee. Students should have a GPA of at least 3.0 (on a 4 point scale). GRE scores are required (General Test). Applications will be accepted throughout the year for the PhD program. However, applications submitted by February 1st of each year will be considered for funding. Decisions about financial assistance are typically made each year shortly after the February 1 deadline. Decisions about financial assistance through research grants, however, can be made for applications received at any time.
2. Applicants should submit recommendations from at least three individuals familiar with the applicant's academic background and aptitude for PhD work in Audiology or Speech-Language Pathology. The letters should specify in detail the applicant's capabilities for PhD study.
3. Applicants also need to submit a resume/vita describing all educational and work experience and a letter describing research interests and professional goals.
4. In addition, applicants must have an interview with U of M faculty in the student's major area of concentration.
5. Most applicants will have a master's or AuD degree upon admission but this is not a requirement.
6. Students are expected to understand and use English proficiently.

Graduation Requirements

1. For students entering with a bachelor's degree, a minimum of 81 graduate hours, not including dissertation, is required for the PhD degree in Communication Sciences and Disorders.
2. For students who have completed a master's degree in Audiology or Speech-Language Pathology, a minimum of 57 graduate hours, not including dissertation, will be required for the PhD degree.
3. For students who have completed a master's degree in a field related to Audiology or Speech-Language Pathology, a minimum of 69 graduate hours, not including dissertation, will be required for the PhD degree.
4. For students who have completed an AuD degree, a minimum of 33 hours, not including dissertation, will be required for the PhD degree.
5. A minimum of 9 hours is required for the dissertation. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the dissertation.
6. Additional coursework, beyond the minimum, may be required at the discretion of the advising committee. Course credit for clinical practicum may not be counted toward the PhD degree.

Areas of Concentration:

Two areas of concentration are offered, (1) Hearing Sciences and Disorders and (2) Speech-Language Sciences and Disorders. A minimum of 24 credit hours must be taken in the student's area of concentration and at least 21 of these hours must be within the School of Communication Sciences and Disorders. This requirement is waived for post-AuD students in the Audiology concentration.

Core Requirements

Core Requirements are designed to ensure that all PhD students will acquire knowledge of the acoustic phonetic structure of speech signals, speech acoustics, professional issues, and the neuroanatomy/neurophysiology related to communication sciences and disorders: All PhD students are required to complete the following:

AUSP 8000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

OR

AUSP 8001 - Psychoacoustics

(3) Basic acoustics, psychoacoustical methods, and psychoacoustical findings presented with emphasis on matters of greatest importance for foundations of audiological practice.

AUSP 8021 - Prof Prep/Scientists

(1) Preparation of early PhD students for the role of scientist in the academic and clinical community; rotating themes include ethics, the publication and review process, teaching strategies and techniques, mentoring, grant preparation, and presentation of research. May be repeated for a maximum of 6 credit hours.

AUSP 8400 - Teaching Experience

(1-3) Mentored university teaching experience as either an assistant to an instructor of record or as instructor of an undergraduate course offered by the School of Communication Sciences and Disorders. PREREQUISITE(S): Approval from the PhD student's Planning Committee. Grades of S/U, or IP will be given.

AUSP 8010 - Neurol Bases Comm

(2) Review of the neuroanatomy of the central and peripheral nervous systems and the physiology of nerves and muscles; attention on cortical and subcortical structures and on neuropsychological processes that are attributed to speech and/or language functions.

or

AUSP 8020 - Anat/Phys Aud Sys II

(3) The nervous system, visual and proprioceptive systems as they relate to hearing and balance. PREREQUISITE(S): AUSP 8019 or permission of instructor.

Note:

Other courses may include those in instrumentation, grant preparation, and computer technology.

Research tools

- Research Tool—15 credit hours, of which 9 hours must be in statistics and/or research design.

Collateral Area:

A minimum of 9 semester hours will be required from a collateral area. A collateral area is defined as a combination of courses based on substantive commonality. This collateral coursework must be taken outside the School of Communication Sciences and Disorders. The collateral area requirement can be waived for a student entering with a master's degree in a field related to Audiology or Speech-Language Pathology or if the student's outside work is considered sufficient by the Planning Committee.

Pre-Candidacy Research Project:

All PhD students will be required to satisfactorily complete a data-based research project prior to candidacy. Students will submit an approved written version of the completed project to the academic advisor and orally present the completed project to a departmental colloquium.

Additional Requirements

1. All PhD students are expected to be active in research collaboratively with members of the School faculty each semester they are enrolled.
2. Students may be permitted to complete the requirements for clinical certification with the approval of their planning committee.

General Program Requirements

Advisors:

Upon admission each student will be assigned an advisor by the Associate Dean of Graduate Studies in consultation with the student. This advisor will serve as the chair of the student's planning committee. The advisor shall be a full member of the graduate faculty of The University of Memphis.

Planning Committee:

The planning committee's charge is to evaluate the student's academic needs and assist in the planning of the student's academic program. Students who have completed a master's or AuD degree will be assessed for currency of knowledge in their concentration to assist in the planning of their academic program. This requirement will not apply to those students who have completed a master's or AuD degree within the School of Communication Sciences and Disorders. The academic program will be tailored to accommodate the individual student's academic interests, background, and professional goals. Within the concentration area, each student will identify an area of special focus. The committee will recommend to the Graduate School those courses, if any, to be transferred toward the PhD, provided that the credit meets general university requirements. The committee, all of whom must be members of the graduate faculty, shall number no less than three, at least two of whom shall be from the student's area of concentration. The student, in conjunction with the committee, will develop a final academic plan to be in written form and filed in the dean's office. This plan is to be signed by each member of the committee and the PhD student. The plan must be filed no later than the middle of the second semester. The student or a planning committee member may propose changes after the plan has been filed. However, any resulting change in the student's plan will require written approval of the committee and the PhD student.

Retention Requirements

All students enrolled in the School of Communication Sciences and Disorders are expected to attain high academic achievement in all courses taken. In addition to Graduate School policy the criteria listed below will be used to determine the retention status of students enrolled in the School.

1. Continuation in the program is contingent upon a satisfactory annual review.
2. Grades of less than 2.00 in a required course are considered unacceptable and must be repeated in order to meet graduation requirements.
3. Students must maintain a cumulative grade point average of 3.00 at the end of each semester of enrollment in all coursework at the University of Memphis. Any student not meeting these conditions will be placed on academic probation by the School.
4. Any student who is placed on academic probation for a third time during his/her academic program will be dismissed before enrolling in another semester.
5. Students have the option of repeating two courses in which a grade of 2.00 or less was earned. After exhausting this option, students are permitted to count only two grades of 2.00 toward graduation. A student will be dismissed at the end of the semester in which a third grade of 2.00 or less is earned.
6. Students must pass the comprehensive examination (including both written and oral components).

Comprehensive Examination Committee

The comprehensive examination committee will consist of members selected by the student in conjunction with the advisor and the planning committee. The committee will be made up of at least three members from the School of Communication Sciences and Disorders and one from an academic unit outside the School of Communication Sciences and Disorders.

Comprehensive Examination

The comprehensive examination will consist of a written and oral examination. The written examination will typically entail 24 hours of writing within a 10-day period, though up to 6 hours may be completed in an alternative manner (e.g., practical laboratory examination or scholarly paper). The purpose of the comprehensive examination is to determine adequate knowledge of the field (AUD or SLP), research tools, the collateral area, and mastery of the area of special focus. Examiners will consider the student's ability to synthesize, integrate, and critique information and ideas. Although there will usually be a relationship between doctoral coursework and the comprehensive examination, the examination is not restricted to course content. The oral examination date shall be within three weeks of the conclusion of the written examination regardless of the student's performance on the written examination. The oral examination is a supplement to the written examination and is intended to ensure that the goals of the comprehensive examination

have been met. All of the faculty committee members from within the School and at least one from outside the School must be present at the oral examination.

The comprehensive examination may be taken upon completion of the PhD student's academic plan or within the last semester of completing his or her academic requirements. This examination will be administered any time within the specified semester subject to the discretion of the comprehensive examination committee. The committee shall determine the student's status relative to the comprehensive examination after the oral examination. No more than one dissenting vote may be cast for a student to pass. The committee has the authority to specify further stipulations aimed at remedying any deficiencies reflected in the student's comprehensive examination including retaking the entire written and oral examination, enrolling for additional coursework, and preparing one or more scholarly papers. The committee chair shall file in the dean's office a decision in writing concerning the student's comprehensive examination within two weeks after the oral examination.

Candidacy

After completion of all academic requirements and successful completion of the comprehensive examination, a PhD student may apply for candidacy.

Dissertation Committee

The dissertation committee will consist of a minimum of four faculty members selected by the student in consultation with the dissertation advisor. At least half of the members must be from the School and at least one member must be from a department outside the School of Communication Sciences and Disorders. The chairperson of the dissertation committee must be from the School and must be a full member of the graduate faculty.

Dissertation

The student will develop a prospectus in conjunction with the dissertation committee chairperson. The prospectus will be reviewed for approval by the committee. After approval the student will conduct the work set forth in the prospectus. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write. The completed dissertation will be defended by the student. The oral defense will be open to the University community, with voting on the acceptability of the defense restricted to dissertation committee members. All members of the committee must be present at the dissertation defense. An affirmative decision will be based on the unanimous decision of the examining committee. After successful defense, any required revision, retyping, and resubmission of the dissertation to the committee chair must be completed prior to awarding of the degree.

Completion of both Research (PhD) and Professional (MA or AuD) Programs

Students applying to the PhD program may also wish to meet the academic and practicum requirements for a professional degree in either Speech-Language Pathology or Audiology. PhD applicants may request consideration of a combined degree plan in consultation with prospective mentors. PhD admission requirements must be met as stated above. Combined degree plans require approval by the PhD admissions committee as well as the clinical admissions committee. For MA-PhD students, all degree requirements for both programs remain in effect as specified in the Graduate Catalog for each degree , and for AuD-PhD students, all degree requirements for both programs remain in effect as specified inthe Graduate Catalog for each degree program.

Communication, (PhD)

PhD Program

The PhD program offers various areas of specialization:

For details on these areas see the Department of Communication website.

All graduate students must comply with the general requirements of the Graduate School (see Admission Regulations, Academic Regulations, and Minimum Degree Requirements) as well as the program requirements of the degree being pursued.

Admissions Criteria

Students can be admitted to the PhD program with or without a Master's degree. We require your degree to be in Communication, Rhetoric, or a related field from an accredited institution. Multiple criteria will be used when considering your application for admission, including, but not limited to, undergraduate and graduate grade point average, GRE scores, statement of purpose, writing samples, relevant employment history, letters of recommendation, and the quality of the applicant's writing. The number of students admitted to the PhD program will depend on availability of adequate faculty supervision and other department resources. More specific admissions criteria can be found on our department website. GRE scores are required for every applicant.

See the Department of Communication website for information on applying.

Graduate Advising

Before registering for courses beyond 18 hours of study in the department, the student must choose a major advisor and form a PhD advisory program committee consisting of their major advisor to serve as chair and two members of the department's graduate faculty. Students must also submit a Plan of Study, approved by their committee, before registering for courses beyond 18 hours.

Role of the PhD Advisory Committee

All decisions pertaining to a student's program must be approved by a consensus of the PhD advisory committee, including meeting to approve a plan of study and approving the content of independent studies. Changes to the plan of study require advisory committee approval. See information below on comprehensive exams and dissertation for more information on the role of the advisory committee.

Program Requirements

1. It is expected that students maintain a GPA of 3.0 throughout the PhD program. Should the student's GPA fall below 3.0, nine semester hours will be allowed to correct the deficiency. At the request of the student's PhD advisory committee and at the discretion of the department chair and the graduate committee, this period may be extended 9 additional semester hours. The student must have obtained a GPA of at least 3.0 before registering for dissertation credit hours. Any assistantship is forfeited if a student is put on probation.
2. A minimum of 72 hours of graduate credit beyond the bachelor's degree. At least 60 hours of credit must be at the 7000 level or higher. Students admitted to the PhD program without an MA must first complete the MA in Communication as part of their PhD requirements. For students who have already obtained a master's degree when admitted to the program, a minimum of 42 hours of graduate credit at the 7000 level or higher beyond that master's degree is required. A minimum of 6 hours must be taken from outside of the Department of Communication. No more than 6 hours of dissertation (COMM 9000) will count toward satisfying the total number of graduate hours required for the PhD.

3. Research Tool or Analytic Specialty. Students must demonstrate competence in the research tool or analytic specialty required for completion of their dissertation. Competence can be demonstrated in a variety of ways to be determined by the student's advisory committee.
4. Core Competencies. Students must have competency in the Department's areas of specialization. These competencies can be satisfied academically in a variety of ways in consultation with the student's advisor.
5. Residency Requirements. A minimum of 2 consecutive semesters (Fall/Spring or Spring/Fall) in residence (with a course load of 9 hours per semester) beyond the master's degree must be completed prior to registering for dissertation credit. The summer session will not count as one of the required semesters.
6. Comprehensive Examination. The examination will consist of a written and an oral portion. At the completion of the students' course-work the student shall take a comprehensive exam over the areas covered in the student's program. The content of the examination for each student will depend on the nature of the student's program and the areas of concentration. The precise distribution of the 10 hours of the written exam and the areas that it will cover will be determined by the student's PhD advisory committee. When appropriate, questions may be solicited from other faculty members to supplement those provided by the PhD advisory committee members. The comprehensive examination, which is both written and oral, is the primary basis on which the faculty of the department determine whether the student is ready to embark upon the program of research and writing culminating in the dissertation. The PhD advisory committee administers the comprehensive examination. At the close of the oral portion, the PhD advisory committee, after considering the quality of both oral and written responses, will determine the outcome. Students will not be allowed to take the comprehensive examination or submit a dissertation prospectus if they have any Incompletes outstanding in the approved program of study.
7. Dissertation Requirements
    1. On successful completion of the comprehensive examination the student shall select a dissertation director and, in consultation with the director, invite three additional faculty members to serve as the students' dissertation advisory committee. One member of the advisory committee must be from outside the discipline. The dissertation director serves as the chair of the dissertation committee. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.
    2. Dissertation Proposal Defense. The student shall submit a proposal for the dissertation to the dissertation advisory committee and defend the proposal before the committee. To be considered as "making satisfactory progress," a candidate must have his/her prospectus approved within two semesters of completion of the comprehensive examination.
    3. Dissertation Defense: Once the dissertation director deems a dissertation ready for defense, the director circulates a complete draft of the document to all committee members. "Ready for defense" means the director, in their judgement, believes that the document is satisfactory and defensible before the full committee. The committee will have at least ten (10) business days to review the document before rendering their judgement. Once the majority of the dissertation committee formally agrees that the disseration is ready to be defended, then a defense date can be set. Upon approval of a majority of the members of the dissertation committee at the defense, the dissertation will then be submitted to the Graduate School for final approval.
8. Departmental PhD Guidelines. Additional details and information are available in the departmental PhD Guidelines found on the department website.

Graduate Assistantships

1. Graduate assistantships are available and are awarded on a competitive basis within the department. Assistantships are normally renewed for one year depending upon the performance of assistantship duties and the progress being made toward a degree.
2. More details are available on the department website.

Time Limit

All requirements for the degree must be completed in 12 calendar years.

Retention

At the end of every academic year, the graduate faculty in the Department of Communication evaluates the progress of every PHD student in the program. For a student to continue in the program, he or she must maintain satisfactory progress. The student will be judged as NOT making satisfactory progress if:

1. The student's cumulative GPA (during the student's initial 36 hours of coursework in the COMM PhD program) drops below 3.0 and remains there for more than one (1) semester or nine (9) credit hours.
2. The student does not pass comprehensive exams within two (2) semesters of completing thirty-six (36) hours of coursework.
3. The student does not defend prospectus successfully within two (2) semesters of passing comprehensive examination.
4. The student has acquired more incompletes than s/he can complete during one semester of normal academic work.
5. The student's coursework does not demonstrate promise for independent scholarly work.

Should a student fail to maintain satisfactory progress, the Graduate Committee, in conjunction with the department chair, can recommend to the CCFA Associate Dean for Graduate Affairs and the U of M Dean of the Graduate School that the student be dropped from the program. Moreover, students found by the Office of Student Conduct to have committed misconduct will be sanctioned by the University in accordance with the policies contained in the "Code of Student Rights and Responsibilities." In these cases, the Department may also recommend to the CCFA Associate Dean for Graduate Affairs and the U of M Dean of the Graduate School that the student be dropped from the program.

Computer Science, (PhD)

PhD Degree

Admission Requirements

1. GRE scores are required and are an important factor for admission;
2. Three letters of recommendation;
3. An undergraduate degree in an appropriate discipline with a minimum GPA of 2.5 (on a 4.0 scale) or equivalent preparation;
4. A score of at least 550 on the paper-based TOEFL, or 79 on the internet-based TOEFL, or 6 on IELTS (for students whose native language is not English).
5. Statement of purpose

Prerequisites

1. One year (8 credit hours) of calculus and one semester (3 credit hours) of linear algebra (Students without the calculus and/or linear algebra prerequisites will be considered on an individual basis and, if admitted, must correct the deficiencies within the first semester.)
2. Satisfactory completion of the following courses (or their equivalents): COMP 1900, 2150, 3410 and 2700. (None of these courses may be used to fulfill degree requirements.)

Program Requirements

Satisfactory completion of coursework requirements as follows:

Students without an approved Masters Degree

Students without an approved Masters Degree must complete at least 72 credit hours, which must satisfy the following rules:

The following coursework must be completed:

Core Requirements:

These courses must be completed within the first 36 hours of credit in the program unless approved by the student's advisor. The student must obtain a grade of B or better in each of these courses.

COMP 7012 - Fndtns/Software Engr

(3) (Same as EECE 7012-EECE 8012) (Same as EECE 7012-8012). Covers project management; software disciplines (requirements, analysis, design, implementation, testing); software modeling notations; mapping designs to code. Students work in teams to develop a significant software system. PREREQUISITE(S): COMP 7713 or COMP 7715 or permission of instructor.

COMP 7212 - Operating/Distrib Sys

(3) Overview of operating system architecture for centralized and distributed systems; storage device and file systems; process management, scheduling, synchronization, interprocess communications and security; case studies of selected operating systems.

COMP 7612 - Foundations of Computing

(3) Review of basic models of computation and complexity; measures and modes of complexity analyses, both logical and experimental; deterministic and stochastic methods for program analysis and data compaction. PREREQUISITE(S): COMP 6601 and COMP 6030, or permission of instructor.

COMP 7712 - Algorithms/Prob Solv

(3) Covers algorithms problems, techniques, and design emphasizing problem solving and implementation skills; topics include advanced data structures, graph algorithms, string matching, network flow, dynamic programming, and randomized algorithms.

Dissertation

Between 9-15 credit hours of Dissertation

COMP 9000 - Dissertation

(1-12) Independent research for the PhD degree.Grades of S, U, or IP will be given. PREREQUISITE(S): Enrollment in a COUN or CPSY degree program or permission of instructor.

At least 12 credit hours

At least 12 credit hours must be completed in courses at the 8000-level other than COMP 8901.

At most 6 credit hours

At most 6 credit hours can be completed in 6000-level courses.

Independent Studies

At most 18 credit hours of Independent Studies can be included.

COMP 7901 - Ind Studies COMP SCI

(1-9) Directed independent problem research and program design, writing, and documentation in an area selected by student with approval of both adviser and supervising staff members. Repeatable by permission. PREREQUISITE(S): Permission of instructor.

COMP 8901 - Ind Studies COMP SCI

(1-9) Directed independent problem research and program design, writing, and documentation in an area selected by student with approval of both adviser and supervising staff members. Repeatable by permission. PREREQUISITE(S): Permission of instructor.

Cannot Be Used Toward the Degree

COMP 6001 - Intro to Python Programming

(3) Basic concepts in computer programming. Incorporates object oriented concepts, variables, flow control statements, arrays and lists, debugging and testing. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor PREREQUISITE(S): permission of instructor; COMP 2700 recommended.

COMP 6005 - Web Design/Development

(3) Web interface development using HTML, XML, CSS, JavaScript, and AJAX ; technological issues in web page design and data visualization; web servers and their features; web services. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor PREREQUISITE(S): COMP 6040 or COMP 6041, or permission of insructor.

COMP 6014 - Intro Java Programming

(3) Java problem-solving strategies with emphasis in fundamental programming skills, primitive data types, control structures, arrays, strings, I/O, basic recursion, documentation, testing and debugging techniques; introduction to object-oriented concepts. NOTE: This course may not be used to fulfill degree requirements. NOTE: This course may not be used to fulfill degree requirements. PREREQUISITE(S): Knowledge of a programming language and descriptive statistics, or equivalent, or permission of instructor.

COMP 6030 - Desgn/Anlys Algorithms

(3) Asymptotic behavior of programs; basic paradigms in algorithm design: greedy, divide-and-conquer, dynamic programming; analysis of efficiency, and optimality of representative algorithms, including graph, pattern matching,

numerical, randomized, and approximation algorithms; approaches to lower bound analysis; basic parallel algorithms. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 2150 and 3410 or permission of instructor.

COMP 6040 - Programming Languages

(3) Comparative features, syntax, and applicability of high-level programming languages such as FORTRAN, PASCAL, LISP, Scheme, ADA, C, C++, Java, PHP, JavaScript, Perl, Prolog, and FORTH data types, data structures, and dataflow; procedures, recursion, runtime environment, string manipulation, list processing, array processing, documentation, programming style. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 2150 and COMP 7212 or permission of instructor.

COMP 6270 - Operating Systems

(3) Hierarchy of storage devices, I/O buffering, interrupts, channels; processor and job scheduling, memory management: paging, segmentation, and virtual memory; interrupt procedure calls; multiprogramming, data races in shared resources, semaphores, concurrency, management of asynchronous processes and synchronization; security and recovery procedures. PREREQUISITE(S): COMP 2150 and either COMP 3410 or EECE 4278, or permission of instructor.

COMP 6601 - Models Of Computation

(3) Computer models as a basis of the understanding and analysis of programming: computation and complexity: machine models (finite-state, stack and Turing machines), linguistic models (grammars, lambda calculus, and predicate calculi); biologically-inspired models (e.g.: neural nets or genetic algorithms); unsolvability, universality, decidability, and feasibility. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 6601 or permission of instructor.

COMP 7960 - Sem Teaching/Res/Consult

(3) Non-traditional setting in which masters students develop skills in areas of teaching, research, and consulting. Required of all graduate assistants in the department. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements. PREREQUISITE(S): PSYC 7215/PSYC 8215.

COMP 8960 - Sem Teaching/Res/Consult

(3) Non-traditional setting in which masters students develop skills in areas of teaching, research, and consulting. Required of all graduate assistants in the department. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements. PREREQUISITE(S): COUN 7541 or COUN 7542, enrollment in a COUN or CPSY degree program or permission of instructor.

Students with an approved Masters Degree

Students with an approved Masters Degree must complete at least 72 credit hours minus the number of approved Masters credits. The number of approved Masters credits will be determined by the student's advisor and the Graduate

Coordinator during the student's first semester in the program; however, students with an approved Masters Degree must complete at least 36 credit hours. Additionally, the credit hours must satisfy the following rules:

Dissertation

COMP 9000 - Dissertation

(1-12) Independent research for the PhD degree.Grades of S, U, or IP will be given. PREREQUISITE(S): Enrollment in a COUN or CPSY degree program or permission of instructor.

Note:

Dissertations must follow the Thesis/Dissertation Preparation Guide.

All other credit

All other credit must be completed at the 8000-level

Independent Studies

At most 15 credits of Independent Studies can be included

COMP 8901 - Ind Studies COMP SCI

(1-9) Directed independent problem research and program design, writing, and documentation in an area selected by student with approval of both adviser and supervising staff members. Repeatable by permission. PREREQUISITE(S): Permission of instructor.

Note:

Students who are requesting credit transfer from another graduate program must submit an application during the student's first semester in the program. The application will be evaluated by the student's advisor and the Graduate Coordinator to determine the number of credits that can be transferred towards completion of the degree requirements. The number of credit hours transferred is limited by the Graduate School.

Satisfactory completion of the following examinations:

Qualifying examination:

Satisfactory completion of the core requirement is deemed as passing the qualifying examination. Students with an approved Masters Degree may satisfy a core requirement by taking the final exam of the core course and obtaining a passing mark as equivalent to obtaining a B or better grade of the course, or by having a waiver approved by the student's advisor and the graduate coordinator. A maximum of two attempts is allowed for each core course, and they must be made within the first 39 credit hours of entering the program (24 for students with an approved Masters Degree).

Comprehensive Examination:

Given and evaluated by a committee composed of departmental and university representatives upon presentation of an acceptable dissertation proposal.

Final Examination:

Given and evaluated by a committee composed of departmental and university representatives upon completion of an acceptable dissertation.

Note:

Detailed information can be obtained by contacting the graduate coordinator of the department. Details of the format of the examinations can be found on the Computer Science Department Web site (http:// www.cs.memphis.edu).

Counseling Psychology, (PhD)

PhD Degree Programs

The Counseling Psychology program is fully accredited by the American Psychological Association and prepares psychologists who embody a scientific approach to understanding and working with both specific and general problems in human behavior. The program is interdisciplinary and is organized around the scientist-practitioner model of critical thinking. It is implemented through didactic and experiential activities that emphasize research, development, evaluation, and learning as bases for prevention and remediation to assist persons of all ages and all life styles with improving and optimizing their well-being. The program has sufficient flexibility for students to pursue their own interests.

Program Prerequisites (or their equivalent) at the masters level:

Group Processes, Assessment/Evaluation, Career Counseling, Counseling Theories, Practicum/Clinical Techniques, Research/Data Analysis. Students who have not completed these courses prior to entering the doctoral program must complete them early during their course of studies at the University of Memphis and prior to taking advanced courses in the same topic area.

Program Admission

A limited number of applicants are admitted once each year only for admission in the Fall semester; applicants for Spring admission are not considered. All application credentials must be received by December 5 for an applicant to be considered. Applicants to the doctoral program in Counseling Psychology typically hold a master's degree (or equivalent) in counseling, psychology, or a related mental health area. Applications from students having a bachelor's degree (or equivalent) in counseling, psychology, or a related mental health area will be considered if they have had substantial academic, clinical, or research work experience beyond the undergraduate degree.

Multiple criteria will be used when considering applicant admission, including, but not limited to, competitive GRE scores, undergraduate and graduate grade point average, personal statement, letters of recommendation, clinical and research experience, and interviews. A completed application packet will include the following: Graduate School application, departmental application, GRE scores, graduate transcripts, and four letters of recommendation from persons familiar with the applicant's academic record and potential for graduate study in counseling psychology.

Program Requirements

Program prerequisites as noted above

15 semester hours in Discipline Specific Knowledge

15 semester hours in Discipline Specific Knowledge that cover each of the following content areas: Affective Aspects of Behavior, Biological Aspects of Behavior, Cognitive Aspects of Behavior, Developmental Aspects of Behavior, Social Aspects of Behavior, History and Systems of Psychology and Advanced Integrative Knowledge.

6 semester hours in Counseling Psychology Foundations and Professional Issues

CPSY 8101 - CPSY Foundations/Prfsnl Issues

(3) (7684-8684) (7684-8684). Designed to orient students and initiate their identification with the profession of Counseling Psychology; including history and future of Counseling Psychology; current issues in the field; and introduction to research, legal/ethical, and professional standards. PREREQUISITE(S): Enrollment in CPSY program.

CPSY 8201 - Advocacy,Consultation,&Ethics

(3) (3)Focus on professional identity, Counseling Psychology research, and legal/ethical issues; emphasizing professional issues, applications, and reading related to diversity and the urban environment. PREREQUISITE(S): Enrolled in CPSY program.

6 semester hours in Psychometric Theory and Methods

CPSY 8575 - Adult Pers Assessmnt

(3) Administration, scoring, and interpretation of psychodiagnostic instruments for individual personality assessment in adults. PREREQUISITE(S): COUN 8700 and enrollment in a COUN or CPSY degree program or consent of instructor.

CPSY 8576 - Adult Cog Assessment

(3) Explores concepts of intelligence and cognition in adults, analyzes issues and controversies related to assessment of cognitive functioning, and develops competency in administration, scoring, and interpretation of assessment instruments. PREREQUISITE(S): Enrollment in a COUN or CPSY degree program or consent of instructor.

or

- approved alternatives

12 semester hours in Research Methods/Data Analysis

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

EDPR 8549 - Multivariate Meth Educ

(3) (EDRS 8549) Systematic investigation of current multivariate methods in the field of educational statistics. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instructor.

or

- approved alternatives
  Students who enter the program with a strong statistical background may waive EDPR 8541 and go directly into EDPR 8542. However, students who begin the statistics sequence with EDPR 8542 must still complete two additional statistical courses.

CPSY 8203 - Sem Coun/Coun Psy Res

(3) (7683-8683) (7683-8683). Designed to give the advanced graduate student in counseling or counseling psychology and research the opportunity to explore current research and research methodology and to design a research project. PREREQUISITE(S): Completion of 6 credit hours of statistics, and enrollment in CPSY PhD program or Counseling EdD program

18 semester hours in Counseling

CPSY 8102 - Seminar In Grp Cpsy

(3) (8793) (8793). Theoretical-philosophical and research base of group counseling and psychotherapy; supervised application. PREREQUISITE(S): Doctoral Student

CPSY 8202 - Vocational Psychology

(3) (COUN 8769) (COUN 8769). Analysis of career development theory and research as applied to practice of career counseling; variables affecting career development in diverse populations. PREREQUISITE(S): COUN 7561 or equivalent.

CPSY 8577 - Supervisn in Coun Psyc

(3) Implementation and critical analysis of theories of counseling psychology supervision, strategies associated with these theories, and assessment of supervision models; surveys research on issues related to supervision in counseling psychology. PREREQUISITE(S): CPSY 8200 and enrollment in a COUN or CPSY degree program or consent of instructor.

COUN 8721 - Thry/Tchnqs Fam Thrpy

(3) (8781) (8781). Major approaches to family therapy: structural, Bowenian, strategic, behavioral, communications, experiential, object relations; techniques and assumptions, traditional and current practices.

COUN 8750 - Multicultural Counseling

(3) (8784) (8784). Theory and research on individual and group multicultural counseling with particular attention to ethnic and racial sectors of society in the US. PREREQUISITE(S): Permission of Instructor.

or

- approved alternative

COUN 8841 - Adv Coun Thry & Tech

(3) (CPSY 7784-8784) (CPSY 7784-8784). Critical analysis of selected theories and techniques of counseling; emphasis on a variety of major theories and systems; provides a thorough theoretical base for developing a consistent approach to professional counseling.

For students who enter with a master's degree that included clinical practicum

For students who enter with a master's degree that included clinical practicum, a minimum of 6 semester hours in counseling psychology practicum, CPSY 8200 and 450 clock hours, of which 150 must be direct contact hours, is required. Following completion of the minimum requirements, students may enroll in additional credits of CPSY 8200 or CPSY 8300 as electives. No more than a total of 15 practicum or advanced practicum credits will count toward the program requirements. Students entering with a bachelor's degree and no supervised clinical practicum will be required to take 9 hours of counseling psychology practicum (CPSY 8200). These students may count up to 18 credits of practicum or advanced practicum toward the program requirements.

15 semester hours of Electives in a Concentration

Residency Project and Comprehensive Examinations:

Upon completion of the core counseling psychology coursework, each doctoral student will complete a written comprehensive examination covering the core counseling psychology domains and an oral examination. Completion of the research-based residency projects (authorship on one conference presentation and authorship on one manuscript submission) is due by the proposal of the dissertation project.

12 semester hours in Dissertation

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

CPSY 9000 - Dissertation

(1-12) Credit may be earned over a period of several semesters. The dissertation may be an organized scientific contribution or a comprehensive analysis of theory and practice in a specific area.

9 semester hours in Predoctoral Internship

A full-time one-year internship in Counseling Psychology in an agency approved by the Director of Training is required.

CPSY 8800 - Predoctoral Intrnshp

(1-6) (8890) (8890). Supervised internship in setting accredited by American Psychological Association or listed in APPIC directory. May be repeated for maximum of 9 semester hours. May be repeated for maximum of 9 semester hours PREREQUISITE(S): Completion of all coursework,comprehensive examinations, and successful proposal of dissertation.

Enrollment

The counseling psychology program is a full-time program of study. Students who enter with a master's degree are able to complete the required coursework in three years and complete a one-year internship in their fourth year. Students who enter with a bachelor's degree are able to complete the required course work in four years and complete a one-year internship in their fifth year. Candidates for the PhD degree in counseling psychology are expected to carry a minimum of 9 credit hours per semester. It is necessary to enroll in 12 credit hours per semester (6-9 in summer) in order to complete the program coursework in the expected time periods.

Professional Competency

Candidates for the PhD in counseling psychology are specializing in a profession. The PhD degree represents more than the accumulation of the specified number of semester hours credit. The student has responsibility to the public and to the psychology profession to ensure that satisfactory levels of professional and research competencies are attained.

Counselor Education and Supervision, (PhD)

PhD Degree Program

The PhD program in Counseling is designed to prepare advanced professional practitioners in counseling, counselor education and counselor supervision with particular program emphases on multicultural and urban settings. Entry into the program presumes a master's degree in counseling wherein one has acquired knowledge and skills in human development, helping relationships, group counseling, lifestyle and career development, assessment techniques, research and evaluation and clinical experiences in applied settings. The PhD is designed for individuals seeking advanced preparation as educational leaders in the roles of counselor educator, counselor supervisor, professional counselor, and researcher. The PhD is not appropriate for individuals seeking preparation or licensure as a psychologist.

Program objectives are: (1) comprehension of concepts and theories underlying the profession of counseling; (2) ability to collect, analyze, and interpret individual and group data, and to generate and test hypotheses related to human behavior; (3) ability to effectively counsel in both individual and group settings: (4) ability to formulate, implement, and evaluate appropriate counseling programs and interventions; (5) ability to understand and demonstrate ethical behavior and the legal and ethical implications of that behavior; and (6) development of sensitivity and understanding of the needs of persons who are culturally different, including the ability to (a) examine attitudes and myths regarding the culturally different and (b) the sociopolitical forces impacting the culturally different client.

Program Prerequisites

A master's degree in counseling that meets CACREP or CORE standards for core knowledge and skills. Students with a master's degree in counseling that does not contain all core areas can be considered for admission, but will be required to complete additional coursework prior to enrolling in doctoral level courses.

Program Admission

1. Applicants must apply to the Graduate School and to the program. The Doctor of Philosophy degree in Counselor Education & Supervision is a limited access program; not all eligible candidates are admitted. To be considered for admission, applicants must:
    - provide official undergraduate and graduate transcripts of all academic work completed,
    - submit a Graduate Record Exam (GRE) score,
    - complete a program admission application including appropriate goals essay,
    - provide three letters of academic and/or professional reference,
    - undergo an interview with the faculty, and submit a writing sample.
2. The program selections committee selects students after all application materials and the personal interview are completed. Deadline for the completion of all admissions requirements is March 1 for the fall semester. Students are admitted one time per year and must begin their coursework during the fall semester.

Program Requirements

Thirty (30) semester hours in the major, including:

COUN 8501 - Doctoral Sem Coun

(1-3) Professional seminar designed for beginning doctoral students in counseling focuses on the development of professional identity as a leader in counseling; critical philosophical issues; research; new directions in theory and techniques; issues in counselor education and practice. Can be repeated for maximum of 3 credit hours.

COUN 8502 - Coun Residency Resrch Semn

(3) Supervised construction of the residency research project. Either under individual supervision or in concert with a research team completion of a research project suitable for publication in a national referred journal or presentation at a refereed professional conference.

COUN 8510 - Counselor Supervision

(3) (CPSY 7786-8786) (CPSY 7786-8786). Critical analysis of theories of counselor supervision, techniques associated with theories, and assessment of those supervision models; survey of research on counseling supervision issues.

COUN 8511 - Practicum in Counseling

(3) Supervised experience in appropriate settings; the student will be involved in varied supervision activities as needed. 150 hours. Grades of A-F, or IP will be given.

COUN 8512 - Teaching Counselor Education

(3) Pedagogical tools and issues with learning in pre-service counselor education programs. Skill development in curriculum, syllabus, and course design, lecture development and delivery, course assessment. teaching methods and strategies. PREREQUISITE(S): COUN 8501

COUN 8530 - Doctoral Intern Counseling

(3-12) (7699/8699) (7699/8699). Supervised experience in counseling and personnel services; complements course study with on-site professional experience focused on programmatic, career, and individual student goals.

COUN 8831 - Adv Group Processes

(3) (CPSY 7731-8731) (CPSY 7731-8731). Advanced study of group processes as applied to counseling and student services; activities, functions, and dynamics of groups will be studied with actual experience and group work included. PREREQUISITE(S): BIOL 1120 and 1121, or permission of instructor.

COUN 8841 - Adv Coun Thry & Tech

(3) (CPSY 7784-8784) (CPSY 7784-8784). Critical analysis of selected theories and techniques of counseling; emphasis on a variety of major theories and systems; provides a thorough theoretical base for developing a consistent approach to professional counseling.

Select from one of the following courses for Multicultural/Diversity/Social Justice Issues in Counseling:

COUN 8700 - Spiritual Issues in Counseling

(3) Various spiritual worldviews and issues as well as counseling interventions and ethical concerns will be discussed in the context of recently developed multicultural and spiritual counseling competencies. This course focuses on the importance of spiritual and/or religious values and beliefs that impact the mental health and emotional well being of persons living in diverse communities.

COUN 8751 - Gender Issues In Coun

(3) (8783) (8783). Current issues related to counseling women and men including developmental theory, awareness of sex role socialization and biases, and appropriate approaches to counseling women and men.

COUN 8752 - Coun Gay/Lesbian/Bisexl

(3) Gay, lesbian, and bisexual issues in counseling and psychotherapy; affirmative psychotherapy techniques and gay, lesbian, bisexual, and transgender issues, including identity formation, homophobia and heterosexism, relationships, parent and family dynamics, ethnic minorities, religion and morality, gender roles, AIDS/HIV, and suicidal ideation. PREREQUISITE(S): ESCI 1020 or ESCI 1040.

COUN 8820 - Special Topics in Counseling

(1-3) Study of current topics in the area of counseling. May be repeated with a change in content; see on-line class listings for topics

CPSY 8798 - Soc Just Coun

(3) Covers issues of social justice in counseling and counseling psychology and provides students with the opportunity to apply their knowledge to a local social justice issue through collaborative consultation, program evaluation, or clinical intervention. PREREQUISITE(S): COUN 7750/COUN 8750. Enrollment in a COUN or CPSY degree program or consent of instructor.

Fifteen (15) semester hours in research:

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

EDPR 8561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

EDPR 8511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541-EDPR 8541 or permission of instructor.

CPSY 8203 - Sem Coun/Coun Psy Res

(3) (7683-8683) (7683-8683). Designed to give the advanced graduate student in counseling or counseling psychology and research the opportunity to explore current research and research methodology and to design a research project. PREREQUISITE(S): Completion of 6 credit hours of statistics, and enrollment in CPSY PhD program or Counseling EdD program

Six (6) Elective semester hours:

such as marriage and family, crisis intervention, career, rehabilitation, school, mental health counseling, etc.

Nine (9) semester hours of dissertation:

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

COUN 9000 - Dissertation

(1-9) Credit may be earned over a period of several semesters. The dissertation may be an organized scientific contribution or a comprehensive analysis of theory and practice in a specific area.

All students:

All students must maintain a cumulative grade point average of 3.0 and make no less than a B- in all required courses.

Earth Sciences - Geophysics Concentration, (PhD)

The Earth Sciences PhD Geophyics concentration is housed in the Center for Earthquake Research and Information.

Program objectives are: (1) understanding geophysical concepts and theories and in-depth knowledge in a chosen branch of geophysics; (2) experience formulating and conducting original research projects; (3) experience in data acquisition and analysis methods, and oral and written presentation of research results; (4) become competitive for professional positions in geophysics.

Program Admission

See MS Degree Program Requirements.

Program Requirements

Course Work Requirements

The doctoral degree program includes the requirement of the satisfactory completion of a minimum of 72 hours of graduate credit beyond the Bachelor's degree. The 72 credit hour total is subject to the following restrictions:

1. No more than 12 credit hours at the 6000 level may be counted toward the Ph.D. degree.
2. At least 12 credit hours must be in courses numbered CERI 7104-CERI 7702.
3. A maximum of 36 credit hours for CERI 9000 - Dissertation may be counted toward the Ph.D. degree. A minimum of 6 credit hours of CERI 9000 is required.
4. A maximum of 6 credit hours of CERI 7621/8621 (Independent Study) may be counted toward the Ph.D. degree.
5. A maximum of 32 hours of graduate course credit completed at the University of Memphis or another accredited institution (including credit applied to a MS degree) may be applied to the 72 credit hour requirement subject to the approval of the students graduate committee. A minimum of 9 hours other than CERI 7621, CERI 7701, CERI 7702, CERI 7703, or CERI 9000 must be completed at the University of Memphis.
6. The last 30 hours of credit must be earned at the University of Memphis.

Residency

A student must commit to full-time study for a minimum of two successive semesters after admission to the degree program to fulfill the residency requirement. The purpose of the residency requirement is to provide students with significant time for sustained participation with peers and faculty in scholarly and creative activities. Summer terms will count toward residency.

Qualifying Examination

The purpose of the qualifying examination is to determine if a student has the appropriate aptitude and background to be retained in the Ph.D. program. The student is required to write an abstract identifying an original research proposition. The subject of the proposition may or may not become part of the dissertation. The examination will begin

by the student giving a brief presentation of the material in the abstract. An oral examination, not to exceed two hours, will follow covering the topic described in the abstract but the questions can and should broaden to other areas. The qualifying examination will be given just prior to the start of the third semester of residence. If the student does not pass on the first attempt, the examination can be taken a second time at the beginning of the fourth semester.

Comprehensive Examination

A comprehensive examination will be administered by the student's graduate committee covering course work taken within the program just before the start of the fifth semester of residence. The student will take a one day, 6 hour written examination. This will be followed by a two-hour oral examination scheduled no later than two days following the written examination. The oral examination will be broad in nature. The graduate committee members will grade the written exam and discuss the overall performance of the student. In general, a student will have to receive a grade of 60% or higher on the written portion of the exam to pass. If a majority of the committee members vote pass, recommendations may be made to remove deficiencies in background by coursework or reading. In the event of a tie, the outcome is a failure and the committee may recommend completion of a M.S. thesis followed by a reexamination, or a second examination at the option of the student. A second failure of the comprehensive exam results in termination.

The Advisory Committee

Upon admission, a student will be assigned a temporary committee consisting of 5 faculty members based upon research interests expressed in the application documentation. A permanent advisor and committee must be selected at the start of the first Spring Break for students entering in the fall semester and the start of the first fall semester for students entering in the spring semester. One member of the permanent committee must be external to CERI. External members from other universities/institutions/agencies may serve on the Ph.D. committee but must obtain adjunct faculty status through the University of Memphis and must agree to be present for the dissertation defense.

Submission of Manuscripts to Refereed Journals

Each student is required to be an author on two manuscripts submitted to refereed journals. The student does not have to be first author on either manuscript to fulfill this requirement but **must be first author on any manuscript included in his/her dissertation**. Both manuscripts must be submitted prior to filing for candidacy.

Doctoral Research and Dissertation

A minimum of six semester hours of CERI 9000 - Dissertation is required for the doctoral degree. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Final Oral Examination

The student's graduate committee will administer a final oral examination based upon the student's dissertation after completion of all other requirements. This examination will be held two weeks after the student has distributed the dissertation to the graduate committee and must occur at least one week before the deadline for submission of material to the Graduate School for review. If the oral examination is unsatisfactory, it must be repeated within one year and may not be repeated more than once.

Retention

A student pursuing the doctoral degree may be terminated for any of the following reasons:

1. Failure to maintain a grade point average of 3.0 or above. A student who has a cumulative grade point average below 3.0 will be placed on probation. The Dean of the Graduate School must approve continuation in graduate school. Any person whose continuation is denied may appeal the decision to the University Council for Graduate Studies.
2. Failure to pass the Qualifying exam.
3. Failure to pass the Comprehensive Examination.
4. Failure to make satisfactory progress towards completion of the degree in a timely manner, as determined by the student's graduate committee.
5. Failure to satisfy the graduate committee on the final oral examination.

Earth Sciences, (PhD)

PhD Degree Program

Program objectives are: (1) understanding in at least one of the major disciplines of earth science and principles and concepts of that discipline with a more in-depth knowledge in the chosen research focus or foci; (2) expertise in experimental design, data analysis, and oral and written presentation of research results; and (3) competitive for professional positions in the field earth sciences.

Nature of the Program

The doctorate prepares the student for a research career, primarily by establishing a broad knowledge of one of the basic areas of geography, geology, or geophysics, and through the experience of successfully completing a dissertation of original research. The prescribed examinations will permit the student to demonstrate mastery of his or her chosen fields of expertise. The individual curriculum will reflect the student's preparation and the demands of the dissertation topic selected, and will assure a strong general knowledge of Earth Sciences.

Program Requirements

1. Completion of a minimum of 72 semester hours beyond the bachelor's degree or a minimum of 40 semester hours beyond the masters degree. The courses to be completed shall be determined in consultation with the student's graduate committee.
2. Satisfactory performance on the Qualifying Examination. The Qualifying Examination will be given at the beginning of the third semester of residence, on or before a date set by the discipline Graduate Coordinator. At least one week prior to the examination date, a PhD student will present to his/her committee an abstract describing a topic that involves original research. *The abstract should be no longer than one page and must describe an original concept or approach to a research problem with a suspected positive outcome deduced by the* **student**. The subject may or may not become part of the dissertation. The exam will begin by the student giving a 15 to 20 minute presentation of the material in the abstract. An oral exam, not to exceed two hours, will follow covering (primarily) the topic described in the abstract but the questions can and should broaden to other areas.
3. Satisfactory completion of a Comprehensive Examination. The Comprehensive Examination will be given at the beginning of the fifth semester of residence, on a date set by the Graduate Coordinator. The purpose of the comprehensive examination is to determine the student's understanding of the chosen field of specialization ("depth") as well as general knowledge in earth sciences ("breadth"). The comprehensive examination will consist of a two-day (12 hours maximum) written examination followed no more than two days later by a two-hour oral examination. The oral examination will be used to clarify any points left in question by the written responses. A student should consult his or her dissertation advisor and graduate committee regarding the areas in which comprehension is expected.
4. Submission of two manuscripts for publication in peer-reviewed journals or books.

5. Completion and successful defense of a dissertation: (ESCI 9000) at least 9 hours. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Educational Psychology and Research, (PhD)

PhD Degree Programs

The PhD degree program in Educational Psychology and Research is designed to prepare advanced educational leaders for university teaching, applied research, or other professional roles in the areas of human development (infant, child, and adolescent development; adult development and aging), learning (motivation and cognitive processes applied to education), educational research methods and statistics, measurement and program evaluation.

Since the purpose of doctoral-level training is to prepare students to conduct research in a specialized area, individuals with no interest in research should not apply to this major.

Program objectives are: (1) ability to contribute to the professional field through research presentations and writing; (2) preparation for careers as academicians in institutions of higher education, applied researchers and/or scholarly work; (3) development of leadership skills for professional organizations and the ability to contribute to the field through professional service activities.

Program Admission

Applicants to the PhD program are evaluated two times a year. Completed application packets must be received by November 1 for spring semester admission, and April 1 for fall admission. Applications for international students are only accepted in the fall (November 1 deadline). Late submissions may be considered on an individual basis, but will normally be deferred to the following semester. The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE scores, personal goals statement, relevant employment history, and letters of recommendation. The number of students admitted to the PhD program will depend on availability of adequate faculty supervision. Admission forms are available in the departmental office. The completed application must include:

1. Letters of recommendation from at least three persons familiar with the applicant's academic background and aptitude for graduate work, specifying in detail the applicant's capabilities for graduate study and for future performance and scholarship.
2. A statement of 500-1000 words indicating the intended area of concentration, the applicant's present interests and career goals, research and applied interests, and prior research and applied experience.
3. A willingness to be interviewed by members of the Educational Psychology & Research faculty, should that be required.

Program Requirements

Credit Hours:

A minimum of 54 hours of graduate credit beyond the master's degree.

Core Competency:

All students upon admission into the doctoral program need to demonstrate competencies in the departmental core domains (research methods; human development; and learning and cognition) as prerequisites for further coursework. Students may demonstrate their competency by (a) having earned at least a 3.0 in a master's level course in each of the

above domains, or (b) passing proficiency exams. Doctoral students without proficiency in any of these core domains must complete the appropriate entry level course before more advanced coursework. These entry level courses will not count toward the minimum of 54 hours required.

Core (24 credits):

Research (18 credits):

Required:

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

EDPR 8081 - Supervised Research

(1-6) (EDFD 7081) Collaborative research with faculty within the major to include planning, design, management, analysis, and reporting of research. May be repeated for a maximum of 12 hours PREREQUISITE(S): Minimum of 12 hours in major and permission of instructor. Grades of A-F, or IP will be given.

Select 3 of the following:

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

EDPR 8531 - Computer As Res Tool

(3) (EDRS 7531-8531) Computer applications to research processes in education and the behavioral sciences; capabilities and limitations of computers in analysis of educational data; experience in the utilization of various (statistical) library programs. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor.

EDPR 8544 - SEM in EDU/Behav Research

(3) Includes path models; path analysis, confirmatory factor analysis, and latent-variable structural equation modeling (SEM); applications of path analytic and SEM techniques in educational research. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instructor.

EDPR 8547 - Survey Research: Sampling Design and Analysis

(3) Examines sampling procedures, design/administration of sample surveys; strategies (simple-random, probability, non-probability, cluster, single and multistage), effect of strategy on sampling error, confidentiality/anonymity issues, questionnaire design, interview procedures, question format, issues in preparation and analysis of survey data. PREREQUISITE(S): EDPR 7521 and EDPR 7542/EDPR 8542 or permission of instructor.

EDPR 8549 - Multivariate Meth Educ

(3) (EDRS 8549) Systematic investigation of current multivariate methods in the field of educational statistics. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instructor.

EDPR 8562 - Designing Qualitative Research

(3) In this course, graduate students who are completing a thesis, residency project, or dissertation will design a qualitative research project with extensive peer and instructor feedback. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 8565 - Qual Methods and Analysis

(3) This advanced level course provides extensive qualitative fieldwork experience. Student will also become familiar with various forms of qualitative data analysis. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

Note:

All doctoral degree students are expected to be active in collaborative research with members of the faculty. This includes the research-based residency project approved by the major advisor that must result in a paper submitted to a refereed journal or a refereed professional conference.

Learning & Cognition (3 credits):

at least one from

EDPR 8121 - Learning & Cognition

(3) (EDPS 7121-8121) Major theories of learning and cognition, intelligence theories, and their application to learning environments.

EDPR 8149 - Sem Cognitive Processes

(3) (EDPS 7149-8149) Classic and current learning theory research, with emphasis on recent work in cognition, constructivism, and neuropsychology applied to education.

EDPR 8150 - Motivation

(3) (EDPS 7150-8150) Theoretical and research viewpoints on motivation to learn; applications to educational settings.

EDPR 8151 - Individual Differences

(3) (EDPS 7151-8151) Theoretical foundations of instructional models designed to optimize student learning; topics include theories of intelligence, theories of learning, learning styles, gender differences, cultural differences, tracking and ability grouping, assessment, response to intervention, and the use of technology. All of these topics are explored as they relate to individual differences in learning.

Human Development (3 credits):

at least one from

EDPR 8112 - Adol Psyc Appld Educ

(3) (EDPS 7112-8112) Advanced study of theories and research on the physical, psychological, social, cognitive, and cultural aspects of adolescent development; implications for education, treatment, secondary school personnel, and others who live and work with adolescents.

EDPR 8113 - Midlife/Adult Developmt

(3) (EDPS 7113-8113) Cognitive, emotional, and psychosocial theories and research on middle age and adult development.

EDPR 8114 - Psychology Of Aging

(3) (EDPS 7114-8114) Cognitive, emotional, and psychosocial developmental theories of aging and implications for life-span education.

EDPR 8116 - Chldhd Dvlpmnt in Digital Age

(3) Current issues, research and theories about the development of children (ages 0-12) in relation to video games, Internet use, digital literacy, digital citizenship and learning in school. The course uses a hands-on/minds-on approach through collaborative work.

EDPR 8131 - Cultural Diverse Stdnts

(3) (EDPS 7131-8131) Cultural differences among American student populations; emphasis on family structure, socialization of children, and cultural influences on student behavior.

EDPR 8161 - Moral Dvlpmnt & Educ

(3) (EDPS 7161-8161) Current theory and research on moral and ethical reasoning and development across the life span and educational implications.

Concentration in Educational Psychology or Educational Research (15 credits):

Courses to be taken within the area of concentration will be planned with the major advisor.

Electives to be taken outside of the major (3 credits)

Comprehensive Examination:

Upon completion of coursework and residency project each doctoral student will complete a three-part open-book written comprehensive examination covering both the educational research and the educational psychology components of their program. The written examination will cover the three key subject areas of the student's concentration. Each part will be administered by one of the student's advisory committee and will be coordinated by the student's advisor. An oral examination will follow the written examination.

Dissertation and Final Defense (12 credits-EDPR 9000):

A dissertation acceptable to the faculty is a requirement for all doctoral students. The dissertation must embody the results of an extended research effort that is an original contribution to the existing body of research within the area of concentration. The dissertation should reflect the candidate's ability to conduct independent research and interpret in a logical manner the facts and phenomena revealed by the research.The dissertation research may be written up in one of two ways. Students may elect either to write a traditional five-chapter dissertation or to write two journal articles and submit them with the approval of the committee for journal reviews. Upon completion of the dissertation, each student will orally defend the research undertaken.

NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

EDPR 9000 - Dissertation

(1-12) (EDFD 9000) Independent research for Doctoral degree. Credit may be earned over a period of several semesters. Grades of S, U, or IP will be given.

Engineering - Civil Engineering Concentration, (PhD)

PhD Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean of Engineering.

Applicants will be considered for admission to the doctoral program based upon their educational background, Graduate Record Examination (GRE) scores, grade point average (GPA), and three letters of recommendation from previous instructors/professors attesting to their academic ability and potential for success in a doctoral program.

In most cases, applicants will be considered for admission after completion of a masters degree. However, in certain cases, highly qualified applicants will be considered for admission to the doctoral program after the attainment of a bachelors degree. It may be suggested that the student complete a masters degree while in pursuit of the doctoral degree.

In addition to the above requirements, all applicants must submit an application for admission to The University of Memphis. Applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS).

The department of study for an applicant whose highest degree is from an international university may require that their credentials be evaluated. The department of study will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Depending on the applicant's educational background, the Advisory Committee for the individual graduate student may require additional coursework to prepare the student for doctoral studies. The Advisory Committee is composed of Graduate Faculty from the College. The Department Chair, the Director of Graduate Studies for the College and the Graduate School will review and approve the Committee.

In unusual circumstances where the above admission requirements cannot be met, an applicant may seek exceptions by contacting the Director of Graduate Studies for the college.

Applicants are further advised that the College reserves the right to deny some applications for admission because of limited availability of faculty and/or physical facilities to accommodate the student's research interests.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into graduate programs. Conditional admission may be granted depending on individual academic departmental policy. If English conditional admission is offered, students will need to register for English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (http://www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived depending on specific academic department policy. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions).

Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Please review your academic program department's website and graduate catalog entries to determine if English conditional admission is offered. Questions can be directed to the program's graduate coordinator. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Retention Requirements

A student will be retained continuously in the program until completion of the degree providing the following conditions are met:

1. All students will be required to maintain a grade point average (GPA) of at least 3.00. Should the student's GPA fall below that mark, a period of one semester or one full summer term will be allowed to correct the deficiency. Failure to regain the minimum 3.00 is considered sufficient reason for being dropped from the program. This period may, at the discretion of the student's advisory committee, be extended one additional semester or full summer term. If the GPA at the end of this extension is still below 3.00, the student will be dismissed from the program.
2. Accumulation of more than 7 semester hours of cumulative graduate coursework with a grade of "C+" or lower will result in dismissal from the program, i.e., a student who accumulates 6 hours of graduate coursework with a grade of "C+" or lower in a masters program is permitted only one additional hour with a grade of "C+" or lower.
3. All students are required to complete a comprehensive examination with at least a minimum passing score on the written portion and a satisfactory performance on the oral portion of the exam. A second and final attempt to pass this examination may be granted by the student's Advisory Committee; failure will result in mandatory dismissal from the program.

4. All students must demonstrate reportable activity and progress on their research project to their advisory committee each fall and spring semester after dissertation hours are started. This reportable activity should also be submitted in writing to the Department Chair.

Grade point averages above are based on a 4.00 grading system where A = 4.00. Students presenting transcripts using a different system will be held to similar standards.

Graduation Requirements

General Requirements: Each student must earn at least 72 semester hours beyond the bachelors degree or 42 beyond the masters degree (see Table 1A). Students entering with a bachelors degree can apply up to 24 semester hours of dissertation credit toward these requirements. Students entering with a masters degree can apply up to 18 hours of dissertation credit. Early in each student's program of study, the Director of Graduate Studies, upon recommendation of the Departmental Chair, will approve an Advisory Committee composed of Graduate Faculty in the College. The Advisory Committee will guide the student's dissertation research and recommend coursework to support that research endeavor.

For students admitted with a bachelors degree, at least 48 of the 72 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 12 semester hours of credit for 6000 level courses will count toward the PhD degree. (See Table 1B)

For students admitted with a masters degree, at least 30 of the 42 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 6 semester hours of credit for 6000 level courses will count toward the PhD degree.

Table 1A) Doctoral Program Options

Option	**Total Credit Hours**	**Course Hours (excluding Dissertation)**	**Hours of Dissertation (9000 course)**
Post Bachelor's Degree (BS)	72	48	24
Post Master's Degree (MS)	42	24	18

Table 1B) Doctoral Program Course Hours

Option	**Course Hours (excluding dissertation)**	**Maximum hours of dissertation (9000 courses)**	**Maximum hours at 6000**	**Minimum hours at 7000/8000**	**Minimum hours at 7000/8000 in concentration**
Post Bachelor's Degree (BS)	48	24	12	36	24
Post Master's Degree (MS)	24	18	6	18	12

Residency Requirements: A minimum of 18 semester hours must be earned while the student is in continuous residence. This may be done in two regular consecutive semesters. If the student is retained as a graduate assistant, the residency requirement may be met over a single continuous twelve-month period provided the student completes 18

semester hours in two successive regular semesters. A student is not eligible to complete the residency requirement until a minimum of 18 semester hours of graduate study have been successfully completed.

Mathematics Requirements: Based on the qualifying examination required of all The University of Memphis doctoral students, the advisory committee may stipulate that appropriate mathematics courses be made a part of the student's program.

Examination Requirements: All students must take a qualifying examination in accordance with University policy outlined under Minimum Requirements for Doctoral Degrees in this catalog. This examination, which is intended to determine the student's mastery of broad fundamental concepts, will be typically given only after the student has completed between 9 to 27 semester hours of graduate study. For students entering the program with a masters degree, the exam will occur early in their PhD program as directed by the student's Advisor and Advisory Committee. The results will be used to prescribe the remainder of the student's academic program, and successful completion of the qualifying exam is required for admission to candidacy as a doctoral student.

The examination will generally be given in written form. However, the student's committee may require an oral session before making a final decision on the student's qualification to continue his/her studies.

After the final semester of coursework, the student will be required to successfully complete written and oral comprehensive examinations that will ascertain the student's mastery of the theoretical material that will underlie the dissertation topic. The student's Advisory Committee will conduct this oral comprehensive exam.

At the completion of the dissertation, the student must defend the work before the advisory committee and other interested members of the university faculty who may care to question the results of the research. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Course Requirements: Nine semester hours of major mathematics, physical science and engineering principles core courses that integrate their doctoral experience are required of all doctoral students. This core is developed by the student's graduate Advisory Committee. Each concentration requires a minimum of 48 semester hours of coursework post Bachelor's Degree (and 24 post Master's Degree) plus research comprising the dissertation hours in the chosen field of study. Each student's program of study will be developed with the student's Advisory Committee. **NOTE: Students taking Engineering courses will be charged an additional $35 per credit hour.**

Concentration Requirements

CIVL 8001 - Engineering Analysis

(3) (same as CERI 8130). Numerical integration of linear and non-linear differential equations; finite difference methods; systems of linear algebraic equations; applications to engineering problems. PREREQUISITE(S): Permission of instructor.

CIVL 8012 - Prob Meth In Engr

(3) Concepts and methods of probability and statistics that are essential for modeling engineering problems under conditions of uncertainty; application to practical problems. PREREQUISITE(S): CIVL 3103 or equivalent.

Engineering - Computer Engineering Concentration, (PhD)

PhD Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean of Engineering.

Applicants will be considered for admission to the doctoral program based upon their educational background, Graduate Record Examination (GRE) scores, grade point average (GPA), and three letters of recommendation from previous instructors/professors attesting to their academic ability and potential for success in a doctoral program.

In most cases, applicants will be considered for admission after completion of a masters degree. However, in certain cases, highly qualified applicants will be considered for admission to the doctoral program after the attainment of a bachelors degree. It may be suggested that the student complete a masters degree while in pursuit of the doctoral degree.

In addition to the above requirements, all applicants must submit an application for admission to The University of Memphis. Applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS).

The department of study for an applicant whose highest degree is from an international university may require that their credentials be evaluated. The department of study will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Depending on the applicant's educational background, the Advisory Committee for the individual graduate student may require additional coursework to prepare the student for doctoral studies. The Advisory Committee is composed of Graduate Faculty from the College. The Department Chair, the Director of Graduate Studies for the College and the Graduate School will review and approve the Committee.

In unusual circumstances where the above admission requirements cannot be met, an applicant may seek exceptions by contacting the Director of Graduate Studies for the college.

Applicants are further advised that the College reserves the right to deny some applications for admission because of limited availability of faculty and/or physical facilities to accommodate the student's research interests.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into graduate programs. Conditional admission may be granted depending on individual academic departmental policy. If English conditional admission is offered, students will need to register for English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (http://www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived depending on specific academic department policy. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions).

Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Please review your academic program department's website and graduate catalog entries to determine if English conditional admission is offered. Questions can be directed to the program's graduate coordinator. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Retention Requirements

A student will be retained continuously in the program until completion of the degree providing the following conditions are met:

1. All students will be required to maintain a grade point average (GPA) of at least 3.00. Should the student's GPA fall below that mark, a period of one semester or one full summer term will be allowed to correct the deficiency. Failure to regain the minimum 3.00 is considered sufficient reason for being dropped from the program. This period may, at the discretion of the student's advisory committee, be extended one additional semester or full summer term. If the GPA at the end of this extension is still below 3.00, the student will be dismissed from the program.
2. Accumulation of more than 7 semester hours of cumulative graduate coursework with a grade of "C+" or lower will result in dismissal from the program, i.e., a student who accumulates 6 hours of graduate coursework with a grade of "C+" or lower in a masters program is permitted only one additional hour with a grade of "C+" or lower.
3. All students are required to complete a comprehensive examination with at least a minimum passing score on the written portion and a satisfactory performance on the oral portion of the exam. A second and final attempt to pass this examination may be granted by the student's Advisory Committee; failure will result in mandatory dismissal from the program.
4. All students must demonstrate reportable activity and progress on their research project to their advisory committee each fall and spring semester after dissertation hours are started. This reportable activity should also be submitted in writing to the Department Chair.

Grade point averages above are based on a 4.00 grading system where A = 4.00. Students presenting transcripts using a different system will be held to similar standards.

Graduation Requirements

General Requirements: Each student must earn at least 72 semester hours beyond the bachelors degree or 42 beyond the masters degree (see Table 1A). Students entering with a bachelors degree can apply up to 24 semester hours of dissertation credit toward these requirements. Students entering with a masters degree can apply up to 18 hours of dissertation credit. Early in each student's program of study, the Director of Graduate Studies, upon recommendation of the Departmental Chair, will approve an Advisory Committee composed of Graduate Faculty in the College. The Advisory Committee will guide the student's dissertation research and recommend coursework to support that research endeavor.

For students admitted with a bachelors degree, at least 48 of the 72 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 12 semester hours of credit for 6000 level courses will count toward the PhD degree. (See Table 1B)

For students admitted with a masters degree, at least 30 of the 42 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 6 semester hours of credit for 6000 level courses will count toward the PhD degree.

Table 1A) Doctoral Program Options

Option	**Total Credit Hours**	**Course Hours (excluding Dissertation)**	**Hours of Dissertation (9000 course)**
Post Bachelor's Degree (BS)	72	48	24
Post Master's Degree (MS)	42	24	18

Table 1B) Doctoral Program Course Hours

Option	Course Hours (excluding dissertation)	Maximum hours of dissertation (9000 courses)	Maximum hours at 6000	Minimum hours at 7000/8000	Minimum hours at 7000/8000 in concentration
Post Bachelor's Degree (BS)	48	24	12	36	24
Post Master's Degree (MS)	24	18	6	18	12

Residency Requirements: A minimum of 18 semester hours must be earned while the student is in continuous residence. This may be done in two regular consecutive semesters. If the student is retained as a graduate assistant, the residency requirement may be met over a single continuous twelve-month period provided the student completes 18 semester hours in two successive regular semesters. A student is not eligible to complete the residency requirement until a minimum of 18 semester hours of graduate study have been successfully completed.

Mathematics Requirements: Based on the qualifying examination required of all The University of Memphis doctoral students, the advisory committee may stipulate that appropriate mathematics courses be made a part of the student's program.

Examination Requirements: All students must take a qualifying examination in accordance with University policy outlined under Minimum Requirements for Doctoral Degrees in this catalog. This examination, which is intended to determine the student's mastery of broad fundamental concepts, will be typically given only after the student has completed between 9 to 27 semester hours of graduate study. For students entering the program with a masters degree, the exam will occur early in their PhD program as directed by the student's Advisor and Advisory Committee. The results will be used to prescribe the remainder of the student's academic program, and successful completion of the qualifying exam is required for admission to candidacy as a doctoral student.

The examination will generally be given in written form. However, the student's committee may require an oral session before making a final decision on the student's qualification to continue his/her studies.

After the final semester of coursework, the student will be required to successfully complete written and oral comprehensive examinations that will ascertain the student's mastery of the theoretical material that will underlie the dissertation topic. The student's Advisory Committee will conduct this oral comprehensive exam.

At the completion of the dissertation, the student must defend the work before the advisory committee and other interested members of the university faculty who may care to question the results of the research. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Course Requirements: Nine semester hours of major mathematics, physical science and engineering principles core courses that integrate their doctoral experience are required of all doctoral students. This core is developed by the student's graduate Advisory Committee. Each concentration requires a minimum of 48 semester hours of coursework post Bachelor's Degree (and 24 post Master's Degree) plus research comprising the dissertation hours in the chosen field of study. Each student's program of study will be developed with the student's Advisory Committee. **NOTE: Students taking Engineering courses will be charged an additional $35 per credit hour.**

Concentration Requirements

EECE 8001 - Professional Develpmnt

(3) Electrical and computer engineering research methods, development issues and ethics in academia and engineering practice. Students learn how to conduct literature search, write progress reports, publications and prepare and give presentations.

Engineering - Electrical Engineering Concentration, (PhD)

PhD Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean of Engineering.

Applicants will be considered for admission to the doctoral program based upon their educational background, Graduate Record Examination (GRE) scores, grade point average (GPA), and three letters of recommendation from previous instructors/professors attesting to their academic ability and potential for success in a doctoral program.

In most cases, applicants will be considered for admission after completion of a masters degree. However, in certain cases, highly qualified applicants will be considered for admission to the doctoral program after the attainment of a bachelors degree. It may be suggested that the student complete a masters degree while in pursuit of the doctoral degree.

In addition to the above requirements, all applicants must submit an application for admission to The University of Memphis. Applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS).

The department of study for an applicant whose highest degree is from an international university may require that their credentials be evaluated. The department of study will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Depending on the applicant's educational background, the Advisory Committee for the individual graduate student may require additional coursework to prepare the student for doctoral studies. The Advisory Committee is composed of Graduate Faculty from the College. The Department Chair, the Director of Graduate Studies for the College and the Graduate School will review and approve the Committee.

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Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Please review your academic program department's website and graduate catalog entries to determine if English conditional admission is offered. Questions can be directed to the program's graduate coordinator. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Retention Requirements

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1. All students will be required to maintain a grade point average (GPA) of at least 3.00. Should the student's GPA fall below that mark, a period of one semester or one full summer term will be allowed to correct the deficiency. Failure to regain the minimum 3.00 is considered sufficient reason for being dropped from the program. This period may, at the discretion of the student's advisory committee, be extended one additional semester or full summer term. If the GPA at the end of this extension is still below 3.00, the student will be dismissed from the program.
2. Accumulation of more than 7 semester hours of cumulative graduate coursework with a grade of "C+" or lower will result in dismissal from the program, i.e., a student who accumulates 6 hours of graduate coursework with a grade of "C+" or lower in a masters program is permitted only one additional hour with a grade of "C+" or lower.
3. All students are required to complete a comprehensive examination with at least a minimum passing score on the written portion and a satisfactory performance on the oral portion of the exam. A second and final attempt to pass this examination may be granted by the student's Advisory Committee; failure will result in mandatory dismissal from the program.
4. All students must demonstrate reportable activity and progress on their research project to their advisory committee each fall and spring semester after dissertation hours are started. This reportable activity should also be submitted in writing to the Department Chair.

Grade point averages above are based on a 4.00 grading system where A = 4.00. Students presenting transcripts using a different system will be held to similar standards.

Graduation Requirements

General Requirements: Each student must earn at least 72 semester hours beyond the bachelors degree or 42 beyond the masters degree (see Table 1A). Students entering with a bachelors degree can apply up to 24 semester hours of dissertation credit toward these requirements. Students entering with a masters degree can apply up to 18 hours of dissertation credit. Early in each student's program of study, the Director of Graduate Studies, upon recommendation of the Departmental Chair, will approve an Advisory Committee composed of Graduate Faculty in the College. The Advisory Committee will guide the student's dissertation research and recommend coursework to support that research endeavor.

For students admitted with a bachelors degree, at least 48 of the 72 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 12 semester hours of credit for 6000 level courses will count toward the PhD degree. (See Table 1B)

For students admitted with a masters degree, at least 30 of the 42 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 6 semester hours of credit for 6000 level courses will count toward the PhD degree.

Table 1A) Doctoral Program Options

Option	Total Credit Hours	Course Hours (excluding Dissertation)	Hours of Dissertation (9000 course)
Post Bachelor's Degree (BS)	72	48	24
Post Master's Degree (MS)	42	24	18

Table 1B) Doctoral Program Course Hours

Option	Course Hours (excluding dissertation)	Maximum hours of dissertation (9000 courses)	Maximum hours at 6000	Minimum hours at 7000/8000	Minimum hours at 7000/8000 in concentration
Post Bachelor's Degree (BS)	48	24	12	36	24
Post Master's Degree (MS)	24	18	6	18	12

Residency Requirements: A minimum of 18 semester hours must be earned while the student is in continuous residence. This may be done in two regular consecutive semesters. If the student is retained as a graduate assistant, the residency requirement may be met over a single continuous twelve-month period provided the student completes 18 semester hours in two successive regular semesters. A student is not eligible to complete the residency requirement until a minimum of 18 semester hours of graduate study have been successfully completed.

Mathematics Requirements: Based on the qualifying examination required of all The University of Memphis doctoral students, the advisory committee may stipulate that appropriate mathematics courses be made a part of the student's program.

Examination Requirements: All students must take a qualifying examination in accordance with University policy outlined under Minimum Requirements for Doctoral Degrees in this catalog. This examination, which is intended to determine the student's mastery of broad fundamental concepts, will be typically given only after the student has completed between 9 to 27 semester hours of graduate study. For students entering the program with a masters degree, the exam will occur early in their PhD program as directed by the student's Advisor and Advisory Committee. The results will be used to prescribe the remainder of the student's academic program, and successful completion of the qualifying exam is required for admission to candidacy as a doctoral student.

The examination will generally be given in written form. However, the student's committee may require an oral session before making a final decision on the student's qualification to continue his/her studies.

After the final semester of coursework, the student will be required to successfully complete written and oral comprehensive examinations that will ascertain the student's mastery of the theoretical material that will underlie the dissertation topic. The student's Advisory Committee will conduct this oral comprehensive exam.

At the completion of the dissertation, the student must defend the work before the advisory committee and other interested members of the university faculty who may care to question the results of the research. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Course Requirements: Nine semester hours of major mathematics, physical science and engineering principles core courses that integrate their doctoral experience are required of all doctoral students. This core is developed by the student's graduate Advisory Committee. Each concentration requires a minimum of 48 semester hours of coursework post Bachelor's Degree (and 24 post Master's Degree) plus research comprising the dissertation hours in the chosen field of study. Each student's program of study will be developed with the student's Advisory Committee. **NOTE: Students taking Engineering courses will be charged an additional $35 per credit hour.**

Concentration Requirements

EECE 8001 - Professional Develpmnt

(3) Electrical and computer engineering research methods, development issues and ethics in academia and engineering practice. Students learn how to conduct literature search, write progress reports, publications and prepare and give presentations.

Engineering - Engineering Physics Concentration, (PhD)

PhD Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean of Engineering.

Applicants will be considered for admission to the doctoral program based upon their educational background, Graduate Record Examination (GRE) scores, grade point average (GPA), and three letters of recommendation from previous instructors/professors attesting to their academic ability and potential for success in a doctoral program.

In most cases, applicants will be considered for admission after completion of a masters degree. However, in certain cases, highly qualified applicants will be considered for admission to the doctoral program after the attainment of a bachelors degree. It may be suggested that the student complete a masters degree while in pursuit of the doctoral degree.

In addition to the above requirements, all applicants must submit an application for admission to The University of Memphis. Applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS).

The department of study for an applicant whose highest degree is from an international university may require that their credentials be evaluated. The department of study will accept evaluations done by any credentialing agency listed on the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Depending on the applicant's educational background, the Advisory Committee for the individual graduate student may require additional coursework to prepare the student for doctoral studies. The Advisory Committee is composed of Graduate Faculty from the College. The Department Chair, the Director of Graduate Studies for the College and the Graduate School will review and approve the Committee.

In unusual circumstances where the above admission requirements cannot be met, an applicant may seek exceptions by contacting the Director of Graduate Studies for the college.

Applicants are further advised that the College reserves the right to deny some applications for admission because of limited availability of faculty and/or physical facilities to accommodate the student's research interests.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into graduate programs. Conditional admission may be granted depending on individual academic departmental policy. If English conditional admission is offered, students will need to register for English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (http://www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived depending on specific academic department policy. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions).

Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Please review your academic program department's website and graduate catalog entries to determine if English conditional admission is offered. Questions can be directed to the program's graduate coordinator. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Retention Requirements

A student will be retained continuously in the program until completion of the degree providing the following conditions are met:

1. All students will be required to maintain a grade point average (GPA) of at least 3.00. Should the student's GPA fall below that mark, a period of one semester or one full summer term will be allowed to correct the deficiency. Failure to regain the minimum 3.00 is considered sufficient reason for being dropped from the program. This period may, at the discretion of the student's advisory committee, be extended one additional semester or full summer term. If the GPA at the end of this extension is still below 3.00, the student will be dismissed from the program.
2. Accumulation of more than 7 semester hours of cumulative graduate coursework with a grade of "C+" or lower will result in dismissal from the program, i.e., a student who accumulates 6 hours of graduate coursework with a grade of "C+" or lower in a masters program is permitted only one additional hour with a grade of "C+" or lower.
3. All students are required to complete a comprehensive examination with at least a minimum passing score on the written portion and a satisfactory performance on the oral portion of the exam. A second and final attempt to pass this examination may be granted by the student's Advisory Committee; failure will result in mandatory dismissal from the program.
4. All students must demonstrate reportable activity and progress on their research project to their advisory committee each fall and spring semester after dissertation hours are started. This reportable activity should also be submitted in writing to the Department Chair.

Grade point averages above are based on a 4.00 grading system where A = 4.00. Students presenting transcripts using a different system will be held to similar standards.

Graduation Requirements

General Requirements: Each student must earn at least 72 semester hours beyond the bachelors degree or 42 beyond the masters degree (see Table 1A). Students entering with a bachelors degree can apply up to 24 semester hours of dissertation credit toward these requirements. Students entering with a masters degree can apply up to 18 hours of dissertation credit. Early in each student's program of study, the Director of Graduate Studies, upon recommendation of the Departmental Chair, will approve an Advisory Committee composed of Graduate Faculty in the College. The

Advisory Committee will guide the student's dissertation research and recommend coursework to support that research endeavor.

For students admitted with a bachelors degree, at least 48 of the 72 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 12 semester hours of credit for 6000 level courses will count toward the PhD degree. (See Table 1B)

For students admitted with a masters degree, at least 30 of the 42 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 6 semester hours of credit for 6000 level courses will count toward the PhD degree.

Table 1A) Doctoral Program Options

Option	**Total Credit Hours**	**Course Hours (excluding Dissertation)**	**Hours of Dissertation (9000 course)**
Post Bachelor's Degree (BS)	72	48	24
Post Master's Degree (MS)	42	24	18

Table 1B) Doctoral Program Course Hours

Option	**Course Hours (excluding dissertation)**	**Maximum hours of dissertation (9000 courses)**	**Maximum hours at 6000**	**Minimum hours at 7000/8000**	**Minimum hours at 7000/8000 in concentration**
Post Bachelor's Degree (BS)	48	24	12	36	24
Post Master's Degree (MS)	24	18	6	18	12

Residency Requirements: A minimum of 18 semester hours must be earned while the student is in continuous residence. This may be done in two regular consecutive semesters. If the student is retained as a graduate assistant, the residency requirement may be met over a single continuous twelve-month period provided the student completes 18 semester hours in two successive regular semesters. A student is not eligible to complete the residency requirement until a minimum of 18 semester hours of graduate study have been successfully completed.

Mathematics Requirements: Based on the qualifying examination required of all The University of Memphis doctoral students, the advisory committee may stipulate that appropriate mathematics courses be made a part of the student's program.

Examination Requirements: All students must take a qualifying examination in accordance with University policy outlined under Minimum Requirements for Doctoral Degrees in this catalog. This examination, which is intended to determine the student's mastery of broad fundamental concepts, will be typically given only after the student has completed between 9 to 27 semester hours of graduate study. For students entering the program with a masters degree, the exam will occur early in their PhD program as directed by the student's Advisor and Advisory Committee. The results will be used to prescribe the remainder of the student's academic program, and successful completion of the qualifying exam is required for admission to candidacy as a doctoral student.

The examination will generally be given in written form. However, the student's committee may require an oral session before making a final decision on the student's qualification to continue his/her studies.

After the final semester of coursework, the student will be required to successfully complete written and oral comprehensive examinations that will ascertain the student's mastery of the theoretical material that will underlie the dissertation topic. The student's Advisory Committee will conduct this oral comprehensive exam.

At the completion of the dissertation, the student must defend the work before the advisory committee and other interested members of the university faculty who may care to question the results of the research. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Course Requirements: Nine semester hours of major mathematics, physical science and engineering principles core courses that integrate their doctoral experience are required of all doctoral students. This core is developed by the student's graduate Advisory Committee. Each concentration requires a minimum of 48 semester hours of coursework post Bachelor's Degree (and 24 post Master's Degree) plus research comprising the dissertation hours in the chosen field of study. Each student's program of study will be developed with the student's Advisory Committee. **NOTE: Students taking Engineering courses will be charged an additional $35 per credit hour.**

Concentration Requirements

For the Engineering Physics concentration, 15 hours in Engineering courses for post-BS and 9 hours in Engineering courses for post-MS candidates are required. Similarly, 24 hours in Physics for post-BS and 9 hours in Physics for post-MS are required. The graduate committee which will be a composition of College of Engineering faculty and Physics Department faculty and this committee will determine the specific Physics and Engineering courses for this proposed concentration to effectively assist the graduate student's academic and research experiences.

Engineering - Mechanical Engineering Concentration, (PhD)

PhD Degree Program

Program Admission

The Herff College of Engineering has established uniform admissions criteria for all graduate programs. Exceptions to these requirements may be addressed by the Graduate Admissions and Retention Committee of the department and must be approved by the Dean of Engineering.

Applicants will be considered for admission to the doctoral program based upon their educational background, Graduate Record Examination (GRE) scores, grade point average (GPA), and three letters of recommendation from previous instructors/professors attesting to their academic ability and potential for success in a doctoral program.

In most cases, applicants will be considered for admission after completion of a masters degree. However, in certain cases, highly qualified applicants will be considered for admission to the doctoral program after the attainment of a bachelors degree. It may be suggested that the student complete a masters degree while in pursuit of the doctoral degree.

In addition to the above requirements, all applicants must submit an application for admission to The University of Memphis. Applicants whose native language is other than English must have a competitive score on the Test of English as a Foreign Language (TOEFL) or The International English Language Testing System (IELTS).

The department of study for an applicant whose highest degree is from an international university may require that their credentials be evaluated. The department of study will accept evaluations done by any credentialing agency listed on

the National Association of Credential Evaluation Services web site (http://www.naces.org). A course-by course report is required.

Depending on the applicant's educational background, the Advisory Committee for the individual graduate student may require additional coursework to prepare the student for doctoral studies. The Advisory Committee is composed of Graduate Faculty from the College. The Department Chair, the Director of Graduate Studies for the College and the Graduate School will review and approve the Committee.

In unusual circumstances where the above admission requirements cannot be met, an applicant may seek exceptions by contacting the Director of Graduate Studies for the college.

Applicants are further advised that the College reserves the right to deny some applications for admission because of limited availability of faculty and/or physical facilities to accommodate the student's research interests.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into graduate programs. Conditional admission may be granted depending on individual academic departmental policy. If English conditional admission is offered, students will need to register for English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (http://www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived depending on specific academic department policy. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above and to the Graduate School (www.memphis.edu/graduateadmissions).

Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Please review your academic program department's website and graduate catalog entries to determine if English conditional admission is offered. Questions can be directed to the program's graduate coordinator. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Retention Requirements

A student will be retained continuously in the program until completion of the degree providing the following conditions are met:

1. All students will be required to maintain a grade point average (GPA) of at least 3.00. Should the student's GPA fall below that mark, a period of one semester or one full summer term will be allowed to correct the deficiency. Failure to regain the minimum 3.00 is considered sufficient reason for being dropped from the program. This period may, at the discretion of the student's advisory committee, be extended one additional semester or full summer term. If the GPA at the end of this extension is still below 3.00, the student will be dismissed from the program.
2. Accumulation of more than 7 semester hours of cumulative graduate coursework with a grade of "C+" or lower will result in dismissal from the program, i.e., a student who accumulates 6 hours of graduate coursework with a grade of "C+" or lower in a masters program is permitted only one additional hour with a grade of "C+" or lower.
3. All students are required to complete a comprehensive examination with at least a minimum passing score on the written portion and a satisfactory performance on the oral portion of the exam. A second and final attempt to pass this examination may be granted by the student's Advisory Committee; failure will result in mandatory dismissal from the program.
4. All students must demonstrate reportable activity and progress on their research project to their advisory committee each fall and spring semester after dissertation hours are started. This reportable activity should also be submitted in writing to the Department Chair.

Grade point averages above are based on a 4.00 grading system where A = 4.00. Students presenting transcripts using a different system will be held to similar standards.

Graduation Requirements

General Requirements: Each student must earn at least 72 semester hours beyond the bachelors degree or 42 beyond the masters degree (see Table 1A). Students entering with a bachelors degree can apply up to 24 semester hours of dissertation credit toward these requirements. Students entering with a masters degree can apply up to 18 hours of dissertation credit. Early in each student's program of study, the Director of Graduate Studies, upon recommendation of the Departmental Chair, will approve an Advisory Committee composed of Graduate Faculty in the College. The Advisory Committee will guide the student's dissertation research and recommend coursework to support that research endeavor.

For students admitted with a bachelors degree, at least 48 of the 72 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 12 semester hours of credit for 6000 level courses will count toward the PhD degree. (See Table 1B)

For students admitted with a masters degree, at least 30 of the 42 semester hours required, including dissertation and research credit, must be in the student's concentration. No more than 6 semester hours of credit for 6000 level courses will count toward the PhD degree.

Table 1A) Doctoral Program Options

Option	**Total Credit Hours**	**Course Hours (excluding Dissertation)**	**Hours of Dissertation (9000 course)**
Post Bachelor's Degree (BS)	72	48	24
Post Master's Degree (MS)	42	24	18

Table 1B) Doctoral Program Course Hours

Option	**Course Hours (excluding dissertation)**	**Maximum hours of dissertation (9000 courses)**	**Maximum hours at 6000**	**Minimum hours at 7000/8000**	**Minimum hours at 7000/8000 in concentration**
Post Bachelor's Degree (BS)	48	24	12	36	24
Post Master's Degree (MS)	24	18	6	18	12

Residency Requirements: A minimum of 18 semester hours must be earned while the student is in continuous residence. This may be done in two regular consecutive semesters. If the student is retained as a graduate assistant, the residency requirement may be met over a single continuous twelve-month period provided the student completes 18 semester hours in two successive regular semesters. A student is not eligible to complete the residency requirement until a minimum of 18 semester hours of graduate study have been successfully completed.

Mathematics Requirements: Based on the qualifying examination required of all The University of Memphis doctoral students, the advisory committee may stipulate that appropriate mathematics courses be made a part of the student's program.

Examination Requirements: All students must take a qualifying examination in accordance with University policy outlined under Minimum Requirements for Doctoral Degrees in this catalog. This examination, which is intended to determine the student's mastery of broad fundamental concepts, will be typically given only after the student has completed between 9 to 27 semester hours of graduate study. For students entering the program with a masters degree, the exam will occur early in their PhD program as directed by the student's Advisor and Advisory Committee. The results will be used to prescribe the remainder of the student's academic program, and successful completion of the qualifying exam is required for admission to candidacy as a doctoral student.

The examination will generally be given in written form. However, the student's committee may require an oral session before making a final decision on the student's qualification to continue his/her studies.

After the final semester of coursework, the student will be required to successfully complete written and oral comprehensive examinations that will ascertain the student's mastery of the theoretical material that will underlie the dissertation topic. The student's Advisory Committee will conduct this oral comprehensive exam.

At the completion of the dissertation, the student must defend the work before the advisory committee and other interested members of the university faculty who may care to question the results of the research. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Course Requirements: Nine semester hours of major mathematics, physical science and engineering principles core courses that integrate their doctoral experience are required of all doctoral students. This core is developed by the student's graduate Advisory Committee. Each concentration requires a minimum of 48 semester hours of coursework post Bachelor's Degree (and 24 post Master's Degree) plus research comprising the dissertation hours in the chosen field of study. Each student's program of study will be developed with the student's Advisory Committee. **NOTE: Students taking Engineering courses will be charged an additional $35 per credit hour.**

Concentration Requirements

MECH 8341 - Engineering Analys I

(3) Analysis of engineering systems using closed form solutions; application of Fourier series and transforms, Laplace transforms, power series methods, vector calculus, ordinary and partial differential equations.

MECH 8342 - Engineering Analys II

(3) Continuation of MECH 7341. Theoretical and numerical analysis of engineering systems, and other advanced topics as applied to mechanical engineering problems. Engineering applications of probability and statistics, and hypothesis tests.

English: Writing and Language Studies, (PhD)

PhD in English: Writing and Language Studies Degree Program

The PhD in English is designed to prepare scholars in widely recognized fields of English, as well as to prepare advanced writing specialists in the fields of business and industry. The structure of the program provides for three related concentrations (Writing, Rhetoric, and Technical Communication; Applied Linguistics; and, Literary and

Cultural Studies) that offer students the professional flexibility that comes with competencies acquired through preparation in a broadly integrative discipline.

Admission Requirements

The following are required for admission to the PhD program in English for all applicants, whether applying with a bachelor's or master's degree.

1. Fulfillment of University requirements for admission to the Graduate School.
2. Official undergraduate and graduate transcript(s) sent to Graduate Admissions.
3. A competitive GRE verbal score. In addition, international students for whom English is not their first language typically submit a score of 90 or above on the TOEFL exam, or 6.5 overall Band score on the IELTS exam.
4. A bachelor's or master's degree from an accredited college or university in the United States, usually with a major or a strong minor in English, or the equivalent of one of these degrees in another country.
5. Minimum undergraduate and graduate grade point average of 3.25 is expected.
6. Evidence of competence in writing in English as evidenced by a statement of purpose and a sample of the applicant's best work.
7. Three letters of recommendation, preferably from college/university professors of English or comparable disciplines.

Program Admission: We normally evaluate applicants for the PhD program once each year in March for admission in the Fall semester. Although the Graduate Studies Committee may consider the application of a promising student at other times, March 1 is the deadline by which we must receive all the application materials of anyone who wishes to be considered for an assistantship for the following academic year.

Retention Requirements

Upon entering the PhD program, a student chooses an advisor in his or her concentration. The advisor will monitor the student's progress towards completion of the degree. Each semester, the Graduate Studies Committee will examine the academic progress of all students for retention in the program. If a student receives either two C's, one D, or one F grade in any English graduate level course, that student will be subject to review and could be dismissed from the program. In order to remain in good standing, all graduate students must maintain a 3.0 average in English Department courses. Students who are on academic probation for two consecutive semesters will not be allowed to continue in the program.

Graduation Requirements

General Requirements

1. A minimum of 72 hours of graduate credit beyond the bachelor's degree is required. At least 60 hours of credit must be equivalent to 7000-level coursework or higher.
2. Students entering the PhD program with a master's degree may count up to 33 hours of graduate credit toward the 72 hours needed for the PhD. Credit previously earned at another institution must be presented for evaluation not later than the end of the student's second semester of enrollment.
3. Master's level courses will be examined on an individual basis for applicability to the program. Students with a master's degree must complete at least 39 credit hours beyond that master's degree.
4. No more than 15 hours granted for dissertation work may be used to attain the required 72 hours for the PhD.

Residency Requirements

The student must complete two successive terms full-time (excluding summer sessions) to fulfill residency requirements.

Concentration Requirements

Writing, Rhetoric, and Technical Communication

PhD students pursuing a concentration in Writing, Rhetoric, and Technical Communication must complete a 12-hour breadth requirement consisting of

ENGL 8001 - Acad Genre and Sch Pub

(3) Study and application of interpretive strategies to texts pertinent to professional writing and composition studies. PREREQUISITE(S): FIR 7410 or permission of instructor.

ENGL 8805 - Foundations of Writing Studies

(3) A multidisciplinary exploration of the purposes, technologies, and contexts for written communication.

ENGL 8806 - Resch Meth In Writing

(3) Bibliographic techniques and an introduction to empirical methodologies for the study of the writing process and the testing of written documents.

ENGL 8350 - Rhetorical Theory

(3) (Same as COMM 7350-COMM 8350) (Same as COMM 7350-8350). History of rhetoric from the sophists through the present; includes readings from Isocrates, Plato, Aristotle, Cicero, Augustine, Erasmus, Ramus, Campbell, Blair, John Q. Adams, and others. PREREQUISITE(S): Successful completion of proficiency examination.

Additional Requirements

1. 21 additional hours of courses in Composition.
2. 12 hours of courses outside of Composition.
3. 6 hours of electives (may be taken in Composition).
4. 3 hours in ENGL 8002 - Reading for Comps .
5. 3 hours in ENGL 8900 - Engl Stds Colloquium
6. 15 Hours of Dissertation credit.
7. Competency with at least one research tool or analytic specialty, which must be directly relevant to the individual student's dissertation work and projected short-term professional goals. These tools or analytical specialties include a demonstrated level of competency in one foreign language, competency in one qualitative, quantitative, or historical research methodology, or competency with appropriate computer programs. See "Options for Fulfilling the Foreign Language Requirement," available from the department.

Applied Linguistics

PhD students pursuing a concentration in Applied Linguistics must complete a 12-hour breadth requirement consisting of:

ENGL 8507 - Empirical Mthds Ling Rsrch

(3) Develop research questions and hypotheses, prepare language surveys, use linguistic databases, perform qualitative and quanitative analysis of linguistic data, use computational tools, and prepare findings for presentation, and publication of research on the study of language use.

ENGL 8511 - Survey of Linguistics

(3) Introduction to the nature of language with emphasis on basic principles of English phonology, morphology, and syntax; emphasis on collecting and analyzing linguistic data for research purposes. PREREQUISITE(S): Permission of graduate coordinator

ENGL 8531 - Theory/History ESL **

(3) Survey of relation of linguistic principles to second language acquisition.

ENGL 8590 - Appl/Theory Linguistics

(3) Intensive study of specialized areas in English linguistics. Maybe repeated up to 9 hours with change of topic. May be repeated for a maximum of 9 credit hours

- Note: Other courses may be substituted for ENGL 8507 or ENGL 8590 with the permission of the Concentration Coordinator and the Director of Graduate Studies.

Additional Requirements

1. 12 additional hours of courses in Applied Linguistics.
2. 12 hours of courses outside of Applied Linguistics.
3. 12 hours of electives (may be taken in Applied Linguistics)
4. 3 hours in ENGL 8002 - Reading for Comps
5. 3 hours in ENGL 8900 - Engl Stds Colloquium .
6. 9 Hours of Dissertation credit.
7. Demonstration of a reading knowledge of two foreign languages or fluency in one foreign language. Appropriate languages must be approved by the student's advisor and the graduate coordinator as relevant to the student's course of study.

Literary and Cultural Studies

PhD students pursuing a concentration in Literary and Cultural Studies will choose from two different tracks, the Literature track or the Literature and Composition Studies track.

Literature Track

PhD students pursuing this track must complete:

1. 12-hour breadth requirement consisting of 3 hours of course work in each of the following focus areas:
    - Medieval and Early Modern Literature and Culture
    - 18th c. and 19th c. Literature and Culture
    - Modern and Contemporary Literature and Culture
    - African-American Literature and Culture

2. Focus area requirement consisting of 15 hours of course work (beyond course taken for breadth requirement) in one of the focus areas.
    - Note: Students may define an individual focus area for this requirement in consultation with advisor, with the permission of the Concentration Coordinator and the Director of Graduate Studies.
3. 9 hours in theory and methodology, including 3 hours in ENGL 8000, and 6 hours from:
    - ENGL 8336 - Afr-Amer Literary Theory
    - ENGL 8480 - Cultural Texts and Theories
    - ENGL 8701 - Hist Crit Theory
    - ENGL 8702 - Contemp Crit Theory
4. 12 hours of courses outside of main focus area (does not include courses taken for breadth requirement; may be taken in other concentrations).
5. 3 hours of electives (may be taken in Literary and Cultural Studies).
6. 3 hours in ENGL 8002 - Reading for Comps.
7. 3 hours in ENGL 8900 - Engl Stds Colloquium.
8. 15 Hours of Dissertation credit.

Literature and Composition Studies Track:

PhD students pursuing this track must complete:

Literature (30 hours):

1. 12-hour breadth requirement consisting of 3 hours of course work in each of the following focus areas:
    - Medieval and Early Modern Literature and Culture
    - 18th c. and 19th c. Literature and Culture
    - Modern and Contemporary Literature and Culture
    - African-American Literature and Culture
2. Focus area requirement consisting of 12 hours of course work (beyond course taken for breadth requirement) in one of the focus areas.
3. 6 hours in theory and methodology, including 3 hours in ENGL 8000.

Composition and Rhetoric (21 hours):

1. 15-hour core requirement consisting of:
    - ENGL 8001 - Acad Genre and Sch Pub
    - ENGL 8350 - Rhetorical Theory
    - ENGL 8801 - History Composition
    - ENGL 8805 - Foundations of Writing Studies
    - ENGL 8822 - Cont Comp Theory
2. 6 additional hours in WRTC
3. 3 hours in ENGL 8002 - Reading for Comps.
4. 3 hours in ENGL 8900 - Engl Stds Colloquium.
5. 15 hours of Dissertation credit.

Students in both Tracks in Literary and Cultural Studies must demonstrate a reading knowledge of two foreign languages or fluency in one foreign language. Appropriate languages must be approved by the student's advisor and the graduate coordinator as relevant to the student's course of study.

Examination Requirements

Examination Requirements

Qualifying Examinations

Students entering without a master's degree in English or 30 hours of appropriate graduate work, as determined by the Graduate Coordinator, must take a qualifying examination the semester after accumulating 30 hours of graduate work through graduate transfer credit and/or graduate courses completed at The University of Memphis. Qualifying examinations are designed to ascertain that the range of knowledge is appropriate at this level. Students entering without a master's degree in English will be awarded an MA degree at the completion of the qualifying exam and 33 hours of appropriate work.

Students who pass the exam will be allowed to advance to doctoral-level study.

A student who fails one section of the qualifying examination will be given one opportunity not later than the following semester to retake that section with a different question. A student who fails more than one exam question will be given an opportunity to take a different exam no later than the following semester

Comprehensive Examinations

After completing the rest of their required courses, after satisfying their language and/or research requirement, and before they begin writing their dissertations, students must pass comprehensive examinations in accordance with concentration guidelines. The Ph.D. comprehensive exam committee for both the written and oral exams will consist of a minimum of four faculty members. The student will choose an advisor from his / her concentration who will be the chair of the committee. There will be three written comprehensive exams and one oral exam.

To allow time to study for the exams, students should take their first written exam within two semesters after completing all Ph.D. coursework (including the foreign language requirements). Students could then take one exam per week over three weeks. A student will have a maximum of two months to complete all of the comprehensive exams.

1. One four-hour proctored written exam will cover the Ph.D. student's concentration. The objective of this exam is to demonstrate that the student has a command of 75-100 seminal texts, in his or her concentration, that are not included in the reading list for exam #. This list will be determined by each committee.
2. A second proctored four-hour written exam will allow students to demonstrate that they have enough background / reading knowledge to qualify them to teach upper division and graduate courses in the student's chosen area of specialization within the concentration. This area will be determined by the student in conjunction with his or her committee. The student will develop the reading list in conjunction with his or her committee, and the reading list for this portion of this exam will consist of between 50-75 texts.
3. A third written take-home exam will consist of 3,500-5,000 words that demonstrate the student's command of his or her knowledge of his or her proposed dissertation area. The objective of this exam is for the student to demonstrate that he or she has enough background / reading knowledge and ability to write a sophisticated essay concerning a literature review of the student's prospective dissertation area. This essay will cite at least 20-25 texts. The take-home exam should take no more than 7 days to complete.
4. After the written exams have been completed and graded, there will be a two-hour oral exam based upon the written exams.

Note: A student who fails one section of the comprehensive examination will be given one opportunity no later than the following semester to retake that section. A student who fails more than one section of the exam will be given an opportunity to take a different exam (with all new questions) no later than the following semester. A student who fails the second comprehensive exam will be dismissed from the program.

Dissertation Requirements

Advisory Committee

The student is responsible for choosing an advisory committee composed of at least four members of the graduate faculty best qualified to help him or her conduct research for the dissertation. If the student's research requires expertise

in a discipline outside the Department of English, the student, in consultation with his or her advisory committee chair, may ask up to one faculty member outside the Department of English to be part of the committee.

Research Proposal

When the student has passed the comprehensive examinations and has done extensive preliminary research, he or she must present and defend a research proposal before the advisory committee. That defense will be open to the entire academic community. The student must give a copy of the proposal to all committee members at least two weeks before the scheduled meeting. The advisory committee must approve the proposal before the student may proceed with the dissertation. NOTE: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Defense

In consultation with the dissertation committee, the student will schedule a defense of the completed dissertation. Both the chair of the advisory committee and the candidate must ensure adequate consultation with members of the dissertation committee well in advance of the defense date.

Epidemiology and Biostatistics, (PhD) - Epidemiology Concentration

Doctor of Philosophy (PhD) Program

Xinhua Yu, MS, MD, PhD
Associate Professor and Graduate Program Coordinator
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Email: xyu2@memphis.edu

The School of Public Health at The University of Memphis offers a PhD degree in Epidemiology and Biostatistics, the highest academic degree for individuals planning to pursue scholarly careers in this discipline. This program is designed for those who intend to teach and conduct original research utilizing rigorous scientific theories and methods, as well as be active in advocating and promoting health policies and intervention programs to improve the general health of societies.

Program Admission

A master's degree in related health field is required for admission. Applicants must show potential for further study by having maintained a GPA of at least a 3.0 average in their master's-level coursework. The Graduate Record Examination (GRE) completed within the past five years is required. Competitive scores on the GRE are considered in the admissions decision. Applicants already holding a doctoral degree or its professional equivalent may be exempted from the GRE requirement. Other professional school standardized test scores (MCAT, DAT, or LSAT,) may be substituted for the GRE by applicants who are working toward or who have already earned post-baccalaureate degrees for example, in medicine, dentistry, management, or law.

All applicants who will be attending the University on a visa and who are not native speakers of English must supply a minimum score of 96 (80%) on the computer-based Test of English as a Foreign Language (TOEFL iBT), or an equivalent score on the paper-based test (TOEFL PBT).

Letters of recommendation from three individuals (at least one letter from a former professor or instructor) familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health scholar, are required. Applicants must also submit a personal statement of approximately 750 to 1000 words indicating his/her present interests and career goals, including how the PhD in Epidemiology will prepare the candidate to achieve these goals.

Materials submitted will be reviewed by the faculty admissions committee. Admissions decisions are made on the overall quality of the applicant's scholarship and academic ability (based on GPAs, GRE scores, undergraduate and graduate coursework completed, research conducted, and recommendations) as well as the applicant's "fit" for the program in terms of research interests and career goals.

Program Prerequisites

All doctoral students are required to fulfill the following pre-requisites (6 credit hours) or documented equivalent coursework. These two courses will not count toward the required 54 hours of doctoral study:

PUBH 8150 - Biostatistical Methods I

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 8170 - Epidemiology in PUBH

(3) This doctoral level course provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies.

Program Requirements

Credit Hours:

To qualify for graduation, students need to complete a minimum of 48 semester hours of graduate course work beyond the master's degree plus 6 hours of PUBH 9000 (Doctoral Dissertation), for a minimum of 54 graduate credit hours. No more than 6 hours of dissertation credits will count toward the degree.

Transfer Credit:

Graduate School regulations must be followed regarding accepting academic credits from another institution. Courses proposed for transfer credit must meet the following two requirements. (a) The Tennessee Board of Regents requires a minimum of 750 contact minutes for each semester credit (2250 for a 3-hour course). (b) The Tennessee Conference of Graduate Schools requires a minimum of 3 hours of class work per week for 3 hours of credit. Grades earned at another institution will not be computed in the University cumulative grade point average, nor will they be accepted for transfer, unless they are "B" (3.0) or better and are from an accredited program. No credit will be transferred unless it meets with the approval of the major advisor or program graduate coordinator.

Enrollment:

Full-time students are expected to carry a minimum of 9 credits per semester, and to devote full time during their enrollment to the pursuit of degree-related activities. Full-time students with graduate assistantships are required to

enroll for 9 credits each semester. Part-time students are expected to carry a minimum of 6 credits per semester, unless permission is granted from the advisor for a reduced course load.

Research:

All doctoral students are expected to be active in research collaboratively with members of the Division faculty each semester they are enrolled. Students may receive credit for research involvement by enrolling in PUBH 8800 - Guided Research in PUBH.

Retention Requirements:

Students must earn a grade of B (3. 0) or higher in all required courses. The PhD program will adhere to Graduate School policy regarding course grades and repetition of courses. All courses applied toward PhD degree program requirements must have the advisor's written approval.

Residency Requirements:

The last 30 credit hours must be earned at The University of Memphis. Credit will be transferred to apply toward a doctoral program upon approval of the student's advisory committee in accordance with Graduate School policy.

Comprehensive Examination:

Upon completion of required coursework and prior to enrolling in dissertation hours (PUBH 9000), the student must successfully complete a written and oral comprehensive exam. The exam will assess mastery of areas covered in the student's program. The content of the examination will consist of core competencies in public health, epidemiology, and biostatistics. Epidemiology and biostatistics faculty will be responsible for organizing and evaluating the comprehensive examination.

Dissertation:

To fulfill the requirements for the PhD in Epidemiology, the student must write and defend a dissertation. The dissertation must adhere to the format outlined by the Graduate School. The dissertation topic will be determined by the student in consultation with the advisor and input from the advisory committee.

Program Curriculum:

The Epi PhD Program is a 54 semester hour degree program. Students are required to fulfill prerequisite courses PUBH 8150 - Biostatistical Methods I, and PUBH 8170 - Epidemiology in PUBH, or document their equivalent. Credit hours for these prerequisite courses will not count toward the 54 hours required for graduation.

Epidemiology Research Methods Core: 9 credit hours

PUBH 8141 - Epidemiologic Survey Method

(3) This course provides students in Public Health with the basic elements in designing and performing survey research. The course describes the initial steps in formulating and focusing the research question and proceeds to the key steps in performing survey research, i.e., identifying the target population, obtaining an appropriate sample, designing the survey instrument and implementing it.

PUBH 8172 - Epidemiology PUBH II

(3) This course is designed for epidemiology majors and other students requiring a more thorough knowledge of the concepts and methods used in epidemiological research. This course stresses analytical study designs and etiologic research. Topics include exposure-disease associations, threats to internal validity and their control, and valid interpretation of study results, including concepts of association, causality, and effect modification. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR PREREQUISITE(S): Permission of instructor.

PUBH 8174 - Epidemiology PUBH III

(3) This course is designed for doctoral and advanced master's degree students. The course focuses on the nature of causality in biological systems and the methods by which it may be determined. The course also focuses on extracting, organizing and interpreting various evidence to support public health and medical practices. Both observational and experimental study designs are considered. Landmark studies from the epidemiologic literature will be extensively used to illustrate these issues. PRE-REQUISITES: PUBH 7150, PUBH 7170, AND PUBH 7172, OR PERMISSION OF INSTRUCTOR.

Biostatistics Core: 15 credit hours

PUBH 8152 - Biostatistical Methods II

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

PUBH 8310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310.

PUBH 8311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 8309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS.

PUBH 8190 - Adv SAS for PUBH Prof 1

(3) This class introduces students to advanced SAS programming statements and techniques using the SAS system software. PREREQUISITE(S): SPRT 7321, SPRT 7331, or permission of instructor.

Doctoral Seminar: 9 credit hours

PUBH 8901 - Doctoral Professional Dev Sem

(3) This is one of two required seminar courses for all doctoral students in the School of Public Health. The seminar will address a variety of professional and personal issues that are vital to success as a doctoral student and public health professional. Topics include developing positive mentor/mentee relationships, time management, manuscript and grant writing, reviewing otherâ€™s scientific work, delivering poster and oral presentations, teaching skills, preparing curriculum vitae, networking and job negotiation/survival skills. PRE-REQUISITE: Enrollment as a doctoral student in the School of Public Health. PREREQUISITE(S): SCMS 3711 or SCMS 7020 .

PUBH 8192 - Intro to Human Disease for PH

(3) This course introduces pathophysiology of major human diseases relevant to public health professionals. The course materials will be discuss from a public health perspective that focuses on mechanisms and progression of diseases, pathophysiologic associations with risk factors, structural changes, and the applications of this knowledge in disease prevention in public health. PREREQUISITE(S): SPRT 7321; and SPRT 7331 or permission of instructor.

PUBH 8720 - Grant Writing in HealthScience

(3) The purpose of this course is to introduce doctoral students to the process of writing and submitting a research grant. Emphasis will be on National Institutes of Health (NIH) funding mechanisms; however, the topics covered will also be applicable to other federal and foundation funding sources.

Epidemiology Electives: 15 credit hours

A total of fifteen (15) credit hours is required, example courses are:

Public Health Electives:

PUBH 8124 - Environmental Toxicology

(3) This course discusses basic principles governing the behavior and effects of toxic chemicals released into the environment; sources, distribution, and fate of toxic chemicals in the environment; chemicals and cancer and birth defects; government regulation of chemical hazards. Focus is on human health impacts of chemicals found in the workplace and general environment.

PUBH 8442 - Cancer Epidemiology

(3) The course concentrates on distribution and trends of incidence, mortality and survival of major cancer types. It also discusses in depth current theories of cancer etiology, including radiation, tobacco, alcohol, drugs, occupation and other environmental, biologic and behavioral factors. Special issues of epidemiological research in cancer, such as study design, issues related to abstracting information from medical and other records and retrospective assessment of exposures will also be emphasized. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR.

PUBH 8443 - Infectious Disease Epidemiolgy

(3) This course is designed to introduce students to the basic concepts in infectious disease epidemiology. Topics include history and major concepts of infectious disease epidemiology, investigating new outbreaks, emerging infectious disease and bioterrorism. Measures for controlling infectious disease, such as surveillance, vaccination, and vector control will be taught. Major infectious diseases will be discussed in some detail, including HIV/AIDS, TB, Malaria, and Flu. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR. PREREQUISITE(S): SPRT 7321, SPRT 7331, or permission of instructor.

PUBH 8140 - Epidemiology Chronic Disease

(3) This course is designed to provide graduate students with knowledge on major chronic diseases and skill on applying various epidemiologic methods to design and conduct epidemiological studies on chronic diseases. The course covers selected topics in chronic disease with critical analysis of the current epidemiologic literature.

PUBH 8445 - Genetic Epidemiology

(3) This course will serve as a basic introduction to genetic epidemiology and its application in research. Basic concepts of human genetics will be introduced, and the research methods used to study the genetic basis of disease will be presented. Research methods discussed will include family based studies such as twin studies and affected sib pair linkage analyses, and candidate gene methods such as case-control, cohort and transmission/disequilibrium test. Gene-environment and gene-gene interaction will also be discussed. The course will conclude with a discussion of ethical issues around genetic epidemiology, current research and future directions. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR. PREREQUISITE(S): SPRT 7321; and SPRT 7331 or permission of instructor.

PUBH 8450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice. PREREQUISITE(S): MKTG 3010 and 4901 (or equivalents); or MKTG 7060; or permission of instructor.

Dissertation: 15 credit hours

PUBH 9000 - Dissertation

(1-9) Independent research for Doctor of Philosophy degree. Only 9 hours may be counted toward degree requirements. Students must be enrolled in this course during the semester in which the student expects to graduate. Grades of S, U, or IP will be given.

Epi PhD Program Requirements

In addition to completion of the 54 semester hours of required coursework, program requirements include successful completion of written and oral comprehensive examinations, and the preparation and successful defense of a dissertation in accordance with the University of Memphis Graduate School policies and guidelines.

Questions about the Epi PhD Program curriculum and degree requirements?

Xinhua Yu, MD, PhD, MS, Associate Professor and Coordinator
Epidemiology Doctoral Program

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Health Systems and Policy, (PhD)

Doctor of Philosophy (PhD)

SangNam Ahn, PhD, MPSA

Associate Professor and Coordinator
Health Systems Policy and Management
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The PhD degree in Health Systems and Policy (HSP) is the highest academic degree for individuals planning to pursue scholarly careers in this discipline. The HSP PhD is designed for those who want to teach and conduct research utilizing evidence-based best practices and rigorous scientific theories and methods to understand and improve the structure, process, and outcomes of health systems, as well as the transformative nature of healthcare data and evidence; and the need to address health systems issues within the context of improving population health. Graduates of the program will be prepared to conduct innovative, interdisciplinary, and translational research and a variety of academic, government, and non-profit health settings.

Program Admission

A master's degree in a public health, health services administration, health policy or other related health field is required for admission. Applicants for the doctoral program must show potential for further study by having maintained a GPA of at least a 3.0 average in their master's-level coursework. An acceptable, competitive score on the Graduate Record Examination (GRE) from the past five years is required. Applicants already holding a doctoral degree or its professional equivalent from a U.S. university may be exempted from the GRE requirement. Other professional school standardized test scores (MCAT, DAT, GMAT, or LSAT,) may be substituted for the GRE by applicants who are working toward, or who have already earned, post-baccalaureate degrees in medicine, dentistry, management, or law earned in the U.S.

All international applicants who will be attending the University on a visa, are non-native English speakers, and are not University of Memphis graduates must supply a minimum score of 96 (80%) on the computer-based Test of English as a Foreign Language (TOEFL iBT) or an equivalent score on the paper-based test (TOEFL PBT).

Letters of recommendation from three professionals (at least two letters from former professors) familiar with the applicant's academic background or experience in public health related work, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health scholar, are required. Applicants must also submit a personal statement of approximately 750 to 1000 words indicating his/her present interests and career goals, including how the PhD in Health Systems and Policy will prepare the candidate to achieve these goals.

Materials submitted will be reviewed by the faculty admissions committee. Admission decisions are based upon the overall quality of the applicant's scholarship and academic ability (i.e., GPAs, GRE scores, undergraduate and graduate coursework completed, research conducted, and recommendations), as well as the applicant's "fit" for the program in terms of research interests and career goals.

Students are usually admitted to the HSP PhD program for the fall semester. The priority application deadline is December 1, guaranteed consideration deadline is February 1, and final application deadline is April 1.

Program Requirements

Credit Hours:

A minimum of 54 semester hours of graduate credit beyond the master's degree is required for the PhD in Health Systems and Policy. All work for doctoral credit must be approved by and must be completed at a level of performance satisfactory to, the graduate faculty of the Division of Health Systems Management and Policy. Students also may take coursework for degree credit outside the School of Public Health with advisor approval.

Transfer Credit:

Graduate School regulations must be followed regarding accepting academic credits from another institution. Courses proposed for transfer credit must meet the following two requirements. (a) The Tennessee Board of Regents requires a minimum of 750 contact minutes for each semester credit (2250 for a 3-hour course). (b) The Tennessee Conference of Graduate Schools requires a minimum of 3 hours of class work per week for 3 hours of credit. Grades earned at another institution will not be computed in the University cumulative grade point average, nor will they be accepted for transfer, unless they are "B" (3.0) or better and are from an accredited program. No credit will be transferred unless it meets with the approval of the major advisor or program graduate coordinator.

Enrollment:

Full-time students are expected to carry a minimum of 9 credits per semester, and to devote full time during their enrollment to the pursuit of degree-related activities. Full-time students with graduate assistantships are required to enroll for 9 credits each semester. Part-time students are expected to carry a minimum of 6 credits per semester, unless permission is granted from the advisor for a reduced course load.

Research:

All doctoral students are expected to be active in research collaboratively with members of the Division faculty each semester they are enrolled. Students may receive credit for research involvement by enrolling in PUBH 8800 - Guided Research in PUBH.

Comprehensive Examination:

Upon completion of required coursework and prior to enrolling in dissertation hours (PUBH 9000), the student must successfully complete a written and oral comprehensive examination. The examination will assess mastery of areas covered in the student's program. The content of the examination for each student will consist of core competencies in public health and health systems and policy applied to public health, health services and policy, and dissertation topic. The student's advisory committee will be responsible for organizing and evaluating the comprehensive examination.

Dissertation:

To fulfill the requirements for the PhD in Health Systems and Policy, the student must write and defend a dissertation. The dissertation must adhere to the format outlined by the Graduate School. The dissertation topic will be determined by the student in consultation with the advisor with input from the advisory committee.

Residency Requirements:

The last thirty semester hours of credit for the doctoral degree must be earned at the University of Memphis. Only the number of dissertation hours accepted by the program toward the degree will be accepted as part of the last 30 hours.

Program Curriculum

Curriculum Requirements:

The HSP doctoral program is a 54 semester hour degree program. Students are required to fulfill prerequisite courses PUBH 8150 - Biostatistical Methods I, PUBH 8170 - Epidemiology in PUBH, and HADM 8105 - Health Policy and the Organization of Health Services, or document their equivalent. Credit hours for these prerequisite courses will not count toward the 54 hours required for graduation.

Health Systems and Policy Core

The following are required courses:

PUBH 8710 - HealthCare Economics

(3) (cross-listed with ECON 7710-8710) Applies basic economic concepts to analyze health care market and evaluate health policies; including distinctive economic characteristics of health, health care industry, and health care professionals; American system of health care; current health care policy issues such as health care reform, managed care, and manpower planning.

HADM 8204 - Quality/Outcome Mgmt Hlth Care

(3) This course is designed to acquaint the student with quality management philosophies, approaches, and methodologies for improving health systems and processes. Students completing this course will be able to identify, analyze and create a basic quality/outcome research proposal. May be repeated for a maximum of 12 credit hours

PUBH 8502 - Hlth Policy, Theory & Methods

(3) The course covers advanced direct practice with adults. Treatment techniques include cognitive behavioral therapy, motivational interviewing, and other evidence based practices

HADM 8109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems. May be repeated for maximum of 6 credits

HADM 8110 - Leadershp/Org Chg in Hlth Care

(3) This course synthesizes theories and strategies for leadership and navigating organizational change in healthcare and is applicable for graduate and professional students in a variety of health-related disciplines. The course covers current theories of leadership and organizational behavior, focusing on healthcare applications. Emphasis will be placed on applying theoretical concepts in organizational situations such as assessing and leading organizational change.

Research Methods Core

HADM 8106 - Health Services Resrch

(3) (POLS 7-8601) (POLS 7-8601). Issues and techniques in data collection for design and implementation of independent research projects; logic of conducting health services research, measurement, ethical considerations, logic of sampling, various methods of collecting data for health services research, and writing research proposal; introduction to program evaluation and specific quantitative decision-making techniques; overview of epidemiological concepts and techniques.

and two (2) of the following courses for a total of nine (9) credit hours:

PUBH 8334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues.

PUBH 8172 - Epidemiology PUBH II

(3) This course is designed for epidemiology majors and other students requiring a more thorough knowledge of the concepts and methods used in epidemiological research. This course stresses analytical study designs and etiologic research. Topics include exposure-disease associations, threats to internal validity and their control, and valid interpretation of study results, including concepts of association, causality, and effect modification. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR PREREQUISITE(S): Permission of instructor.

PUBH 8174 - Epidemiology PUBH III

(3) This course is designed for doctoral and advanced master's degree students. The course focuses on the nature of causality in biological systems and the methods by which it may be determined. The course also focuses on extracting, organizing and interpreting various evidence to support public health and medical practices. Both observational and experimental study designs are considered. Landmark studies from the epidemiologic literature will be extensively used to illustrate these issues. PRE-REQUISITES: PUBH 7150, PUBH 7170, AND PUBH 7172, OR PERMISSION OF INSTRUCTOR.

PUBH 8141 - Epidemiologic Survey Method

(3) This course provides students in Public Health with the basic elements in designing and performing survey research. The course describes the initial steps in formulating and focusing the research question and proceeds to the key steps in performing survey research, i.e., identifying the target population, obtaining an appropriate sample, designing the survey instrument and implementing it.

PUBH 8444 - PUBH Surveillance Fundamentals

(3) This course covers topics related to the systematic collection, analysis, and interpretation of health outcomes for use in planning, implementation, reporting, and evaluation of public health. Additional topics include basic concepts and procedures of sample designs, graphical techniques, and statistical methods of population sampling. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): SPRT 7321, SPRT 7331, or permission of instructor.

PUBH 8450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are

relevant to public health research and practice. PREREQUISITE(S): MKTG 3010 and 4901 (or equivalents); or MKTG 7060; or permission of instructor.

PUBH 8347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation. PREREQUISITE(S): Permission of instructor.

PUBH 8339 - Transl Rsrch Meth Pop Hlth

(3) This course covers methods to plan, design and evaluate the potential translatability and public health impact of prevention interventions. Methodological issues to be considered include reach, representativeness, adoption, implementation, adaptation, impact, scalability, and sustainability of interventions. Measurement and metrics to assess these elements and evaluate their impact will be included.

Biostatistics Core

PUBH 8152 - Biostatistical Methods II

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

and two (2) of the following courses for a total of nine (9) credit hours:

PSYC 8301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 8302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 8304 - Meas Th & Psychomet

(3) Measurement theory and psycho-metrics involved in the construction and evaluation of psychological measurement instruments will be stressed. Particular emphasis will be placed on theory and techniques of psychological measurement, scale and inventory construction, reliability, validity, evaluation of measurement quality, classical and contemporary measurement theory, and standardization. Restricted by program or permit. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 8305 - Quant Meth Review Rsch

(3) (Same as PUBH 7305-PUBH 8305) (same as PUBH 7305-8305). Quantitative procedures (meta-analysis) for reviewing research findings in psychology and other social sciences; techniques for locating and coding research studies, calculating effect sizes, and analyzing study findings. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PUBH 8104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 8306 - Linear Struct Modeling

(3) (PSYC 7306-8306). The purpose of this course is to provide students with an introduction to structural equation modeling (SEM). An emphasis will be placed on helping students use/apply SEM methodology to answer research questions in their areas of interest. After completing this course, students should be able to (1) conduct structural equation analyses using SAS, AMOS, and Mplus, (2) communicate results of structural equation analyses in both written and verbal form, (3) evaluate strengths and limitations of studies employing SEM techniques, and (4) provide consultation to colleagues on SEM related issues. PRE-REQUISITES: PUBH 7152 OR EQUIVALENT. PREREQUISITE(S): MKTG 3010 and 4901 (or equivalents); or MKTG 7060; or permission of instructor.

PUBH 8308 - Appl Multivariate Stat

(3) (PSYC 7308-8308). Covers multivariate analysis of variance (MANOVA) with independent designs and extensions to repeated measures and ANOVA. Goals include review of conceptual bases, learning SPSS and SAS procedures, learning analysis of simple and complex designs, and learning special post-hoc procedures. PRE-REQUISITES: PUBH 7152/8152 OR EQUIVALENT. May be repeated for a maximum of 12 credit hours

PUBH 8310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310.

PUBH 8311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

Elective Courses

Students will choose up to 9 credit hours of faculty-guided electives.

Doctoral Seminar

PUBH 8901 - Doctoral Professional Dev Sem

(3) This is one of two required seminar courses for all doctoral students in the School of Public Health. The seminar will address a variety of professional and personal issues that are vital to success as a doctoral student and public health professional. Topics include developing positive mentor/mentee relationships, time management, manuscript and grant writing, reviewing otherâ€™s scientific work, delivering poster and oral presentations, teaching skills, preparing curriculum vitae, networking and job negotiation/survival skills. PRE-REQUISITE: Enrollment as a doctoral student in the School of Public Health. PREREQUISITE(S): SCMS 3711 or SCMS 7020 .

Dissertation

up to nine (9) credit hours

PUBH 9000 - Dissertation

(1-9) Independent research for Doctor of Philosophy degree. Only 9 hours may be counted toward degree requirements. Students must be enrolled in this course during the semester in which the student expects to graduate. Grades of S, U, or IP will be given.

HSP PhD Program Requirements

In addition to completion of the 54 semester hours of required coursework, program requirements include successful completion of written and oral comprehensive examinations, and the preparation and successful defense of a dissertation in accordance with the University of Memphis Graduate School policies and guidelines.

Questions about the HSP PhD Program curriculum and degree requirements?

SangNam Ahn, PhD, MPSA, Associate Professor and Coordinator
Health Systems Policy and Management
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Higher and Adult Education, (EdD)

Doctor of Education (EdD)

Program objectives are: (1) development of skills in leadership, higher education or adult education, policy formulation, implementation, and evaluation; (2) development of research skills such as data and the relationship to organizational effectiveness; and (3) knowledge and understanding within a concentration area.

Program Admission

1. Each applicant must submit a completed application packet to the Graduate School that includes:
    - A completed admissions application, and
    - An official report of Graduate Record Examination (GRE) scores
    - Official transcripts for all prior undergraduate and graduate courses
    - In addition, each applicant must submit the following to the Department of Leadership.
        - Professional resume

        - Two-to-three page statement of academic and professional goals,
        - Three letters of recommendation
    - The admission committee may request a personal interview.

The admission decision will be based on a holistic profile that includes, but is not limited to, information contained in the completed application packet described above and obtained during the personal interview. Interested applicants are encouraged to contact the departmental office to obtain admission forms and a more completed statement of admission guidelines for the higher and adult education program.

Deadline for submission of all application material is February 15 for the summer and fall semesters, and October 1 for the spring semester.

Program Requirements

Core Requirements

A minimum of 54 semester hours beyond the master's degree, including the core requirements of LEAD 8001, LEAD 8003, LEAD 8500, HIAD 8412, HIAD 8415, HIAD 8403, EDPR 8541, EDPR 8542, and 1 additional research methods course approved by the advisor; 9 hours of dissertation; and 18 hours approved in the concentration. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write the dissertation.

LEAD 8001 - Educ Ldrship In Orgntns **

(3) (EDAS 8800) Basic theories of organization and administration; historical and contemporary foundations of theories; implications of current theories and practices for organizational and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

LEAD 8003 - Policy-Oriented Rsrch **

(3) Inquiry methods appropriate to educational policy research; empirico-inductive (grounded) and constructivist inquiry strategies emphasized. PREREQUISITE(S): LEAD 8001 and LEAD 8002,EDPR 8541 or equivalent, or permission of the instructor. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor

LEAD 8500 - Adult Lrng/Leadership **

(3) (HIAD 7255-8255) Characteristics of adult learners; factors that affect learning, achievement, and motivation throughout the adult life-cycle; implications for educational leaders and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 8412 - Hist/Policy Persp Hied

(3) (EDFD 7002-8002) Historical development of higher education in the United States; current higher education policy issues in relation to this development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 8415 - IT Trends & Issues **

(3) Explores issues and trends in information technology for leaders of higher and adult education, involving readings, discussion, and hands-on web research related to IT planning and budget considerations, academic and administrative

systems, management of IT professionals, and IT-induced change in various segments of education. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 8403 - Rsrch Hghr/Adult Educ **

(3) Current topics, research problems, new studies, and needed inquiries in higher and adult education.

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

Concentrations

Higher Education:

HIAD 8401 - Higher Educ Adminstratn **

(3) (EDAS 7192-8192) Role, function, organization, and administration of colleges and universities; roles of presidents and other administrators; variations in academic and student life in higher education; relationships with various constituencies; problems of practice and power.

HIAD 8420 - Legal/Ethical Issues in HIAD **

(3) (EDAS 8380) (EDAS 8380). Legal principles and significant legal constraints relating to institutions of higher education; emphasis on application of law to organizational structure, students, personnel, programs, property, and finance; analysis of current legal issues. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor. May be repeated for credit when topic varies

HIAD 8422 - Higher Educ Finance **

(3) (EDAS 8320) Financing of institutions in higher education; sources and methods of securing funds; development of programs; procedures for budget development and analysis; other financial and economic aspects of higher education administration; analysis of current problems related to higher education finance. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor. PREREQUISITE(S): EDPR 7541/EDPR 8541 and EDPR 8542/EDPR 8542

HIAD 8541 - Issues/Trends Tchg Adults **

(3) (HIAD 7201-8201) Teaching and learning in higher education and other educational settings; analysis of who our learners are and teaching approaches designed for diverse student populations. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

- 6 elective hours approved by the student's advisory committee

Adult Education:

HIAD 8510 - Overview of Adult Educ **

(3) (HIAD 7250) Historical development of adult education; scope of field, including non-formal, post-secondary education, and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 8541 - Issues/Trends Tchg Adults **

(3) (HIAD 7201-8201) Teaching and learning in higher education and other educational settings; analysis of who our learners are and teaching approaches designed for diverse student populations. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 8542 - Global/Compartv Issues Ldrshp **

(3) Cross-cultural and cross-national study of selected issues and problems in higher and adult education; examines role of education in promoting social, economic, and cultural change. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

- 9 elective hours approved by the student's advisory committee

The following policies in the Department of Leadership are exceptions to the policies of the Graduate School:

1. Graduate students must complete the doctoral program within ten (10) calendar years.
2. A maximum of twelve (12) hours of transfer credit/credits earned as nondegree can be counted toward the degree.

Note:

A minimum of a "B" grade must be earned in all courses as indicated on the program of study for HIAD doctoral programs.

History - Concentration in Ancient Egyptian History, (PhD)

PhD Degree Program

The Department of History also offers a program of study built upon the MA degree leading to the PhD degree. The program is designed to provide wide knowledge in two fields, more intensive preparation in a third field, and professional competence in original research and writing that will prepare the student for teaching and research in higher education or for a career in government, business, library service, and other research-related fields.

Program Admission

In making our decisions on admission we consider multiple factors, including transcripts and GPA, the nature of your coursework, recommendations, your writing sample and statement, your GRE scores (particularly the Verbal and Analytical Writing sections), the compatibility of our program with your interests, and availability of faculty to supervise your major field.

In most cases, you will need 24 graduate hours in history with at least a 3.25 GPA (on a 4.0 scale) from an accredited institution, or a M.A. in a related field that we judge as sufficient preparation for our PhD program. We strongly recommend an MA in history.

In addition to submitting your application and all transcripts to the Graduate School, you should submit the following, the first to the Graduate School and the rest to the History Department:

1. Official GRE scores, which should include the Analytical Writing section.
2. A 750-1000 word "Statement of Purpose," in which you explain your educational goals, anticipated fields of study, and general research interests. In this statement, we expect you to demonstrate some familiarity with the history department's program and faculty.
3. Three letters of recommendation commenting on your academic ability and suitability for PhD work.
4. A writing sample, consisting either of a MA thesis or a paper written for a graduate course in history (preferred) or a related field.

As part of the admission process, the Graduate Admissions Committee will seek input from department members in the applicant's field of interest.

Advising

The Coordinator of Graduate Studies will advise students when they first enroll. During the first school year enrolled, and whenever possible within the first semester, each student will choose an advisory committee. In most cases, the advisory committee will be composed of a professor with full graduate faculty rank from the major field who is designated as the advisor and two other faculty members (one from each minor field). At the advisor's discretion, the committee may include two professors from the major field. The advisory committee assists the student in determining such matters as fields of study, the choice of courses, acceptance of transfer credit, and acceptance of credit from the master's degree. The committee provides all of its decisions in writing with copies to the student and to the Coordinator of Graduate Studies.

Foreign Language

All students whose major field is not in U.S. history must demonstrate reading proficiency in one foreign language, whenever possible one directly related to the dissertation field. Proficiency consists of acceptably translating a selection from a historical work or source. The advisory committee may require the student to demonstrate reading knowledge in two or more foreign languages. It will be up to the advisory committee to determine whether students in U.S. history must demonstrate proficiency in a foreign language.

Fields of Study

1. The student will choose, in consultation with the advisor, three fields of study, one of which will be designated the dissertation field. One of the two minor fields can be complementary to the dissertation field; the second minor field must be distinct geographically, chronologically, and/or thematically from the major field.
    - The advisory committee will consult with the student and determine what and how many courses will be required in each field.

    - The student must take near the end of coursework 3 credit hours of "Reading for and Writing Comprehensives" (HIST 8990) in each field, each of which is devoted to intensive individual study of the historiography of the field as a whole, compiling a bibliography of the important literature, gaining familiarity with the key debates, and writing the comprehensive examinations. No more than these 9 credits of "Reading for and Writing Comprehensives" may count toward the degree.
2. Dissertation Fields
    - United States before 1877
    - United States after 1877
    - Ancient World; normally a dissertation in Ancient History must be in the area of Egyptology.
    - Modern Europe
    - African American History
    - Women and Gender History
    - Global History
3. Minor fields (in addition to the above)
    - Medieval-Renaissance Europe
    - Early Modern Europe
    - Latin America
    - Africa
    - East Asia
    - Russia
    - Middle East
4. As noted above, the primary focus of at least one minor field must be geographically, chronologically, and/or thematically distinct from the major field. With that restriction, a student may petition the Graduate Studies Committee for a field or fields not listed in the official list if the prospective field advisor agrees and the student's advisory committee approves.

5. Furthermore, the student's major field may be subdivided into two separate fields if it embraces separate regions or is conventionally divided into separate fields (such as Ancient or Medieval-Renaissance).

6. With the approval of the Graduate Studies Committee, one field may be taken in another department or may be interdisciplinary, including courses from at least two departments.

7. Upon approval of a petition to the Graduate Studies Committee from both the student and a prospective dissertation director, a dissertation may be completed in a field that is not normally a dissertation field.

Concentration in Ancient Egyptian History

(**Note:** "Concentration" refers to a specific program in this area. It does not imply that this is our only area of specialization.)

We expect students choosing this concentration to deepen their proficiency in Middle Egyptian and they must have a reading knowledge of French and German before they may take research seminars or write the dissertation. Admission into the graduate program in history does not automatically ensure admission into this concentration. The approval of the department's Egyptologists is also necessary, so students should contact them directly.

Course Requirements

A minimum of 60 semester hours

A minimum of 60 semester hours of graduate course work beyond the bachelor's degree plus 12 hours of HIST 9000 - Doctorl Dissertation, for a minimum total of 72 graduate credits. No more than 12 hours of dissertation credits will be counted toward the degree.

The last 30 hours of course work

The last 30 hours of course work (including 12 dissertation hours) must be from The University of Memphis.

Core requirements:

All PhD students are required to take 3 credit hours of research seminar (HIST 8070, one 7/8000-level course in the historiography of the major field and HIST 7011 - Phil & Theory of History/HIST 8011 - Phil & Theory of History. We recommend, but do not require, HIST 7100 - Global Historiography/ HIST 8100 - Global Historiography and historiography courses in the minor fields; however, the advisory committee may require them. Whenever possible, students should take all the core courses in the first year.

HIST 8070 - Research Seminar

(1-3) Emphasis on original research and writing in topics drawn from the fields generally covered by the Studies courses. May be repeated for credit when topic varies. Grades of S, U, or IP will be given.

HIST 7011 - Phil & Theory of History

(3) Speculative philosophy of history and recent problems in analytical philosophy of history.

HIST 8011 - Phil & Theory of History

(3) Speculative philosophy of history and recent problems in analytical philosophy of history.

HIST 7100 - Global Historiography

(3) Formation, development, and importance of global/ subglobal systems over time, societal interactions, and factors that favor or hinder the formation, development, and decline of various kinds of society; significance of biological, cultural, linguistic, intellectual, political, social, and economic elements for large-scale historical development.

HIST 8100 - Global Historiography

(3) Formation, development, and importance of global/ subglobal systems over time, societal interactions, and factors that favor or hinder the formation, development, and decline of various kinds of society; significance of biological, cultural, linguistic, intellectual, political, social, and economic elements for large-scale historical development.

At most 6 credit hours

At most 6 credit hours of HIST 8012 - Directed Readings, with an additional 6 hours permitted in special circumstances by petition to the Graduate Coordinator.

HIST 8012 - Directed Readings

(1-3) Arranged on an individual basis between a student and a particular instructor, whose permission is required. Master's students may take a maximum of 3 hours (6 by petition), PhD students a maximum of 6 hours (12 by petition). Grades of A-F, or I will be given.

At most 6 credits of

At most 6 credits of MA courses and 6 credits of PhD courses at the 6000-level. In special cases, the advisory committee may allow a total of 15 credits at the 6000-level.

With the approval of the advisory committee

With the approval of the advisory committee, up to 33 hours of course work from the master's degree, as well as any other graduate coursework completed before admission to the PhD program, may be counted toward the 60 credits.

A student who makes a grade of B- or lower in 6 or more hours of course work

A student who makes a grade of B- or lower in 6 or more hours of course work will be dropped from the PhD program, except under exceptional circumstances. No grade of C+ or lower may count toward the required number of credits.

The following courses do not count toward the degree:

Comprehensive Examination

The Advisory Committee will review the progress of each full-time Ph.D. student at the end of both the first and second year, and will give their findings to each student in writing. Full-time PhD students with a history MA are expected to pass their Comprehensive Examination in the fourth or fifth semester in the PhD program, and in any case within six months of finishing the required coursework.

Since the examination is designed to test knowledge of each field, it is not confined to material covered in classes and the books and articles read in them. We expect students to demonstrate an intellectual command of the subject matter, historiography, current scholarly controversies, bibliography, and whatever else is expected in each field. While reading lists for exams will vary in length and content, in most cases they will include at least 30–50 monographs in minor fields and 60–100 in the major field, or the equivalent in major articles.

Preparation for the Comprehensive Examination should begin with the first PhD class, and, for MA students anticipating continuing in the PhD program, with the first graduate class. See the departmental Guide for Graduate Students for a complete description of the exam.

The Advisory Committee will review the progress of each full-time Ph.D. student at the end of both the first and second year, and will give their findings to each student in writing. Full-time PhD students with a history MA are expected to pass their Comprehensive Examination in the fourth or fifth semester in the PhD program, and in any case within six months of finishing the required coursework.

Since the examination is designed to test knowledge of each field, it is not confined to material covered in classes and the books and articles read in them. We expect students to demonstrate an intellectual command of the subject matter, historiography, current scholarly controversies, bibliography, and whatever else is expected in each field. While reading lists for exams will vary in length and content, in most cases they will include at least 30–50 monographs in minor fields and 60–100 in the major field, or the equivalent in major articles.

Preparation for the Comprehensive Examination should begin with the first PhD class, and, for MA students anticipating continuing in the PhD program, with the first graduate class. See the departmental Guide for Graduate Students for a complete description of the exam.

Before scheduling the Reading for and Writing Comprehensives courses, the student must choose, in consultation with the advisory committee and with the approval of the Graduate Studies Committee, a Comprehensive Committee composed of three or four faculty members: one from each minor field and one or two from the dissertation field. Usually, this is the same as the advisory committee.

No sooner than the last semester of course work, in which the student will normally take only Reading for and Writing Comprehensives classes, and after satisfying the language requirement, if any, the Comprehensive Committee will administer a Comprehensive Examination over all fields. The committee, in consultation with the student, will decide whether the exam essays should be written simultaneously or not and may decide to spread them over not more than two semesters.

The written portion of the exam consists of essays of about thirty-pages length in each minor field and one or two essays totally approximately sixty pages in the major field. Students and field advisors will work out the format of these essays, based upon the nature of the field, the content of their coursework, and the reading lists and bibliographies developed for the Readings courses. The essays will be based on a series of broad questions and, in many fields, be historiographical in nature. They will draw from, but not be a mere compilation of, the written documents, described in the departmental Guide to be done in each previous course.

After a student has completed all written parts of the Comprehensive Examination, the Comprehensive Committee will conduct an oral examination over all the fields, normally within two weeks, but if necessary the Comprehensive Committee may extend the time. After the oral exam, the committee will either pass the student or require the resubmitting of one or more written parts. After the student has resubmitted any required exams, the committee may choose to hold another oral examination, but it is not required to do so.

The student may not resubmit any written examination, which will necessarily involve a major reconceptualization and revision of an essay, sooner than one full semester after the first attempt. After the student has retaken all required parts, including a second oral examination, if required, the Comprehensive Committee will decide whether, with the approval of at least three of the four members, the student should be promoted to late doctoral status or dropped from the program. Upon successful completion of the Comprehensive Examination, the coordinator of graduate studies will notify the Graduate School of the student's late doctoral status. The student may enroll in dissertation hours only after passing the Comprehensive Examination.

Dissertation

To complete the requirements for the PhD in History, the student must prepare a dissertation based on a substantial amount of original research and submitted in the acceptable form. The student determines the dissertation topic in consultation with a faculty member in the dissertation field who agrees to direct the research. NOTE: Students electing to write a dissertation should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Each PhD student must, within one semester after passing the Comprehensive Examination, present a prospectus of the proposed dissertation in a colloquy supervised by the Dissertation Committee. All history faculty and graduate students are invited to this colloquy, and all other interested persons are welcome. This is not intended as an examination, but rather as a forum in which the candidate can discuss ideas and receive suggestions and criticisms.

The Dissertation Committee consists of at least four graduate faculty, chaired by the director, who, with at least two other members, must have full graduate faculty status. It is recommended that one member be outside the discipline, department, or university. Prospective committee members not on the University of Memphis faculty must apply for Adjunct Graduate Faculty status. All graduate committees, including this one, should normally consist of tenured and tenure-track faculty. Other instructors at University of Memphis, untenured or non-tenure track instructors from other institutions, and unaffiliated scholars, with appropriate graduate faculty status may serve, but only with the approval of the committee chair and by a formal petition to the Graduate Studies Committee providing a full explanation of the reasons for the request. The Coordinator of Graduate Studies may waive the departmental requirement that three of the four members hold Full Graduate Faculty membership when an Adjunct/Affiliate member's credentials warrant it. In

these instances, only two of the departmental faculty members will be required to hold full Graduate Faculty membership. Only one adjunct or affiliate graduate faculty member may serve as a voting member; the director must hold full membership.

Formal approval of the final dissertation will be given by the Dissertation Committee and the Graduate Studies Committee.

History, (PhD)

PhD Degree Program

The Department of History also offers a program of study built upon the MA degree leading to the PhD degree. The program is designed to provide wide knowledge in two fields, more intensive preparation in a third field, and professional competence in original research and writing that will prepare the student for teaching and research in higher education or for a career in government, business, library service, and other research-related fields.

Program Admission

In making our decisions on admission we consider multiple factors, including transcripts and GPA, the nature of your coursework, recommendations, your writing sample and statement, your GRE scores (particularly the Verbal and Analytical Writing sections), the compatibility of our program with your interests, and availability of faculty to supervise your major field.

In most cases, you will need 24 graduate hours in history with at least a 3.25 GPA (on a 4.0 scale) from an accredited institution, or a M.A. in a related field that we judge as sufficient preparation for our PhD program. We strongly recommend an MA in history.

In addition to submitting your application and all transcripts to the Graduate School, you should submit the following, the first to the Graduate School and the rest to the History Department:

1. Official GRE scores, which should include the Analytical Writing section.
2. A 750-1000 word "Statement of Purpose," in which you explain your educational goals, anticipated fields of study, and general research interests. In this statement, we expect you to demonstrate some familiarity with the history department's program and faculty.
3. Three letters of recommendation commenting on your academic ability and suitability for PhD work.
4. A writing sample, consisting either of a MA thesis or a paper written for a graduate course in history (preferred) or a related field.

As part of the admission process, the Graduate Admissions Committee will seek input from department members in the applicant's field of interest.

Advising

The Coordinator of Graduate Studies will advise students when they first enroll. During the first school year enrolled, and whenever possible within the first semester, each student will choose an advisory committee. In most cases, the advisory committee will be composed of a professor with full graduate faculty rank from the major field who is designated as the advisor and two other faculty members (one from each minor field). At the advisor's discretion, the committee may include two professors from the major field. The advisory committee assists the student in determining such matters as fields of study, the choice of courses, acceptance of transfer credit, and acceptance of credit from the master's degree. The committee provides all of its decisions in writing with copies to the student and to the Coordinator of Graduate Studies.

Foreign Language

All students whose major field is not in U.S. history must demonstrate reading proficiency in one foreign language, whenever possible one directly related to the dissertation field. Proficiency consists of acceptably translating a selection from a historical work or source. The advisory committee may require the student to demonstrate reading knowledge in two or more foreign languages. It will be up to the advisory committee to determine whether students in U.S. history must demonstrate proficiency in a foreign language.

Fields of Study

1. The student will choose, in consultation with the advisor, three fields of study, one of which will be designated the dissertation field. One of the two minor fields can be complementary to the dissertation field; the second minor field must be distinct geographically, chronologically, and/or thematically from the major field.
    - The advisory committee will consult with the student and determine what and how many courses will be required in each field.
    - The student must take near the end of coursework 3 credit hours of "Reading for and Writing Comprehensives" (HIST 8990) in each field, each of which is devoted to intensive individual study of the historiography of the field as a whole, compiling a bibliography of the important literature, gaining familiarity with the key debates, and writing the comprehensive examinations. No more than these 9 credits of "Reading for and Writing Comprehensives" may count toward the degree.
2. Dissertation Fields
    - United States before 1877
    - United States after 1877
    - Ancient World; normally a dissertation in Ancient History must be in the area of Egyptology.
    - Modern Europe
    - African American History
    - Women and Gender History
    - Global History
3. Minor fields (in addition to the above)
    - Medieval-Renaissance Europe
    - Early Modern Europe
    - Latin America
    - Africa
    - East Asia
    - Russia
    - Middle East
4. As noted above, the primary focus of at least one minor field must be geographically, chronologically, and/or thematically distinct from the major field. With that restriction, a student may petition the Graduate Studies Committee for a field or fields not listed in the official list if the prospective field advisor agrees and the student's advisory committee approves.

5. Furthermore, the student's major field may be subdivided into two separate fields if it embraces separate regions or is conventionally divided into separate fields (such as Ancient or Medieval-Renaissance).

6. With the approval of the Graduate Studies Committee, one field may be taken in another department or may be interdisciplinary, including courses from at least two departments.

7. Upon approval of a petition to the Graduate Studies Committee from both the student and a prospective dissertation director, a dissertation may be completed in a field that is not normally a dissertation field.

Course Requirements

A minimum of 60 semester hours

A minimum of 60 semester hours of graduate course work beyond the bachelor's degree plus 12 hours of HIST 9000 - Doctorl Dissertation, for a minimum total of 72 graduate credits. No more than 12 hours of dissertation credits will be counted toward the degree.

The last 30 hours of course work

The last 30 hours of course work (including 12 dissertation hours) must be from The University of Memphis.

Core requirements:

All PhD students are required to take 3 credit hours of research seminar (HIST 8070, one 7/8000-level course in the historiography of the major field and HIST 7011 - Phil & Theory of History/HIST 8011 - Phil & Theory of History. We recommend, but do not require, HIST 7100 - Global Historiography/ HIST 8100 - Global Historiography and historiography courses in the minor fields; however, the advisory committee may require them. Whenever possible, students should take all the core courses in the first year.

HIST 8070 - Research Seminar

(1-3) Emphasis on original research and writing in topics drawn from the fields generally covered by the Studies courses. May be repeated for credit when topic varies. Grades of S, U, or IP will be given.

HIST 7011 - Phil & Theory of History

(3) Speculative philosophy of history and recent problems in analytical philosophy of history.

HIST 8011 - Phil & Theory of History

(3) Speculative philosophy of history and recent problems in analytical philosophy of history.

HIST 7100 - Global Historiography

(3) Formation, development, and importance of global/ subglobal systems over time, societal interactions, and factors that favor or hinder the formation, development, and decline of various kinds of society; significance of biological, cultural, linguistic, intellectual, political, social, and economic elements for large-scale historical development.

HIST 8100 - Global Historiography

(3) Formation, development, and importance of global/ subglobal systems over time, societal interactions, and factors that favor or hinder the formation, development, and decline of various kinds of society; significance of biological, cultural, linguistic, intellectual, political, social, and economic elements for large-scale historical development.

At most 6 credit hours

At most 6 credit hours of HIST 8012 - Directed Readings, with an additional 6 hours permitted in special circumstances by petition to the Graduate Coordinator.

HIST 8012 - Directed Readings

(1-3) Arranged on an individual basis between a student and a particular instructor, whose permission is required. Master's students may take a maximum of 3 hours (6 by petition), PhD students a maximum of 6 hours (12 by petition). Grades of A-F, or I will be given.

At most 6 credits of

At most 6 credits of MA courses and 6 credits of PhD courses at the 6000-level. In special cases, the advisory committee may allow a total of 15 credits at the 6000-level.

With the approval of the advisory committee

With the approval of the advisory committee, up to 33 hours of course work from the master's degree, as well as any other graduate coursework completed before admission to the PhD program, may be counted toward the 60 credits.

A student who makes a grade of B- or lower in 6 or more hours of course work

A student who makes a grade of B- or lower in 6 or more hours of course work will be dropped from the PhD program, except under exceptional circumstances. No grade of C+ or lower may count toward the required number of credits.

The following courses do not count toward the degree:

Comprehensive Examination

The Advisory Committee will review the progress of each full-time Ph.D. student at the end of both the first and second year, and will give their findings to each student in writing. Full-time PhD students with a history MA are expected to pass their Comprehensive Examination in the fourth or fifth semester in the PhD program, and in any case within six months of finishing the required coursework.

Since the examination is designed to test knowledge of each field, it is not confined to material covered in classes and the books and articles read in them. We expect students to demonstrate an intellectual command of the subject matter, historiography, current scholarly controversies, bibliography, and whatever else is expected in each field. While reading lists for exams will vary in length and content, in most cases they will include at least 30–50 monographs in minor fields and 60–100 in the major field, or the equivalent in major articles.

Preparation for the Comprehensive Examination should begin with the first PhD class, and, for MA students anticipating continuing in the PhD program, with the first graduate class. See the departmental Guide for Graduate Students for a complete description of the exam.

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reading lists for exams will vary in length and content, in most cases they will include at least 30–50 monographs in minor fields and 60–100 in the major field, or the equivalent in major articles.

Preparation for the Comprehensive Examination should begin with the first PhD class, and, for MA students anticipating continuing in the PhD program, with the first graduate class. See the departmental Guide for Graduate Students for a complete description of the exam.

Before scheduling the Reading for and Writing Comprehensives courses, the student must choose, in consultation with the advisory committee and with the approval of the Graduate Studies Committee, a Comprehensive Committee composed of three or four faculty members: one from each minor field and one or two from the dissertation field. Usually, this is the same as the advisory committee.

No sooner than the last semester of course work, in which the student will normally take only Reading for and Writing Comprehensives classes, and after satisfying the language requirement, if any, the Comprehensive Committee will administer a Comprehensive Examination over all fields. The committee, in consultation with the student, will decide whether the exam essays should be written simultaneously or not and may decide to spread them over not more than two semesters.

The written portion of the exam consists of essays of about thirty-pages length in each minor field and one or two essays totally approximately sixty pages in the major field. Students and field advisors will work out the format of these essays, based upon the nature of the field, the content of their coursework, and the reading lists and bibliographies developed for the Readings courses. The essays will be based on a series of broad questions and, in many fields, be historiographical in nature. They will draw from, but not be a mere compilation of, the written documents, described in the departmental Guide to be done in each previous course.

After a student has completed all written parts of the Comprehensive Examination, the Comprehensive Committee will conduct an oral examination over all the fields, normally within two weeks, but if necessary the Comprehensive Committee may extend the time. After the oral exam, the committee will either pass the student or require the resubmitting of one or more written parts. After the student has resubmitted any required exams, the committee may choose to hold another oral examination, but it is not required to do so.

The student may not resubmit any written examination, which will necessarily involve a major reconceptualization and revision of an essay, sooner than one full semester after the first attempt. After the student has retaken all required parts, including a second oral examination, if required, the Comprehensive Committee will decide whether, with the approval of at least three of the four members, the student should be promoted to late doctoral status or dropped from the program. Upon successful completion of the Comprehensive Examination, the coordinator of graduate studies will notify the Graduate School of the student's late doctoral status. The student may enroll in dissertation hours only after passing the Comprehensive Examination.

Dissertation

To complete the requirements for the PhD in History, the student must prepare a dissertation based on a substantial amount of original research and submitted in the acceptable form. The student determines the dissertation topic in consultation with a faculty member in the dissertation field who agrees to direct the research. NOTE: Students electing to write a dissertation should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Each PhD student must, within one semester after passing the Comprehensive Examination, present a prospectus of the proposed dissertation in a colloquy supervised by the Dissertation Committee. All history faculty and graduate students are invited to this colloquy, and all other interested persons are welcome. This is not intended as an examination, but rather as a forum in which the candidate can discuss ideas and receive suggestions and criticisms.

The Dissertation Committee consists of at least four graduate faculty, chaired by the director, who, with at least two other members, must have full graduate faculty status. It is recommended that one member be outside the discipline,

department, or university. Prospective committee members not on the University of Memphis faculty must apply for Adjunct Graduate Faculty status. All graduate committees, including this one, should normally consist of tenured and tenure-track faculty. Other instructors at University of Memphis, untenured or non-tenure track instructors from other institutions, and unaffiliated scholars, with appropriate graduate faculty status may serve, but only with the approval of the committee chair and by a formal petition to the Graduate Studies Committee providing a full explanation of the reasons for the request. The Coordinator of Graduate Studies may waive the departmental requirement that three of the four members hold Full Graduate Faculty membership when an Adjunct/Affiliate member's credentials warrant it. In these instances, only two of the departmental faculty members will be required to hold full Graduate Faculty membership. Only one adjunct or affiliate graduate faculty member may serve as a voting member; the director must hold full membership.

Formal approval of the final dissertation will be given by the Dissertation Committee and the Graduate Studies Committee.

Instruction and Curriculum Leadership - Early Childhood Education, (EdD)

EdD Degree Program

The primary purposes of the doctoral programs in the Department of Instruction and Curriculum Leadership are to prepare candidates for positions as teacher educators and researchers in colleges and universities; or, to produce experts in research and development who can lead initiatives to analyze, implement, and evaluate instructional materials and learning environments.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions information:

- Application to the Graduate School that includes:
    1. Official Graduate Record Examination (GRE) score (verbal, quantitative, and writing)
    2. Official transcripts of undergraduate and graduate study
    3. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
- Application to the program in the Department of Instruction and Curriculum Leadership (departmental applications can be obtained via the ICL web site (http://www.memphis.edu/icl/docs/edd_application_pc.docx) that includes:
    1. Two letters of recommendation from people familiar with the applicant's academic background and aptitude for graduate work, specifying in detail the applicant's capabilities for doctoral study and for future performance and scholarship. At least one letter from a college/university professor is preferred.
    2. A written statement of 500 to 1000 words (maximum) indicating the intended area of focus in the doctoral program and the applicant's present interests and career goals.
    3. Interviews with two faculty members (one from the student's area of interest) that must be completed prior to the College deadlines. The doctoral application file must be completed before an

interview will be scheduled. Submit the Department of Instruction and Curriculum Leadership application to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152).

- Each student's file will be evaluated prior to full admission to the Department of Instruction and Curriculum Leadership. Only those files that are completed by the admission deadline will be considered. All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for the spring semester with the exception of applications for the EdD in the Instructional Design and Technology (IDT) program area, which has a summer admission only with a February 15 deadline.

- The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for doctoral studies.

Program Requirements

1. A minimum total of 54 post-master's hours.

2. The major will consist of 42-45 hours, including the department core requirements: ICL 8200 - Prof Sem/Doctoral Stdnt, ICL 8005 - The Nature of Knowledge, 9-12 hours of dissertation credit (ICL 9000), and 3-6 hours of Research Residency Seminar (ICL 8995). A maximum of 15 hours for ICL 8995 and ICL 9000 will be credited toward the degree.

    - NOTE: Students must adhere to the Thesis/Dissertation Preparation Guide when writing their dissertation.

    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

    - (This does not apply to students in SPED with an emphasis in Applied Behavior Analysis whose doctoral students are expected to follow the program of study identified in collaboration with their advisor.)

3. The research requirement for ICL will consist of 9-12 hours which includes EDPR 8541, EDPR 8561, and 3 - 6 additional elective research hours in consultation with advisor. The elective research hours should consist of courses directed toward research and/or statistical techniques and procedures necessary for the discipline and the dissertation topic.

    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

4. Approved transfer credit or post-master's courses may be accepted for not more than 12 semester hours.

5. Completion of the college residency requirements.

Additional information pertaining to the major and concentration areas may be secured from the Chair or Graduate Coordinator of the Department of Instruction and Curriculum Leadership.

Instruction and Curriculum Leadership - Instruction and Curriculum, (EdD)

EdD Degree Program

The primary purposes of the doctoral programs in the Department of Instruction and Curriculum Leadership are to prepare candidates for positions as teacher educators and researchers in colleges and universities; or, to produce experts in research and development who can lead initiatives to analyze, implement, and evaluate instructional materials and learning environments.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions information:

- Application to the Graduate School that includes:
    1. Official Graduate Record Examination (GRE) score (verbal, quantitative, and writing)
    2. Official transcripts of undergraduate and graduate study
    3. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
- Application to the program in the Department of Instruction and Curriculum Leadership (departmental applications can be obtained via the ICL web site (http://www.memphis.edu/icl/docs/edd_application_pc.docx) that includes:
    1. Two letters of recommendation from people familiar with the applicant's academic background and aptitude for graduate work, specifying in detail the applicant's capabilities for doctoral study and for future performance and scholarship. At least one letter from a college/university professor is preferred.
    2. A written statement of 500 to 1000 words (maximum) indicating the intended area of focus in the doctoral program and the applicant's present interests and career goals.
    3. Interviews with two faculty members (one from the student's area of interest) that must be completed prior to the College deadlines. The doctoral application file must be completed before an interview will be scheduled. Submit the Department of Instruction and Curriculum Leadership application to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152).
- Each student's file will be evaluated prior to full admission to the Department of Instruction and Curriculum Leadership. Only those files that are completed by the admission deadline will be considered. All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for the spring semester with the exception of applications for the EdD in the Instructional Design and Technology (IDT) program area, which has a summer admission only with a February 15 deadline.
- The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for doctoral studies.

Program Requirements

1. A minimum total of 54 post-master's hours.
2. The major will consist of 42-45 hours, including the department core requirements: ICL 8200 - Prof Sem/Doctoral Stdnt, ICL 8005 - The Nature of Knowledge, 9-12 hours of dissertation credit (ICL 9000), and 3-6 hours of Research Residency Seminar (ICL 8995). A maximum of 15 hours for ICL 8995 and ICL 9000 will be credited toward the degree.

- NOTE: Students must adhere to the Thesis/Dissertation Preparation Guide when writing their dissertation.

- (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

- (This does not apply to students in SPED with an emphasis in Applied Behavior Analysis whose doctoral students are expected to follow the program of study identified in collaboration with their advisor.)

3. The research requirement for ICL will consist of 9-12 hours which includes EDPR 8541, EDPR 8561, and 3 - 6 additional elective research hours in consultation with advisor. The elective research hours should consist of courses directed toward research and/or statistical techniques and procedures necessary for the discipline and the dissertation topic.

    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

4. Approved transfer credit or post-master's courses may be accepted for not more than 12 semester hours.

5. Completion of the college residency requirements.

Additional information pertaining to the major and concentration areas may be secured from the Chair or Graduate Coordinator of the Department of Instruction and Curriculum Leadership.

Instruction and Curriculum Leadership - Instructional Design and Technology, (EdD)

EdD Degree Program

The primary purposes of the doctoral programs in the Department of Instruction and Curriculum Leadership are to prepare candidates for positions as teacher educators and researchers in colleges and universities; or, to produce experts in research and development who can lead initiatives to analyze, implement, and evaluate instructional materials and learning environments.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions information:

- Application to the Graduate School that includes:
    1. Official Graduate Record Examination (GRE) score (verbal, quantitative, and writing)

    2. Official transcripts of undergraduate and graduate study

    3. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).

- Application to the program in the Department of Instruction and Curriculum Leadership (departmental applications can be obtained via the ICL web site (http://www.memphis.edu/icl/docs/edd_application_pc.docx) that includes:

1. Two letters of recommendation from people familiar with the applicant's academic background and aptitude for graduate work, specifying in detail the applicant's capabilities for doctoral study and for future performance and scholarship. At least one letter from a college/university professor is preferred.

2. A written statement of 500 to 1000 words (maximum) indicating the intended area of focus in the doctoral program and the applicant's present interests and career goals.

3. Interviews with two faculty members (one from the student's area of interest) that must be completed prior to the College deadlines. The doctoral application file must be completed before an interview will be scheduled. Submit the Department of Instruction and Curriculum Leadership application to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152).

- Each student's file will be evaluated prior to full admission to the Department of Instruction and Curriculum Leadership. Only those files that are completed by the admission deadline will be considered. All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for the spring semester with the exception of applications for the EdD in the Instructional Design and Technology (IDT) program area, which has a summer admission only with a February 15 deadline.

- The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for doctoral studies.

Program Requirements

1. A minimum total of 54 post-master's hours.

2. The major will consist of 42-45 hours, including the department core requirements: ICL 8200 - Prof Sem/Doctoral Stdnt, ICL 8005 - The Nature of Knowledge, 9-12 hours of dissertation credit (ICL 9000), and 3-6 hours of Research Residency Seminar (ICL 8995). A maximum of 15 hours for ICL 8995 and ICL 9000 will be credited toward the degree.

    - NOTE: Students must adhere to the Thesis/Dissertation Preparation Guide when writing their dissertation.

    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

    - (This does not apply to students in SPED with an emphasis in Applied Behavior Analysis whose doctoral students are expected to follow the program of study identified in collaboration with their advisor.)

3. The research requirement for ICL will consist of 9-12 hours which includes EDPR 8541, EDPR 8561, and 3 - 6 additional elective research hours in consultation with advisor. The elective research hours should consist of courses directed toward research and/or statistical techniques and procedures necessary for the discipline and the dissertation topic.

    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

4. Approved transfer credit or post-master's courses may be accepted for not more than 12 semester hours.

5. Completion of the college residency requirements.

Additional information pertaining to the major and concentration areas may be secured from the Chair or Graduate Coordinator of the Department of Instruction and Curriculum Leadership.

Instruction and Curriculum Leadership - Literacy Education, (EdD)

EdD Degree Program

The primary purposes of the doctoral programs in the Department of Instruction and Curriculum Leadership are to prepare candidates for positions as teacher educators and researchers in colleges and universities; or, to produce experts in research and development who can lead initiatives to analyze, implement, and evaluate instructional materials and learning environments.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions information:

- Application to the Graduate School that includes:
    1. Official Graduate Record Examination (GRE) score (verbal, quantitative, and writing)
    2. Official transcripts of undergraduate and graduate study
    3. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
- Application to the program in the Department of Instruction and Curriculum Leadership (departmental applications can be obtained via the ICL web site (http://www.memphis.edu/icl/docs/edd_application_pc.docx) that includes:
    1. Two letters of recommendation from people familiar with the applicant's academic background and aptitude for graduate work, specifying in detail the applicant's capabilities for doctoral study and for future performance and scholarship. At least one letter from a college/university professor is preferred.
    2. A written statement of 500 to 1000 words (maximum) indicating the intended area of focus in the doctoral program and the applicant's present interests and career goals.
    3. Interviews with two faculty members (one from the student's area of interest) that must be completed prior to the College deadlines. The doctoral application file must be completed before an interview will be scheduled. Submit the Department of Instruction and Curriculum Leadership application to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152).
- Each student's file will be evaluated prior to full admission to the Department of Instruction and Curriculum Leadership. Only those files that are completed by the admission deadline will be considered. All application information must be received by February 1 for summer semesters, April 1 for fall semesters, and October 1 for the spring semester with the exception of applications for the EdD in the Instructional Design and Technology (IDT) program area, which has a summer admission only with a February 15 deadline.

- The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for doctoral studies.

Program Requirements

1. A minimum total of 54 post-master's hours.
2. The major will consist of 42-45 hours, including the department core requirements: ICL 8200 - Prof Sem/Doctoral Stdnt, ICL 8005 - The Nature of Knowledge, 9-12 hours of dissertation credit (ICL 9000), and 3-6 hours of Research Residency Seminar (ICL 8995). A maximum of 15 hours for ICL 8995 and ICL 9000 will be credited toward the degree.
    - NOTE: Students must adhere to the Thesis/Dissertation Preparation Guide when writing their dissertation.
    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)
    - (This does not apply to students in SPED with an emphasis in Applied Behavior Analysis whose doctoral students are expected to follow the program of study identified in collaboration with their advisor.)
3. The research requirement for ICL will consist of 9-12 hours which includes EDPR 8541, EDPR 8561, and 3 - 6 additional elective research hours in consultation with advisor. The elective research hours should consist of courses directed toward research and/or statistical techniques and procedures necessary for the discipline and the dissertation topic.
    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)
4. Approved transfer credit or post-master's courses may be accepted for not more than 12 semester hours.
5. Completion of the college residency requirements.

Additional information pertaining to the major and concentration areas may be secured from the Chair or Graduate Coordinator of the Department of Instruction and Curriculum Leadership.

Instruction and Curriculum Leadership - Special Education, (EdD)

EdD Degree Program

The primary purposes of the doctoral programs in the Department of Instruction and Curriculum Leadership are to prepare candidates for positions as teacher educators and researchers in colleges and universities; or, to produce experts in research and development who can lead initiatives to analyze, implement, and evaluate instructional materials and learning environments.

Program Admission

Admission to the Graduate School and admission to a specific ICL graduate program are separate procedures. Applicants must submit the following admissions information:

- Application to the Graduate School that includes:
    1. Official Graduate Record Examination (GRE) score (verbal, quantitative, and writing)
    2. Official transcripts of undergraduate and graduate study
    3. Applicants who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).
- Application to the program in the Department of Instruction and Curriculum Leadership (departmental applications can be obtained via the ICL web site (http://www.memphis.edu/icl/docs/edd_application_pc.docx) that includes:
    1. Two letters of recommendation from people familiar with the applicant's academic background and aptitude for graduate work, specifying in detail the applicant's capabilities for doctoral study and for future performance and scholarship. At least one letter from a college/university professor is preferred.
    2. A written statement of 500 to 1000 words (maximum) indicating the intended area of focus in the doctoral program and the applicant's present interests and career goals.
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- The above criteria represent the minimum acceptable admission requirements. Depending on the applicant's educational background, the graduate committee may require additional coursework to prepare the student for doctoral studies.

Program Requirements

1. A minimum total of 54 post-master's hours.
2. The major will consist of 42-45 hours, including the department core requirements: ICL 8200 - Prof Sem/Doctoral Stdnt, ICL 8005 - The Nature of Knowledge, 9-12 hours of dissertation credit (ICL 9000), and 3-6 hours of Research Residency Seminar (ICL 8995). A maximum of 15 hours for ICL 8995 and ICL 9000 will be credited toward the degree.
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    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

- (This does not apply to students in SPED with an emphasis in Applied Behavior Analysis whose doctoral students are expected to follow the program of study identified in collaboration with their advisor.)

3. The research requirement for ICL will consist of 9-12 hours which includes EDPR 8541, EDPR 8561, and 3 - 6 additional elective research hours in consultation with advisor. The elective research hours should consist of courses directed toward research and/or statistical techniques and procedures necessary for the discipline and the dissertation topic.

    - (This does not apply to IDT whose doctoral students are expected to follow the program of study for the IDT major concentration.)

4. Approved transfer credit or post-master's courses may be accepted for not more than 12 semester hours.

5. Completion of the college residency requirements.

Additional information pertaining to the major and concentration areas may be secured from the Chair or Graduate Coordinator of the Department of Instruction and Curriculum Leadership.

Leadership and Policy Studies - Educational Leadership Concentration, (EdD)

Doctor of Education (EdD)

Program Admission

1. Each applicant must submit a completed application packet to the University Graduate School that includes:
    1. A completed admissions application.
    2. An official report of the Graduate Record Examination (GRE) score.
    3. Official transcripts for all prior undergraduate and graduate courses.
2. In addition, each applicant to the Ed.D. must submit a portfolio to the Department of Leadership that includes:
    1. Letter of application
    2. Professional resume
    3. Three letters of professional recommendation on letterhead
    4. A brief statement of professional goals
    5. A personal interview preceded by a writing sample will be scheduled with each applicant and admission decision will be made following the personal interview. The decision will be based on a holistic profile that includes, but is not limited to information contained in the completed application packet described above and obtained during the personal interview. Interested applicants are required to contact the departmental office to obtain admission forms and a more complete statement of admission guidelines.
    6. Deadline for submission of all application material is the 3rd Friday in February for the summer semester, the 3rd Friday in June for the fall semester, and the 3rd Friday in September for the spring semester.

Program Requirements

A minimum of 54 semester hours

A minimum of 54 semester hours beyond the master's degree is required of all students.

Fifteen hours must be taken in the departmental core:

LEAD 8001 - Educ Ldrship In Orgntns **

(3) (EDAS 8800) Basic theories of organization and administration; historical and contemporary foundations of theories; implications of current theories and practices for organizational and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

LEAD 8002 - Am Society & Ed Policy

(3) (EDFD 7001-8001) Historical evolution of major social issues and resulting educational policies; normative and empirical bases of educational principles and practices; sociocultural contexts of contemporary problems and issues.

LEAD 8003 - Policy-Oriented Rsrch **

(3) Inquiry methods appropriate to educational policy research; empirico-inductive (grounded) and constructivist inquiry strategies emphasized. PREREQUISITE(S): LEAD 8001 and LEAD 8002,EDPR 8541 or equivalent, or permission of the instructor. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

- 9 hours of dissertation
- and 30 additional hours

Doctoral programs

Doctoral programs are not intended for basic administrative certification. Students wishing certification through this program must complete additional course work approximating the requirements in the Certification program noted above.

Educational Leadership:

LDPS 8121 - Personnel Admin

(3) (EDAS 7160-8160) Educational personnel administration and policy including: human resource management, staffing goals, policies, recruitment, induction, roles, and professional development.

LDPS 8132 - School Finance

(3) Funding of public schools in the United States and other developed nations; analysis of various school funding models and related equity issues.

LDPS 8181 - Plcy Implmntn Ed Ldrshp

(3) (EDAS 7811-8811) Development and implementation of administrative policy at the local, state, and national levels in relation to forces that shape thinking of policy-making bodies.

- 21 hours approved by the student's advisory committee

Leadership and Policy Studies - Policy Studies Concentration, (EdD)

Doctor of Education (EdD)

Program Admission

1. Each applicant must submit a completed application packet to the University Graduate School that includes:
    1. A completed admissions application.
    2. An official report of the Graduate Record Examination (GRE) score.
    3. Official transcripts for all prior undergraduate and graduate courses.
2. In addition, each applicant to the Ed.D. must submit a portfolio to the Department of Leadership that includes:
    1. Letter of application
    2. Professional resume
    3. Three letters of professional recommendation on letterhead
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    5. A personal interview preceded by a writing sample will be scheduled with each applicant and admission decision will be made following the personal interview. The decision will be based on a holistic profile that includes, but is not limited to information contained in the completed application packet described above and obtained during the personal interview. Interested applicants are required to contact the departmental office to obtain admission forms and a more complete statement of admission guidelines.
    6. Deadline for submission of all application material is the 3rd Friday in February for the summer semester, the 3rd Friday in June for the fall semester, and the 3rd Friday in September for the spring semester.

Program Requirements

A minimum of 54 semester hours

A minimum of 54 semester hours beyond the master's degree is required of all students.

Fifteen hours must be taken in the departmental core:

LEAD 8001 - Educ Ldrship In Orgntns **

(3) (EDAS 8800) Basic theories of organization and administration; historical and contemporary foundations of theories; implications of current theories and practices for organizational and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

LEAD 8002 - Am Society & Ed Policy

(3) (EDFD 7001-8001) Historical evolution of major social issues and resulting educational policies; normative and empirical bases of educational principles and practices; sociocultural contexts of contemporary problems and issues.

LEAD 8003 - Policy-Oriented Rsrch **

(3) Inquiry methods appropriate to educational policy research; empirico-inductive (grounded) and constructivist inquiry strategies emphasized. PREREQUISITE(S): LEAD 8001 and LEAD 8002,EDPR 8541 or equivalent, or permission of the instructor. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

- 9 hours of dissertation
- and 30 additional hours

Doctoral programs

Doctoral programs are not intended for basic administrative certification. Students wishing certification through this program must complete additional course work approximating the requirements in the Certification program noted above.

Policy Studies:

LDPS 8305 - Issues In Educ Policy

(3) Special issues of current interest related to American educational policies and practices.

LDPS 8310 - Phil Anly & Educ Plcy

(3) (EDFD 7022-8022) Exploration and use of philosophical analytical skills for assessing educational policies and practices.

LDPS 8350 - Policies/Politics Educ

(3) (EDFD 7033-8033) Conceptual and empirical analyses of political and social issues related to US education.

- 21 hours approved by the student's advisory committee

Leadership and Policy Studies, (EdD)

Doctor of Education (EdD)

Program Admission

1. Each applicant must submit a completed application packet to the University Graduate School that includes:
    1. A completed admissions application.
    2. An official report of the Graduate Record Examination (GRE) score.
    3. Official transcripts for all prior undergraduate and graduate courses.
2. In addition, each applicant to the Ed.D. must submit a portfolio to the Department of Leadership that includes:
    1. Letter of application
    2. Professional resume
    3. Three letters of professional recommendation on letterhead
    4. A brief statement of professional goals
    5. A personal interview preceded by a writing sample will be scheduled with each applicant and admission decision will be made following the personal interview. The decision will be based on a holistic profile that includes, but is not limited to information contained in the completed application packet described above and obtained during the personal interview. Interested applicants are required to contact the departmental office to obtain admission forms and a more complete statement of admission guidelines.
    6. Deadline for submission of all application material is the 3rd Friday in February for the summer semester, the 3rd Friday in June for the fall semester, and the 3rd Friday in September for the spring semester.

Program Requirements

A minimum of 54 semester hours

A minimum of 54 semester hours beyond the master's degree is required of all students.

Fifteen hours must be taken in the departmental core:

LEAD 8001 - Educ Ldrship In Orgntns **

(3) (EDAS 8800) Basic theories of organization and administration; historical and contemporary foundations of theories; implications of current theories and practices for organizational and human resource development. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

LEAD 8002 - Am Society & Ed Policy

(3) (EDFD 7001-8001) Historical evolution of major social issues and resulting educational policies; normative and empirical bases of educational principles and practices; sociocultural contexts of contemporary problems and issues.

LEAD 8003 - Policy-Oriented Rsrch **

(3) Inquiry methods appropriate to educational policy research; empirico-inductive (grounded) and constructivist inquiry strategies emphasized. PREREQUISITE(S): LEAD 8001 and LEAD 8002,EDPR 8541 or equivalent, or permission of the instructor. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

- 9 hours of dissertation
- and 30 additional hours

Doctoral programs

Doctoral programs are not intended for basic administrative certification. Students wishing certification through this program must complete additional course work approximating the requirements in the Certification program noted above.

Liberal Studies, (DLS)

Doctor of Liberal Studies Degree Program

Admission Standards

- Hold an earned Master's degree from a regionally accredited U.S. college or university. International Master's degrees will be evaluated on an individual basis.
- Have a cumulative Grade Point Average (GPA) of 3.25 on a 4.0 scale in all earned graduate coursework.
- Acceptance to the University of Memphis Graduate School.
- Submit a portfolio of professional work experience along with a detailed statement of educational and professional goals, along with three letters of recommendation.

- Submit an original, research-based writing sample of 20-30 pages.
- Submit a proposed Course of Study identifying specific courses (with substitutes) to be completed outside of the College of Professional and Liberal Studies DLS Core.
- Potential Interview with the Graduate Admissions Committee in the College of Professional and Liberal Studies.
- GRE is not required.

Program Requirements

- Earn 54 hours of post-master's coursework at the 7000 and/or 8000 course level.
- Complete the 21 hours of College of Professional and Liberal Studies core requirements (including the 6-hour Dissertation/Capstone Project)
    - Foundations in Liberal Studies (3)
    - Research in Interdisciplinary Studies (3)
    - Data-Based Decision Making (3)
    - Liberal Studies Seminar (3)
    - Prospectus Design (3)
    - Dissertation/Capstone Project (6)
    - Students who have previously completed UNIV 7000, UNIV 7100, or a quantitative research methods course may petition the Graduate Coordinator to apply these courses for the degree, though total credits required will not be reduced.
    - Students who have previously completed UNIV 7200 will need to complete UNIV 8200 with a separate topic than UNIV 7200.
- Complete 33 hours in two or more disciplines with no more than 18 hours in any one discipline.
- Successfully complete comprehensive exams and defend the Dissertation/Capstone Project.
- No more than two courses with a grade below B- may be counted towards the degree.
- Students whose GPA remains below 3.0 for more than 2 consecutive semesters may be dropped from the program.

Comprehensive Exams

- **Comprehensive Exam committee**
    - Each student's committee members must include at least one member from each concentration and at least one member from the College of Professional and Liberal Studies. Students, in conjunction with their advisor, will identify a Chair for their Oral Exams. This individual could also chair their Dissertation/Capstone Project.
- **Comprehensive Exam Questions**
    - Questions will be determined by the faculty of the student's program and based on the topics of the concentrations they have pursued. Comprehensive exams will include both written responses to faculty questions and an oral defense of those answers. Students will be required to answer written questions from each committee member, with up to two hours to answer questions posed by each committee member.
    - Oral exams will normally be held no sooner than two weeks after the written exams have been completed and no later than a month after written exams have been completed. Oral exams will include all members of the exam committee. Each committee member may question the student for up to 30 minutes.

For Students Completing a Dissertation

- **Dissertation Committee**

    - The dissertation committee will normally consist of the student's Comprehensive Exam committee, with, if needed, an appropriate qualitative or quantitative research specialist. At least one member from each of the student's concentrations and at least one member from the College of Professional and Liberal Studies is required. The Chair of the dissertation committee must have full graduate faculty status, and will receive a monetary stipend to act as Chair for a student outside of their department. Typically, a committee will include four to five people.
- **Dissertation Expectations**
    - The student's committee must approve each dissertation prospectus. During the prospectus course (UNIV 8990), the dissertation will be outlined and approved by the committee with the expectation of appropriate professionalism, as well as academic rigor. Students are required to get this approved prior to registering for any dissertation hours.
    - Students completing a dissertation will create a research-based, interdisciplinary, original contribution that reflects the student's ability to conduct independent research.

For Students Completing a Capstone Project

- **Capstone Project Committee**
    - The Capstone Project Committee will normally consist of the student's Comprehensive Exam committee, with, if needed, an appropriate qualitative or quantitative research specialist. At least one member from each of the student's concentrations and at least one member from the College of Professional and Liberal Studies is required. The Chair of the Capstone Project Committee must have full graduate faculty status, and will receive a monetary stipend to act as Chair for a student outside of their department. Typically, a committee will include four to five people.
- **Capstone Project Expectations**
    - The student's committee must approve each capstone project. During the prospectus course (UNIV 8990), the project will be outlined and approved by the committee with the expectation of appropriate professionalism, as well as academic rigor. Students are required to get this approved prior to registering for any capstone project hours.
    - Though each project will be individualized for each project focus, every project will be required to include the following components, but are not limited to these topics alone:
        - Needs Analysis
        - Inventory of other similar community-based resources
        - Potential stakeholders
        - Impact within the community (For example; cultural, environmental, policy, or political impacts)
        - Literature review
            - Include case studies of similar projects should be identified
        - Methodology
        - Potential Budget, Financial Plan, and Sustainability
        - Results/Findings
            - If implementation is not planned during the duration of the capstone project, then a pilot must be implemented and results/findings discussed at the Defense.
        - Recommendations

Dissertation/Capstone Project Defense

- Each student will provide either an electronic or hard copy of the written portion of her or his dissertation/capstone project to their committee members at least four weeks prior to the scheduled defense date.
- The defense of the student's dissertation/capstone project will normally be an oral defense. Students should be prepared to give a brief summary of their work to the committee before fielding questions. The defense of

the dissertation/capstone project should not last more than two hours, after which the committee should inform the candidate of its decision.

- As the University of Memphis offers dissertation and capstone hours on a Satisfactory/Unsatisfactory/In Progress basis, College of Professional and Liberal Studies will not assign final grades to a student's dissertation or capstone project. Nonetheless, each student should obtain a Defense Assessment Rubric from the Graduate Studies Coordinator and provide a copy to each member of her/his committee along with one copy of the Graduate School's "Final Defense Results Form" to the committee chair.

Mathematical Sciences - Applied Statistics Concentration, (PhD)

PhD Degree Program

Program objectives are: (1) development of knowledge to appreciate, reconstruct and create mathematical reasoning; (2) development of skills leading to high quality research in mathematics; and (3) development of oral and written mathematical proficiency.

Admission Requirements

1. GRE scores are required and are an important factor for admission.
2. Three letters of recommendation
3. TOEFL scores are required for students whose native language is not English.
4. An undergraduate degree in an appropriate discipline with a minimum GPA of 3.0 (on a 4.0 scale) or equivalent preparation

Program Requirements

72 Credit Hours of Graduate Credit

The doctoral degree program requires satisfactory completion of a minimum of 72 credit hours of graduate credit (a minimum of 36 hours for a student entering with an approved master's degree). The 72 hours:

1. may include a maximum of 12 hours of 6000 level coursework, but must include at least 18 hours of 8000 level course work;
2. must include between 9 and 15 hours of dissertation (MATH 9000);
3. cannot include courses designed for the "Teaching of Mathematics" concentration, and
4. must include the satisfactory completion of the requirements for one of the concentrations: Applied Statistics or Mathematics.

Each student must:

1. obtain a passing grade on a qualifying examination;
2. obtain a passing grade on a comprehensive examination;
3. complete an acceptable dissertation (Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.); and
4. pass a final examination given by a committee composed of departmental and university representatives. Detailed information can be obtained by contacting the graduate coordinator of the department.

Applied Statistics Concentration

Students must complete the following courses:

- MATH 7642-MATH 8642
- MATH 7651-MATH 8651
- MATH 7670-MATH 8670
- MATH 7692-MATH 8692
- MATH 7695-MATH 8695

Two Courses From

- MATH 7759-MATH 8759
- MATH 7763-MATH 8763
- MATH 7764-MATH 8764
- MATH 7765-MATH 8765

In Addition

In addition, students are required to give at least two formal presentations through taking

- MATH 7691-MATH 8691

Dissertation

Presentation of an acceptable dissertation proposal within six months after passing the comprehensive examination. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Mathematical Sciences - Mathematics Concentration, (PhD)

PhD Degree Program

Program objectives are: (1) development of knowledge to appreciate, reconstruct and create mathematical reasoning; (2) development of skills leading to high quality research in mathematics; and (3) development of oral and written mathematical proficiency.

Admission Requirements

1. GRE scores are required and are an important factor for admission.
2. Three letters of recommendation
3. TOEFL scores are required for students whose native language is not English.
4. An undergraduate degree in an appropriate discipline with a minimum GPA of 3.0 (on a 4.0 scale) or equivalent preparation

Program Requirements

72 Credit Hours of Graduate Credit

The doctoral degree program requires satisfactory completion of a minimum of 72 credit hours of graduate credit (a minimum of 36 hours for a student entering with an approved master's degree). The 72 hours:

1. may include a maximum of 12 hours of 6000 level coursework, but must include at least 18 hours of 8000 level course work;
2. must include between 9 and 15 hours of dissertation (MATH 9000);
3. cannot include courses designed for the "Teaching of Mathematics" concentration, and
4. must include the satisfactory completion of the requirements for one of the concentrations: Applied Statistics or Mathematics.

Each student must:

1. obtain a passing grade on a qualifying examination;
2. obtain a passing grade on a comprehensive examination;
3. complete an acceptable dissertation (Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.); and
4. pass a final examination given by a committee composed of departmental and university representatives. Detailed information can be obtained by contacting the graduate coordinator of the department.

Mathematics Concentration

The PhD concentration in mathematics is designed so that students may pursue a degree based on independent research or may choose a more broadly based program aimed toward a college teaching career. Students may contact the department for more detailed information.

Students must complete the following courses:

MATH 7261 - Algebraic Theory I

(3) Studies in group theory and ring theory, including Sylow theory and factorization theory.

MATH 7262 - Algebraic Theory II

(3) A continuation of Math 7261. Studies in field theory and modules, including free algebras, Galois theory, tensor products.

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

MATH 7351 - Real Variables II

(3) Metric spaces, Baire category theorem, Hahn Banach theorem, uniform boundedness principle, closed graph theorem, general measure, signed measures, Radon-Nikodym theorem, product measures, Fubini theorem. Grades of S, U, or IP will be given.

Additional requirements can be found by visiting the following webpage: www.memphis.edu/msci/grad/phdmath

Music - Composition Concentration, (DMA)

DMA Degree Program

The DMA degree is structured to allow maximum flexibility in designing a program around each student's background and needs. Although the distribution of hours is firm, program requirements are to be regarded as general rather than fixed. The student's preparation, experience, and stated goals are carefully evaluated before an individually selected course of study is prescribed.

Program objectives are: (1) competency in music theory, music history, advanced research, and pedagogical for classroom or studio; (2) preparation for college or university teaching; (3) preparation for auditions at orchestra or performing ensemble.

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Composition

Music History and Music Theory (9 hours)

Students must take 3 hours of music history, 3 hours of music theory, and can choose between history or theory for the remaining 3 hours. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses. Students with a cognate area in music history or theory may substitute electives for those credits in the core requirements.

Applied Lessons (15 hours)

Taken over five semesters.

MUTC 8501 - Composition

(2-6) Free composition in all forms. Applicants to this course are required to submit original works in various forms and media as proof of maturity and technical preparation for graduate work. The course may be repeated with the instructor's permission for successive semesters. NOTE: Composition is taught as applied music. Students receive the equivalent of two half-hour lessons per week. The additional fee for this instruction is $250.00 per semester.

Cognate area in music (9 hours)

Requirements for cognates in the School of Music can be found in section 6.5 of the School of Music Graduate Handbook.

Dissertation (9 hours)

The dissertation will consist of a work of significant scope.

MUTC 9000 - Dissertation

(1-9) Grades of S, U, or IP will be given. May be repeated for up to 12 hours

Music - Conducting Concentration, (DMA)

DMA Degree Program

The DMA degree is structured to allow maximum flexibility in designing a program around each student's background and needs. Although the distribution of hours is firm, program requirements are to be regarded as general rather than fixed. The student's preparation, experience, and stated goals are carefully evaluated before an individually selected course of study is prescribed.

Program objectives are: (1) competency in music theory, music history, advanced research, and pedagogical for classroom or studio; (2) preparation for college or university teaching; (3) preparation for auditions at orchestra or performing ensemble.

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Conducting

Music History and Music Theory (6 hours)

3 hours of music history and 3 hours of music theory. Any graduate music theory or history course may be used for this requirement with the exception of individual studies, pedagogy, or repertory courses. Students with a cognate area in music history or theory may substitute electives for those credits in the core requirements.

Applied Lessons (15 hours)

Taken over 5 semesters

MUAP 8701 - Conducting

(2-6) Conducting the concert band, the symphony orchestra, and the chorus in the larger musical forms; emphasis on interpretation. $250.00 instruction and lab fee. May be repeated for credit.

Cognate area in music (9 hours)

Requirements for cognates in the School of Music can be found in section 6.5 of the School of Music Graduate Handbook.

Major Field Area (9 hours)

Area requirements for the major field can be found in section 6.5 of the School of Music Graduate Handbook.

Dissertation Equivalent (6 hours)

Three public recitals of repertory approved by the doctoral committee are required. A formal research document on a topic approved by the committee will also be submitted to the Graduate School after the final defense; music covered by this document will also appear on one of the recitals. The 6 hours of dissertation equivalent must include at least 4 hours of MUAP 8999 and at least 1 hour of MUAP 9000.

Music - Music Education Concentration, (PhD)

PhD Degree Program

The PhD degree is structured to allow maximum flexibility in designing a program around each student's background and needs. Although the distribution of hours is firm, program requirements are to be regarded as general rather than fixed. The student's preparation, experience, and stated goals are carefully evaluated before an individually selected course of study is prescribed.

Program objectives are: (1) competency in selected area of concentration and related research areas; (2) development of teaching skills; and (3) ability to successfully publish research in a selected music discipline.

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Music Education

Admission to the PhD program in Music Education is highly competitive. Students must submit proof of employment in the field and proof of licensure/certification. In addition, a written philosophy of music education and an example of research in the field must be submitted to the Music Education Area.

Major Field (15 hours)

MUSE 8207 - Measure Music Behavior

(3) The investigation of evaluative tools in music education, formulation, and utilization of measurement devices in music teaching and research. May be repeated with change in topic. See online class listings for topic. Grades of S, U, or IP will be given.

MUSE 8606 - Desc/Exp Research Music

(3) Develop research concepts and models in quantitative research using experimental, quasi-experimental, and descriptive design models; determine relationships between independent and dependent variables through appropriate research procedures, analysis, and interpretation of findings. May be repeated once PREREQUISITE(S): PHYS 3010, PHYS 3011, PHYS 3211.

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

EDPR 8561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

Music and/or MUSE electives (18 hours)

Minor (18 hours)

Dissertation (9 hours)

MUSE 9000 - Dissertation

(1-9) Grades of S, U, or IP will be given. PREREQUISITE(S): PHYS 3211, PHYS 3010, PHYS 3011. PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

NOTE:

Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Music - Musicology Concentration, (PhD)

NOTE: The Southern Regional Studies program is not accepting applications at this time.

PhD Degree Program

The PhD degree is structured to allow maximum flexibility in designing a program around each student's background and needs. Although the distribution of hours is firm, program requirements are to be regarded as general rather than fixed. The student's preparation, experience, and stated goals are carefully evaluated before an individually selected course of study is prescribed.

Program objectives are: (1) competency in selected area of concentration and related research areas; (2) development of teaching skills; and (3) ability to successfully publish research in a selected music discipline.

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Students will follow either:

MUSICOLOGY

A program providing a broad background in historical musicology culminating in a dissertation on a musicological topic agreed upon by the student and the doctoral committee.

Musicology Major Field (27 hours)

A minimum of 9 courses in the major area, including:

MUHL 8531 - Erly Musical Notation

(3) (RECR 6705-15) Examination of history of Western musical notations from the ninth through seventeenth centuries; transcription of medieval music from its original sources into modern notation; singing and playing renaissance and early baroque music from facsimiles of original manuscripts and prints. PREREQUISITE(S): Permission of instructor PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

MUHL 8505 - Seminar Musicology

(3) Seminars in selected areas of musicology. May be repeated when topic varies.

Cognate Field (9 hours)

These 9 hours of graduate coursework must be in an approved humanistic discipline outside music.

Dissertation (6 hours)

- MUHL 9000

Note: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

A reading knowledge of two foreign languages, ordinarily including German, must be demonstrated before graduation.

OR

Southern Regional Studies

This program is not currently accepting applicants. A program providing a broad background in ethnomusicology with a focus on the music of the southern United States.

Ethnomusicology Major Field (27 hours)

A minimum of nine courses in the major area (27 hours). Two of the remaining five courses in music shall have a major focus on Southern regional music.

MUHL 7800 - Fld Mthd In Ethnmsclgy

(3) An exploration of techniques for designing field research subjects and gathering information in the field; special attention to techniques and problems related to the study of southern musical traditions.

OR

MUHL 8800 - Fld Mthd In Ethnmsclgy

(3) An exploration of techniques for designing field research subjects and gathering information in the field; special attention to techniques and problems related to the study of southern musical traditions.

MUHL 8801 - Ethnomusicology

(3) A survey of concepts, problems, and methods of research in the interpretation of music in different social groups; emphasis on functional and popular music rather than art music, and on cultures other than Western European and North American.

MUHL 8805 - Trnscrpt/Anly Etnmsclgy

(3) (RECR 6905-15) An examination of the problems and methods of transcribing and analyzing non-Western and traditional music; the uses and limitations of staff notation; alternative descriptive systems.

MUHL 8806 - Sem Southern Reg Music

(3) Major issues in the study of southern folk and popular music; includes the relationship between Afro-American and Anglo-American styles and traditions, the relationships of these styles and traditions to African and European music, and the interplay of traditionalism and commercialism in southern music. May be repeated for up to 9 hours of credit

Cognate Field (9 hours)

These 9 hours of graduate coursework must be in an approved humanistic discipline outside music.

Dissertation (6 hours)

- MUHL 9000

Note: Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

A reading knowledge of two foreign languages, ordinarily including German, must be demonstrated before graduation.

Music - Performance Concentration, (DMA)

DMA Degree Program

The DMA degree is structured to allow maximum flexibility in designing a program around each student's background and needs. Although the distribution of hours is firm, program requirements are to be regarded as general rather than

fixed. The student's preparation, experience, and stated goals are carefully evaluated before an individually selected course of study is prescribed.

Program objectives are: (1) competency in music theory, music history, advanced research, and pedagogical for classroom or studio; (2) preparation for college or university teaching; (3) preparation for auditions at orchestra or performing ensemble.

Program Admission

Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Handbook.

Core Requirements (6 hours)

1. Music History (3 hours)
2. Music Theory (3 hours)

Students with a cognate area in music history or theory may substitute electives for those credits in the core requirements.

Performance Concentration Requirements

Performance (bass, bassoon, cello, clarinet, euphonium, flute, guitar, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice) (45 hours)

Applied Lessons (15 hours)

Taken over five semesters

Cognate area in music (9 hours)

Requirements for cognates in the School of Music can be found in section 6.5 of the School of Music Graduate Handbook.

Major Field area (9 hours)

Area requirements for the major field can be found in section 6.5 of the School of Music Graduate Handbook.

Dissertation Equivalent (6 hours)

Three public recitals, of repertory approved by the doctoral committee, are required. A formal research document on a topic approved by the committee will also be submitted to the Graduate School after the final defense; music covered by this document will also appear on one of the recitals. (These requirements are part of the applied music hours. Voice majors may submit a proposal requesting substitution of a major operatic role for one recital. Further details are contained in the "Voice Area Policies and Procedures" document, available from the area coordinator. The 6 hours of dissertation equivalent must include at least 4 hours of MUAP 8999 and at least 1 hour of MUAP 9000.)

Nursing, (PhD)

Doctor of Philosophy (PhD) Program

Dr. Lin Zhan
Dean and Professor
lzhan@memphis.edu

Dr. Shirleatha Lee Associate
Associate Dean of Academic Programs, Associate Professor
sntaylr1@memphis.edu

The Loewenberg College of Nursing at The University of Memphis offers a PhD degree in Nursing, the highest academic degree for individuals planning to pursue scholarly careers in the nursing discipline. This PhD Program is designed for those who plan to assume a role as nurse researcher/scholar/educator in academic nursing as well as healthcare settings through research experimentation and theory application to generate new knowledge. The program will emphasize health equity in practice, education, and policy locally to globally.

Graduates of the PhD program will be prepared to:

1. conduct rigorous nursing and interdisciplinary research,
2. generate new knowledge that guides nursing practice, and
3. lead educational research in program and course design, clinical education, and the evaluation of learning that prepares nurses of the future.

Program Admission

The applicant must meet all criteria for admission to the graduate school. A master's degree is required for admission and international applicants will be expected to submit a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL).

Additionally, applicants will:

1. possess an unencumbered RN license or equivalent in the student's state/nation of residence.
2. earned Master's Degree with minimum GPA of 3.0. If a GPA is not available, the Graduate Record Examination (GRE) is required with scores from the last five years with a minimum of verbal and quantitative score of 140 and analytical writing score of at least 3.0.
3. provide three letters of reference from individuals familiar with the applicant's capabilities for doctoral study and for future performance as a nurse scholar and researcher. Generally, two letters from former professors will be expected.
4. submit a personal statement of approximately 750-1000 words indicating his/her present interests and career goals, including how the PhD in Nursing will prepare the student to achieve those goals.
5. provide a writing sample (e.g., published paper, or coursework from previous degree program is acceptable).
6. provide a copy of the applicant's curriculum vitae (CV) or resume.
7. interview via phone, face-to-face, or Skype will be required.

The PhD Program Committee will review all submitted materials. Admissions decisions are made on the overall quality of the applicant's professional background in nursing, scholarship, academic ability, as well as the applicant's "fit" for the program in terms of academic background, research interests, and career goals.

Program Requirements

Credit Hours:

To qualify for graduation, students must meet all U of M Graduate School requirements. Additionally, students must complete a minimum of 60 semester hours of graduate course work beyond the master's degree and 54 semester hours beyond the Doctorate of Nursing Practice (DNP) degree.

Transfer Credit:

Previously earned doctoral credits may be considered for transfer by the student's advisory committee in accordance with the Graduate School policy; however, residency requirements stipulate that the last thirty semester hours of credit for the doctoral degree (including 9 dissertation hours) must be earned at the U of M. Credit towards a graduate degree does not transfer automatically. However, graduate work completed at another institution in a program accredited at the graduate level may be accepted in a graduate degree program at the University, with the following provisions. (1) They relate to the content of the graduate program and/or are comparable to those offered at the University. (2) They do not exceed time limitations set for doctoral programs.

Credit previously earned at another institution must be presented for evaluation no later than the end of the student's second semester of enrollment. Forms are available on-line or from the Graduate School Graduation Analyst. Only transcripts received directly from an issuing institution are considered official. Approved transfer credit may be accepted for one-half the number of semester hours of course credit toward a doctoral degree. Credit will be transferred to apply toward a doctoral program upon approval of the student's advisory committee.

Courses proposed for transfer credit must meet the following two requirements. (1) a minimum of 750 contact minutes for each semester credit (2250 for a 3-hour course). (2) a minimum of 3 hours of class work per week for 3 hours of credit. Grades earned at another institution will not be computed in the University cumulative grade point average, nor will they be accepted for transfer, unless they are "B" (3.0) or better. No credit will be transferred unless it meets with the approval of the major advisor or program graduate coordinator.

Enrollment:

Full-time students are expected to carry a minimum of 9 credits per semester, and to devote full time during their enrollment to the pursuit of degree-related activities. Full-time students with graduate assistantships are required to enroll for 9 credits each semester. Part-time students are expected to carry a minimum of 6 credits per semester, unless permission is granted from the advisor for a reduced course load.

Research:

All doctoral students are expected to be active in research collaboratively with members of the faculty each semester they are enrolled.

Retention Requirements:

Students must earn a grade of B (3. 0) or higher in all required courses. The PhD program will adhere to Graduate School policy regarding course grades and repetition of courses. All courses applied toward PhD degree program requirements must have the advisor's written approval.

Retention requirements are per policies stipulated by the U of M Graduate School. In terms of course performance, no more than seven (7) credit hours in which a grade of C or below was earned will be counted toward degree requirements.

In order to remain eligible for departmental funding, you must maintain an overall grade point average (GPA) of 3.0 on a 4-point scale. A minimum of 3.0 is also required for graduation. According to the U of M Graduate School, grades of "D" and "F" will not apply toward any graduate degree, but will be calculated in the GPA. Please note that grades from other institutions are not computed in calculating the GPA.

Residency Requirements:

The last 30 credit hours must be earned at The University of Memphis. Credit will be transferred to apply toward a doctoral program upon approval of the student's advisory committee in accordance with Graduate School policy.

Comprehensive Examination:

Prior to enrolling for dissertation hours (NURS 9000), a student must successfully complete both a written and oral comprehensive examination. The examination will assess mastery of areas covered in the doctoral program. The content of the examination will consist of theory and methodology, and nursing issues central to the student's main research area. Since the examination is designed to test each student's knowledge of the field, it is not confined to material covered in classes.

Prior to initiating the examination process, a student must have completed at least 30 credit hours of coursework in the program. Additionally, he/she is required to be enrolled during the semester he/she proposes to take the comprehensive exam.

- The student's comprehensive examination will be reviewed by the committee in relation to:
- Quality of written and oral examination
- Ability to conceptualize and analyze the topic in depth
- Capacity for original thought and substantive knowledge in the focused area
- Integration of state of the art knowledge

University policy does not consider comprehensive examinations to be a course; therefore, the results of the examination are not appealable. University policy allows you to take the comprehensive examination twice; failure to pass on the second attempt results in dismissal from the university. The dismissal may be appealed (see Retention Appeals in the Graduate Catalog).

Dissertation:

To fulfill the requirements for the PhD in Nursing, the student must write and defend a dissertation. The dissertation must adhere to the format outlined by the Graduate School. The dissertation topic will be determined by the student in consultation with the advisor and input from the advisory committee.

Program Curriculum:

The Nursing PhD Program is a 60-semester hour degree program beyond the master's degree and 54-semester credit hours beyond the Doctor of Nursing Practice (DNP) degree.

Nursing Science Core: 6 credit hours

NURS 8111 - Philosophy of Science

(3) The study of historical and contemporary philosophical perspectives and how philosophical views shaped science and scientific inquiry. Scientific explanation, perceived and received views of philosophy of science, and science and cultures will be examined. Emphasis is placed on analysis and evaluation of the nature of knowledge and the development of knowledge in nursing science.

NURS 8112 - Middle-Range Theories in Nsg

(3) The study of theory construction and concept analysis to evaluate selected middle-range theories and conceptual models related to nursing and health equity that inform nursing practice and research.

Research Core: 18 credit hours

NURS 8311 - Doctoral Research Seminar I

(3) Explores how research proposals are generated. Emphasis is on determining need, the theoretical basis for the proposed study, and developing and integrative review.

NURS 8312 - Doctoral Research Seminar II

(3) Explores how the research study is designed including data collection methods and analysis in the development of a research proposal. PREREQUISITE(S): NURS 8311

NURS 8313 - Resp. Conduct of Research

(1) This course introduces key concepts and principles related to human subject protections, legal regulations of research ethics, and professional conduct as stipulated by the National Institute of Health. Ethical constructs and established norms in the performance of scientific research activities will be explored.

NURS 8314 - Doctoral Research Practicum

(3) This course involves the active participation of the student in a mentored pilot research project. The practicum involves guiding the student to design and implement a pilot research project, conducting data analysis, and prepare study dissemination through manuscript submission.

NURS 8211 - Qualitative Methods

(3) The study of qualitative research methods used in nursing and the health sciences. Emphasis is on grounded theory, phenomenology, ethnography, life history/narrative, critical incidents, and case study. Provides students with the opportunity to understand the philosophical underpinnings of qualitative research methods, data collection and analysis methods.

NURS 8213 - Quantitative Methods

(3) The study of quantitative research design and methods in nursing. Emphasis is placed on the research process: review of literature, selecting a research design, operationalizing concepts, sampling, protecting human subjects in research, selecting measurement instruments, collecting data, and analyzing and reporting data. Quantitative approaches to collect data will be examined and applied.

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

Education Core: 6 credit hours

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

ICL 8003 - Curric Design/Evalatn

(3) Considers a variety of curriculum designs and their implications for educational practice.

Health Equity Core: 6 credit hours

NURS 8113 - Health Equity Research

(3) The study of theories and concepts related to health equity and their applications in health equity research. Emphasis is on examining social determinants of health, health disparities, and vulnerable populations, and key areas in which theory testing is required to set a research agenda and to use valid research methodology for health equity research relevant to nursing.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

Electives: 6-12 credit hours

A total of six (6) credit hours are required post DNP and twelve (12) credit hours are required post MSN, example courses are:

Education Focus Electives:

HIAD 8541 - Issues/Trends Tchg Adults **

(3) (HIAD 7201-8201) Teaching and learning in higher education and other educational settings; analysis of who our learners are and teaching approaches designed for diverse student populations. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

ICL 7030 - Assessment & Evaluation **

(3) Test construction and methods of evaluation; emphasis on teacher made tests, standardized tests, test administration, test data management, interpretation and application of test data to instructional decisions, and reporting test results to students and parents.

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

HIAD 8410 - Overview Higher Edu **

(3) (EDAS 7190-8190) Higher education in social and historical contexts; organization and administration of colleges and universities. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

HIAD 8420 - Legal/Ethical Issues in HIAD **

(3) (EDAS 8380) (EDAS 8380). Legal principles and significant legal constraints relating to institutions of higher education; emphasis on application of law to organizational structure, students, personnel, programs, property, and finance; analysis of current legal issues. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor. May be repeated for credit when topic varies

LEAD 7000 - Intro To Educ Ldrshp **

(3) (EDAS 7100) Theory and practice of educational leadership; scope, task, areas, processes and procedures, organization structure, problems and issues, and types of personnel needed in the United States. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

EDPR 7121 - Learning & Cognition

(3) (EDPS 7121-8121) Major theories of learning and cognition, intelligence theories, and their application to learning environments.

ICL 8004 - Innovative Curricula

(3) Generic issues, problems, processes, and strategies relative to changes occurring with the implementation of innovative curricula.

ICL 8054 - Creativity Tchg/Curric

(3) Instructional strategies relevant to development of creative potential; activities include problem-solving, metaphoring, inventing, synectics, evaluation, questioning, brainstorming, creative writing and thinking, and spontaneity.

Research Focus Electives:

HIAD 8403 - Rsrch Hghr/Adult Educ **

(3) Current topics, research problems, new studies, and needed inquiries in higher and adult education.

EDPR 8543 - Res Design Analysis

(3) (EDRS 8543) Includes validity of research designs, complex analysis of variance, and analysis of covariance; emphasis is on practical advanced univariate and analytic and interpretative skills. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instructor.

HIAD 8406 - Designing Research in HIAD

(3) This course focuses on the theoretical, conceptual, and procedural knowledge underpinning the designing of qualitative, quantitative, and mixed methods research in higher and adult education. PREREQUISITE(S): LEAD 8001,HIAD 8412,EDPR 8561 EDPR 8541,EDPR 8542 or equivalent, or permission of the instructor.

PSYC 8309 - Focus Group Research

(3) Examination of the general logic of focus group research, including strengths and weaknesses of this approach. Methodology will be covered in depth, including how to plan a project, development of questions for a focus group, moderating the group, and analyzing and reporting data. Completion of a semester project is required.

PSYC 8312 - Qualitative Resrch/Psyc

(3) Examines history and current practice of research stemming from a human science philosophy, introducing a variety of qualitative research methodologies; examines differences and similarities in human and natural sciences in order to appreciate the significance of epistemology on research practice. PREREQUISITE/COREQUISITE: PSYC 7301 or permission of instructor. PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

EDPR 7512 - Psychomet Thry/Ed Appl

(3) (EDRS 7512-8512) Psychometric principles and applications to tests, rating scales, questionnaires, and other standardized instruments used in educational research; problems associated with evaluation of items and instruments in terms of reliability and validity. PREREQUISITE(S): EDPR 7511/EDPR 8511 and EDPR 7541/EDPR 8541 or permission of instructor.

EDPR 8511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541-EDPR 8541 or permission of instructor.

PUBH 8311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

ICL 8953 - Writing for Academic Publicatn

(3) Learning to master the discourses necessary to succeed in academic writing; focus on genres of academic writing; emphasis on strategies for successful academic work based on publication.

EDPR 8547 - Survey Research: Sampling Design and Analysis

(3) Examines sampling procedures, design/administration of sample surveys; strategies (simple-random, probability, non-probability, cluster, single and multistage), effect of strategy on sampling error, confidentiality/anonymity issues, questionnaire design, interview procedures, question format, issues in preparation and analysis of survey data. PREREQUISITE(S): EDPR 7521 and EDPR 7542/EDPR 8542 or permission of instructor.

Health Equity Focus Electives:

PUBH 8130 - Social Determinants of Health

(3) This course focuses on the systematic study of the economic and social conditions which determine health. It examines the social gradient in health and explores how social influences such as poverty, social capital, job security, neighborhood characteristics, social support, transportation, discrimination, and stress affect health and longevity. It also explores structural interventions in shaping social environments that are conducive to better health. PRE-REQUISITE: PUBH 7160/8160 OR PERMISSION OF INSTRUCTOR

HADM 7204 - Healthcare Qual & Outcms Mgmt

(3) This course is designed to acquaint the student with quality management philosophies, approaches, and methodologies for improving health systems and processes. Students completing this course will be able to identify, analyze and create a basic quality/outcome research proposal.

HADM 7107 - Health Care Ethics

(3) Overview of ethical theory and its relationship to individual and community health; discusses critical issues, including beginning of life, end of life, medical research, access to care, and justice; emphasizes the critical decision making of individuals and how ethical thinking might inform public policy.

NURS 7811 - Special Topics in Nursing

(3) (HMEC, CSED 6702) Topics are varied and announced in online course listings. PREREQUISITE(S): Permission of instructor.

Dissertation: 12 credit hours

NURS 9000 - Doctoral Dissertation

(1-9) This course focuses on guiding the student in the development of a doctoral dissertation proposal toward defending his/her dissertation. Grades of S,U, or IP will be given.

PhD Nursing Program Requirements

In addition to completion of the 60 semester hours of required coursework beyond the master's degree or 54 semester hours beyond the Doctorate of Nursing Practice (DNP) degree, program requirements include successful completion of

written and oral comprehensive examinations, and the preparation and successful defense of a dissertation in accordance with the University of Memphis Graduate School policies and guidelines.

For questions about the PhD in Nursing program curriculum, degree requirements, or how to apply?

Dr. Eric Bailey
Assistant Dean of Students
eabailey@memphis.edu

Dr. Shirleatha Lee
Associate Dean of Academic Programs
sntaylr1@memphis.edu

Philosophy, (PhD)

PhD Degree Program

Program objectives are: (1) development of expertise in the subject matter to teach a variety of undergraduate courses in area of specialization; (2) development of ability to produce original research papers of sufficient quality for presentation at professional meetings and conferences and publication in professional journals, in addition to ability to impart research skills to students at all levels; (3) ability to contribute to philosophical discussions across the subdivisions of the field; and (4) preparation to assume the role of a philosophy faculty member.

Program Admission

The Philosophy Department admits students for the fall semester of each academic year. Information and application forms can be found on the department web site. Applications received after January 5 cannot be guaranteed consideration for an assistantship for the upcoming academic year.

1. Fulfillment of university requirements for admission to the Graduate School, including a score on the GRE acceptable to the department.
2. The equivalent of the BA degree, usually with a major in philosophy. This must include at least the following courses or their equivalents: intermediate logic, survey of ancient philosophy, survey of modern philosophy, and ethics. Students lacking one or more of these courses may be admitted to the program provisionally, on the condition that they make up the missing course work as soon as possible (graduate credit will not be granted for make-up work).
3. Three letters of recommendation, to be submitted by persons competent to judge the prospective student's ability to undertake graduate work. (These letters are to be sent directly from the referee to the department's coordinator of graduate admissions).
4. Transcripts of prior academic work. Official copies should be sent to the Office of Graduate Admissions. A minimum GPA of 3.00 (on a scale of 4.00) will be expected.
5. A 10-20 page writing sample and a 1-2–page statement of purpose should be submitted to the Coordinator of Graduate Admissions in Philosophy.

Retention Requirements

A student will be retained continuously in the program until completion of the degree providing the following conditions are met:

1. All students will be required to maintain a GPA of at least 3.5. Should the student's GPA fall below that mark, a period of one semester will be allowed to correct the deficiency. At the discretion of the chair and the coordinator of graduate studies, this period may be extended one additional semester.
2. Students will be expected to demonstrate satisfactory progress in fulfilling the graduation requirements outlined below.

Graduation Requirements

General Requirements

1. A minimum of 72 hours of graduate credit beyond the bachelor's degree is required. At least 60 hours credit must be at the 7000 level or higher.
2. If a student has completed 18 or more hours of graduate credit at another institution, but did not complete the graduate degree, then at most 18 hours of that work may be transferred and applied towards the 72 hours required for the PhD at Memphis. Only graduate hours that relate in content to the graduate program, and that do not exceed university time restrictions can be transferred.
3. If a student did complete the master's degree in another graduate program, at most 30 hours of graduate credit may be transferred and applied towards the 72 hours required for the PhD at Memphis (whether or not that graduate program required more than 30 hours). Consequently, a minimum of 42 hours of graduate credit is required beyond that master's degree. At least 36 hours of graduate credit must be at the 7000 level or higher. More hours may be required at the discretion of the department's advisory committee.
4. If a student completes the master's degree in philosophy at the University of Memphis and is then accepted in the PhD program at the university 30-33 hours of graduate credit will be accepted towards the 72 hours required (33 hours in case the student did not take the MA thesis option).
5. No more than 18 credit hours of dissertation (PHIL 9000) will count towards satisfying the total number of graduate hours required for the PhD. A minimum of 6 hours of dissertation is required for the PhD.

Residency Requirements:

At least 24 credit hours must be earned while the student is in continuous residence in the program.

Distribution Requirements

Core Requirements—Students must take a core of twelve hours in the history of philosophy (at least three in ancient and three in modern), six hours in theoretical philosophy, and six hours in practical philosophy.

Examination Requirements:

1. Comprehensive Examinations—The Comprehensive Examinations must be taken no later than the student's fourth semester in the program. This examination includes a written part and an oral part and covers the primary area of the student's research interest (i.e., the area in which the student intends to write a dissertation).
2. NOTE: It is expected that the doctoral comprehensive examination will be coordinated with the master's comprehensive examination, so that those whose scores fail to qualify them for advanced doctoral study but are sufficient for the master's degree may then complete the requirements for a terminal master's degree.

Research Tool Requirements:

Students must demonstrate sufficient ability in either (a) one natural language relevant to the student's dissertation area (or two natural languages if the director of the student's dissertation determines that this additional capability is

required for successful research in the student's area of specialization) or (b) one non-natural language or research tool (i.e.,logic) if such a language or tool is determined to be most useful to the student's area of research.

Dissertation Requirements

1. Dissertation Committee—The student must select a dissertation director. The coordinator of graduate studies in consultation with the graduate faculty will select three additional readers.
2. Dissertation Proposal Defense—The student will submit a proposal for the dissertation to the committee and defend the proposal before the graduate faculty. This defense will normally occur before the end of the sixth semester.
3. Dissertation Defense—The dissertation committee will schedule a defense of the completed dissertation in coordination with the chair and the coordinator of graduate studies. Notice will be given, copies of the dissertation made available, and a public oral defense of the dissertation will be held. Upon approval of the dissertation committee and faculty, the dissertation will be submitted to the Graduate School and the degree awarded.
4. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write.

Psychology - Clinical Psychology, (PhD)

MS/PhD Degree Program

There are three broad programs within the MS/PhD degree program: Clinical Psychology (APA accredited), School Psychology (APA accredited), and Experimental Psychology. Across these doctoral programs, faculty and students participate in five research areas: Clinical Health Psychology; Behavioral Neuroscience; Child and Family Studies; Cognitive Psychology; and Psychotherapy Research. Students interested in other areas should contact the department for further information.

In each of these programs, the MS is preparatory to continuation in the program. In order to be advanced to doctoral study, a student must have satisfactorily completed all requirements for the MS (including a thesis that is empirical and psychological) at The University of Memphis, or have completed an equivalent degree, with empirical thesis, from another institution. Students possessing a master's degree without a thesis will be required to complete a thesis before being advanced to doctoral study.

Across the MS/PhD degree programs, the general training objectives are: (1) understanding of theoretical principles and practices of psychology; (2) development of expertise in experimental design, data analysis, and oral and written presentation of research results; and (3) being competitive for professional positions in psychology.

Program Admission and Prerequisites

Applications for each of the MS/PhD degree programs are reviewed once each year for admission in the following Fall semester. Applications for Spring admission are not considered. All application information must have been received by December 5 for an applicant to be considered for admission to the MS/PhD program in Clinical Psychology, by January 15 for an applicant to be considered for admission to the MS/PhD program in Experimental Psychology, and by December 15 for an applicant to be considered for admission to the MS/PhD program in the MS/PhD program in School Psychology. The following items are required for admission:

1. A completed Departmental application form and completed University application form.
2. A grade point average of at least 2.75/4.0 in all undergraduate course work. Applicants with undergraduate records at this minimum level are not ordinarily admitted. An official transcript of *all* undergraduate and graduate coursework must be sent.

3. A minimum of 18 semester hours in undergraduate psychology courses, including courses in Quantitative Methods (Psychological Statistics) and Experimental Design. Students lacking some or all of these prerequisite courses, but presenting an exceptional undergraduate record, may nevertheless be granted graduate admission. However, students may be asked to remove such deficiencies before or during their first academic year.
4. GRE scores (Verbal, Quantitative, and Written Analytical).
5. Letters of recommendation from at least three persons familiar with the applicant's academic background and aptitude for graduate work in psychology, specifying in detail the applicant's capabilities for graduate study and for future performance as a psychologist.
6. An essay of approximately 1200 words indicating the specific graduate program being applied to, and describing the applicant's prior research and applied experience, current research and applied interests, and career goals. Prior research involvement is weighted heavily.
7. A willingness to be interviewed in person or by phone by members of the department faculty, should that be requested.

Program Requirements

Credit Hours:

A minimum of 33 semester hours of graduate credit beyond the bachelor's degree is required for the MS degree in Psychology, and a minimum of 80 semester hours of graduate credit beyond the bachelor's degree is required for the PhD degree in Psychology. All work for graduate credit must be approved by, and must be completed at a level of performance satisfactory to the graduate faculty of the department. Students also may take coursework for degree credit outside the department with program approval.

Transfer Credit:

Students with graduate credits earned at another institution, upon matriculation at The University of Memphis, may petition to have these credits applied toward the total number of hours required to earn their degree at The University of Memphis and to use transfer credits as substitutes for specific courses required for the degree. Decisions about such substitutions are made by the psychology department Graduate Coordinator. The number of transfer credits accepted as substitutions for specific courses varies by degree program. Substitutions are not granted for any of the Clinical Psychology program's core curriculum.

Enrollment:

MS/ PhD degree candidates are expected to carry a minimum of 9 credits per semester and to devote full time during their enrollment to pursuit of degree-related activities.

Research:

All MS/PhD degree students are expected to be active in research collaboratively with members of the department faculty each semester they are enrolled.

Master's Thesis and Comprehensive Examination:

Each PhD student is expected to complete an independent research project, culminating in a master's thesis. The thesis is intended to be a demonstration of the student's ability to plan, organize, conduct, and report a research/scholarly project. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Only 3 hours of thesis credit (PSYC 7996) can count toward the degree. Upon completion of the thesis, the

student takes an oral examination that assesses not only mastery of the thesis topic but also broader awareness of the theoretical and empirical issues in contemporary psychology. This oral examination serves as the MS comprehensive examination.

Second Milestone Project:

After completing the requirements of the master's thesis, all PhD students will complete a second milestone, usually in the third year of graduate work, which varies by graduate program in Psychology. Students in the Experimental Psychology PhD program can satisfy this requirement with a (a) a Specialty Examination;(b) a Major Area Paper (MAP); (c) a grant proposal with the student as Principal Investigator submitted for review; or (d) an empirical manuscript submitted for publication. All alternatives require committees (three faculty members), proposal defenses, and final defenses.

Comprehensive Educational Requirements:

All MS/PhD students are required to complete

All MS/PhD students are required to complete PSYC 7301/PSYC 8301, and PSYC 7302/PSYC 8302 during the first two years. With permission of the Major Professor and Graduate Coordinator, students may substitute PSYC 7303/PSYC 8303 for PSYC 7302/PSYC 8302 as their required course. Clinical Psychology and School Psychology MS/PhD students are required to complete PSYC 7000/PSYC 8000. Also, for both semesters in the first year, all MS/PhD students must attend weekly colloquium series to acquaint them with issues of research and professional ethics and professional opportunities in the department and in the discipline.

PSYC 7301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 8301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 7302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 8302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 7303 - Adv Statistics Psych II

(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

PSYC 8303 - Adv Statistics Psych II

(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

Must complete two additional

All MS/PhD students must complete two additional statistics/quantitative/methodology course from the following list (or a substituted course approved by the student's major professor and the Graduate Coordinator):

PSYC 7303 - Adv Statistics Psych II

(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

PSYC 8303 - Adv Statistics Psych II

(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

PSYC 7304 - Meas Th & Psychomet

(3) Measurement theory and psycho-metrics involved in the construction and evaluation of psychological measurement instruments will be stressed. Particular emphasis will be placed on theory and techniques of psychological measurement, scale and inventory construction, reliability, validity, evaluation of measurement quality, classical and contemporary measurement theory, and standardization. Restricted by program or permit. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 8304 - Meas Th & Psychomet

(3) Measurement theory and psycho-metrics involved in the construction and evaluation of psychological measurement instruments will be stressed. Particular emphasis will be placed on theory and techniques of psychological measurement, scale and inventory construction, reliability, validity, evaluation of measurement quality, classical and contemporary measurement theory, and standardization. Restricted by program or permit. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 7305 - Quant Meth Review Rsch

(3) (same as PUBH 7305-PUBH 8305) (same as PUBH 7305-8305). Quantitative procedures (meta-analysis) for reviewing research findings in psychology and other social sciences; techniques for locating and coding research studies, calculating effect sizes, and analyzing study findings. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 8305 - Quant Meth Review Rsch

(3) (Same as PUBH 7305-PUBH 8305) (same as PUBH 7305-8305). Quantitative procedures (meta-analysis) for reviewing research findings in psychology and other social sciences; techniques for locating and coding research studies, calculating effect sizes, and analyzing study findings. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 7306 - Linear Struct Modeling

(3) An applied introduction to cross sectional and longitudinal structural equation modeling with single or multiple groups, including: path analysis, confirmatory factor analysis, measurement invariance, mediation, moderation, mixture modeling, latent growth curves, exploratory structural equation modeling and other latent variable models which include applications to experimental and non-experimental data. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 8306 - Linear Struct Modeling

(3) An applied introduction to cross sectional and longitudinal structural equation modeling with single or multiple groups, including: path analysis, confirmatory factor analysis, measurement invariance, mediation, moderation, mixture modeling, latent growth curves, exploratory structural equation modeling and other latent variable models which include applications to experimental and non-experimental data. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 7307 - Models Program Eval

(3) History and nature of program evaluation, review of different approaches taken to evaluation by variety of major theorists in the field; practice in evaluation.

PSYC 8307 - Models Program Eval

(3) History and nature of program evaluation, review of different approaches taken to evaluation by variety of major theorists in the field; practice in evaluation.

PSYC 7308 - Appl Multivariate Stat

(3) Multivariate analysis of variance (MANOVA) with independent designs and its extension to repeated measures ANOVA. Goals include review conceptual bases, learn SPSS procedures, analyze simple and complex designs, and learn special post hoc procedures. PREREQUISITE(S): PSYC 7302 or equivalent.

PSYC 8308 - Appl Multivariate Stat

(3) Multivariate analysis of variance (MANOVA) with independent designs and its extension to repeated measures ANOVA. Goals include review conceptual bases, learn SPSS procedures, analyze simple and complex designs, and learn special post hoc procedures. PREREQUISITE(S): PSYC 7302 or equivalent.

PSYC 7310 - Mixed-Model Regress Anly

(3) Instruction in the use of mixed-model regression with a focus on design and analysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 8310 - Mixed-Model Regress Anly

(3) Instruction in the use of mixed-model regression with a focus on design and analysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 7311 - Appl Cat Data Analysis

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pursuing a career in research. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents

PSYC 8311 - Appl Cat Data Analysis

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pursuing a career in research. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PSYC 7312 - Qualitative Resrch/Psyc

(3) Examines history and current practice of research stemming from a human science philosophy, introducing a variety of qualitative research methodologies; examines differences and similarities in human and natural sciences in order to appreciate the significance of epistemology on research practice. PREREQUISITE/COREQUISITE: PSYC 7301 or permission of instructor. PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

PSYC 8312 - Qualitative Resrch/Psyc

(3) Examines history and current practice of research stemming from a human science philosophy, introducing a variety of qualitative research methodologies; examines differences and similarities in human and natural sciences in order to appreciate the significance of epistemology on research practice. PREREQUISITE/COREQUISITE: PSYC 7301 or permission of instructor. PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

Must complete at least one course in each of the following areas

All MS/PhD students must complete at least one course in each of the following areas (or a substituted course approved by the student's major professor and the Graduate Coordinator). Restrictions for Clinical and School Psychology students exist.

Biological Bases of Behavior:

PSYC 7441 - Psyc/Medical Illness

(3) Addresses application of psychological principles to promote coping with medical disability and optimal healing; diagnostic interviewing and medical consulting skills emphasized; psychological and cognitive impact on various medical diseases and disorders reviewed; biological bases of behavior emphasized. Restricted by Program or by Permit.

PSYC 8441 - Psyc/Medical Illness

(3) Addresses application of psychological principles to promote coping with medical disability and optimal healing; diagnostic interviewing and medical consulting skills emphasized; psychological and cognitive impact on various medical diseases and disorders reviewed; biological bases of behavior emphasized. Restricted by Program or by Permit.

PSYC 7701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 8701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 7705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

PSYC 8705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

Cognitive-Affective Bases of Behavior:

PSYC 7208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 8208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 7211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

PSYC 8211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

PSYC 7222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 8222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 7407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 8407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

Social Bases of Behavior:

PSYC 7215 - Organizational Psyc

(3) The course deals with the major organizational determinants of individual and group behavior and performance. The characteristics of organization structure and climate are explored from both a classical and a contemporary viewpoint. Organization change and development theories are examined plus the major ancillary theoretical positions on leadership, individual and group performance, behavior modification, selection and training. PREREQUISITE(S): Permission of instructor.

PSYC 8215 - Organizational Psyc

(3) The course deals with the major organizational determinants of individual and group behavior and performance. The characteristics of organization structure and climate are explored from both a classical and a contemporary viewpoint. Organization change and development theories are examined plus the major ancillary theoretical positions on leadership, individual and group performance, behavior modification, selection and training. PREREQUISITE(S): Permission of instructor.

PSYC 7217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

PSYC 8217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

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PSYC 7220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

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Individual Bases of Behavior:

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

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PSYC 7412 - Psychopathology

(3) Survey of the manifestations of abnormal behavior and psychological processes; detailed analysis of clinical and experimental literature concerning psychological and psychiatric disorders and their etiology. Historical principles are emphasized. Restricted by Program or by Permit.

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(3) Survey of the manifestations of abnormal behavior and psychological processes; detailed analysis of clinical and experimental literature concerning psychological and psychiatric disorders and their etiology. Historical principles are emphasized. Restricted by Program or by Permit.

PSYC 7416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

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PSYC 7420 - Personal Construct Thry

(3) In-depth seminar on personal construct theory, a cognitively oriented theory of personality stemming from the work of George Kelly. Philosophical assumptions and basic theory; use of repertory grid technique and its application to research on such topics as cognitive complexity, development, interpersonal relationships, psychopathology, and psychotherapy. Restricted by Program or by Permit.

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PSYC 7516 - Issues Psychothrpy Rsch

(3) Research evidence pertaining to basic questions about psychotherapy and its effectiveness; classic contributions and current research findings.

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Dissertation and Final Examination:

The dissertation is viewed as the capstone of the student's academic training, reflecting the student's capacity for independent research. Dissertation credit hours (PSYC 9000) must be taken for a minimum of 6 hours and can be taken for a maximum of 9 credit hours. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Upon completion of an independent written dissertation research project acceptable to the faculty, each student will take a final oral examination oriented toward, but not exclusively on, the student's dissertation research and major area of specialization.

PSYC 9000 - Dissertation

(1-9) Independent research for Doctor of Philosophy degree. Application for writing a dissertation must be filled out on an approved form after consultation with the major professor and filed with the Graduate School. Only 9 hours may be counted toward degree requirements. Student must be enrolled in this course during the semester in which the student expects to graduate. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Clinical Psychology:

Students in the Clinical Psychology program must meet these additional requirements:

Additional Courses and Activities

Additional Courses and Activities — PSYC 7207/PSYC 8207, PSYC 7217/PSYC 8217, PSYC 7407/PSYC 8407, PSYC 7412/PSYC 8412, PSYC 7428/PSYC 8428, PSYC 7430/PSYC 8430, PSYC 7432/PSYC 8432, PSYC 7435/PSYC 8435, PSYC 7705/PSYC 8705, 2 credits of PSYC 8707 and 6 credit hours of PSYC 7434/PSYC 8434 (including two courses of 3 hours credit each, with one course focusing on therapy with diverse populations). As part of their clinical training, students must also participate in the activities of the Psychological Services Center. To fulfill this requirement, students enroll in PSYC 7438/PSYC 8438 for a minimum of 6 semesters.

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

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PSYC 7407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

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(3) Survey of the manifestations of abnormal behavior and psychological processes; detailed analysis of clinical and experimental literature concerning psychological and psychiatric disorders and their etiology. Historical principles are emphasized. Restricted by Program or by Permit.

PSYC 7428 - Foundatns Clinical Psyc

(3) Introduction to fundamental concepts and methods of clinical psychology conceived as application of scientific reasoning to human problems; historical and scientific foundations for scientist-practitioner model, and various roles of clinical psychologist in social context; ethical, legal, and multi-cultural issues emphasized. Restricted by Program or by Permit.

PSYC 8428 - Foundatns Clinical Psyc

(3) Introduction to fundamental concepts and methods of clinical psychology conceived as application of scientific reasoning to human problems; historical and scientific foundations for scientist-practitioner model, and various roles of clinical psychologist in social context; ethical, legal, and multi-cultural issues emphasized. Restricted by Program or by Permit.

PSYC 7430 - Clin Assessment/Ability

(3) Introduction to psychological assessment of cognitive abilities and achievement; exposure to basic psychometric concepts; observation and interpretation of assessment related to behavior; specific emphasis on development of assessment skills such as test administration, test interpretation, and report writing; ethical and legal issues of professional conduct emphasized. Restricted by Program or by Permit.

PSYC 8430 - Clin Assessment/Ability

(3) Introduction to psychological assessment of cognitive abilities and achievement; exposure to basic psychometric concepts; observation and interpretation of assessment related to behavior; specific emphasis on development of assessment skills such as test administration, test interpretation, and report writing; ethical and legal issues of professional conduct emphasized. Restricted by Program or by Permit.

PSYC 7432 - Clinic Asses/Case Cncpt

(3) Comprehensive review of fundamental concepts and practices of clinical assessment as application of scientific reasoning to problem of case conceptualization; development of conceptualization skills to integrate interview, objective assessment, and systematic observations; evaluation of different assessment approaches for empirical support and utility in case management; critical and analytic thinking, ethical and legal issues of professional conduct emphasized. Restricted by Program or by Permit.

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(3) Comprehensive review of fundamental concepts and practices of clinical assessment as application of scientific reasoning to problem of case conceptualization; development of conceptualization skills to integrate interview, objective assessment, and systematic observations; evaluation of different assessment approaches for empirical support and utility in case management; critical and analytic thinking, ethical and legal issues of professional conduct emphasized. Restricted by Program or by Permit.

PSYC 7435 - Intro To Psychotherapy

(1-3) Required for all clinical students. Surveys major traditions of psychotherapy - psychodynamic, humanistic, cognitive-behavioral, and systemic - considering originators' works as well as contemporary exponents; includes didactic (reading, discussion) and experiential learning (exercises, role plays) to promote both conceptual and practical acquaintance with the implications of each tradition. Students can enroll in this course for 3 hours and then repeat once for 1 hour. Restricted by Program or by Permit.

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PSYC 7705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

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PSYC 8707 - Professional Issues

(1) Prepares late-doctoral students in school and clinical psychology for internship and future careers; includes developing a professional vita, articulating a theoretical orientation and professional identity, obtaining an internship, career options, effective supervision, licensure and private practice issues. May be repeated for a maximum of 4 credit hours. Restricted to Program or by Permit. Grades of S, U, or IP will be given.

PSYC 7434 - Clin Psychotherapies

(3) In-depth study of methods of psychotherapy and intervention strategies, their basic assumptions, spheres of applicability, and typical outcomes. Therapeutic approach covered will depend upon the particular instructor. May be repeated for maximum of 20 credits with change in topic. May be repeated for maximum of 20 credits with change in topic. Restricted by Program or by Permit.

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PSYC 7438 - Pract Clinical Trtmt

(1-3) Practical experience to students in clinical psychology, permitting them to work under professional supervision for 42 client contact hours in the Psychological Services Center. Students conduct intake interviews, administer and interpret psychological tests, and provide therapy. May be repeated for maximum of 24 hours credit. Restricted by Program or by Permit. Grades of S, U, or IP will be given.

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During their time in the graduate program

During their time in the graduate program, Clinical Psychology students receiving department funding may be placed on a department assistantship, grant-funded assistantship, or clinical agency placement. The student is required to complete a minimum of 12 months of 20 hours per week (or the equivalent) in a clinical placement before graduation (i.e., 10 hours per week over 24 months).

Students are also required to complete

Students are also required to complete a minimum of 12 months of 20 hours per week in a research assistantship after their first year in the doctoral program. The research assistantship may be served in a community research facility or in the psychology department.

Research Area Course Requirements:

In addition to the general clinical requirements, clinical psychology program students in the following Research Areas must complete the courses listed below

Clinical Health Research area

Clinical Psychology students in the Clinical Health Research area must complete two of the following courses: PSYC 7440/PSYC 8440, PSYC 7441/PSYC 8441, or sections of PSYC 7434/PSYC 8434 focused on cognitive-behavior therapy, clinical health psychology (e.g., therapy with medical patients, changing health risk behaviors, and pediatric psychology). Further, a major portion of clinical practica, the master's thesis, the doctoral dissertation, and the internship must pertain to clinical health.

PSYC 7440 - Behavioral Medicine I

(3) Overview of behavioral medicine and examination of psychologists' roles in healthcare settings; psychological and interpersonal factors that affect healthcare delivery will be examined, such as physician-patient communication, gender, and ethnic diversity; differences in ethical underpinnings between medicine and psychology will be explored. Restricted by Program or by Permit.

PSYC 8440 - Behavioral Medicine I

(3) Overview of behavioral medicine and examination of psychologists' roles in healthcare settings; psychological and interpersonal factors that affect healthcare delivery will be examined, such as physician-patient communication, gender, and ethnic diversity; differences in ethical underpinnings between medicine and psychology will be explored. Restricted by Program or by Permit.

PSYC 7441 - Psyc/Medical Illness

(3) Addresses application of psychological principles to promote coping with medical disability and optimal healing; diagnostic interviewing and medical consulting skills emphasized; psychological and cognitive impact on various medical diseases and disorders reviewed; biological bases of behavior emphasized. Restricted by Program or by Permit.

PSYC 8441 - Psyc/Medical Illness

(3) Addresses application of psychological principles to promote coping with medical disability and optimal healing; diagnostic interviewing and medical consulting skills emphasized; psychological and cognitive impact on various medical diseases and disorders reviewed; biological bases of behavior emphasized. Restricted by Program or by Permit.

PSYC 7434 - Clin Psychotherapies

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(3) In-depth study of methods of psychotherapy and intervention strategies, their basic assumptions, spheres of applicability, and typical outcomes. Therapeutic approach covered will depend upon the particular instructor. May be repeated for maximum of 20 credits with change in topic. May be repeated for maximum of 20 credits with change in topic. Restricted by Program or by Permit.

Child and Family Studies Research area

Clinical Psychology students in the Child and Family Studies Research area must complete PSYC 7416/PSYC 8416; a section of PSYC 7434/PSYC 8434 focused on children, adolescents, or families; and one other course focused on children or families (e.g., PSYC 7207/PSYC 8207, PSYC 7219/PSYC 8219, PSYC 7701/PSYC 8701, PSYC 7705/PSYC 8705, PSYC 7808/PSYC 8808. They must also attend the Child and Family Colloquium. A major portion of practicum work must involve children, and the master's thesis and doctoral dissertation must pertain to children or families.

PSYC 7416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

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PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

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PSYC 7701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

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PSYC 7705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

PSYC 8705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

PSYC 7808 - Psychoed Assessmnt III

(3) Introduction to psychoeducational assessment of preschool children; includes issues surrounding early assessment, skill development with preschool instruments, and related report writing, conferencing.

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Psychotherapy Research area

Clinical Psychology students in the Psychotherapy Research area must also complete PSYC 7516/PSYC 8516. In addition, students must complete a third section of PSYC 7438/PSYC 8438 and the student's specialty exam and dissertation must relate to psychotherapy.

PSYC 7516 - Issues Psychothrpy Rsch

(3) Research evidence pertaining to basic questions about psychotherapy and its effectiveness; classic contributions and current research findings.

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PSYC 7438 - Pract Clinical Trtmt

(1-3) Practical experience to students in clinical psychology, permitting them to work under professional supervision for 42 client contact hours in the Psychological Services Center. Students conduct intake interviews, administer and interpret psychological tests, and provide therapy. May be repeated for maximum of 24 hours credit. Restricted by Program or by Permit. Grades of S, U, or IP will be given.

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Clinical Internship:

A full-time one-year internship, in an agency approved by the director of training in clinical psychology, is required. Permission from the clinical faculty must be secured before making application for internship. To be approved, the clinical faculty must judge the student to be academically and clinically ready for the internship. In addition, the student must have successfully defended the second milestone requirement by May 31 and the dissertation proposal by September 15 of the year in which they are applying for internship.

Psychology - Experimental Psychology, (PhD)

MS/PhD Degree Program

There are three broad programs within the MS/PhD degree program: Clinical Psychology (APA accredited), School Psychology (APA accredited), and Experimental Psychology. Across these doctoral programs, faculty and students participate in five research areas: Clinical Health Psychology; Behavioral Neuroscience; Child and Family Studies; Cognitive Psychology; and Psychotherapy Research. Students interested in other areas should contact the department for further information.

In each of these programs, the MS is preparatory to continuation in the program. In order to be advanced to doctoral study, a student must have satisfactorily completed all requirements for the MS (including a thesis that is empirical and psychological) at The University of Memphis, or have completed an equivalent degree, with empirical thesis, from another institution. Students possessing a master's degree without a thesis will be required to complete a thesis before being advanced to doctoral study.

Across the MS/PhD degree programs, the general training objectives are: (1) understanding of theoretical principles and practices of psychology; (2) development of expertise in experimental design, data analysis, and oral and written presentation of research results; and (3) being competitive for professional positions in psychology.

Program Admission and Prerequisites

Applications for each of the MS/PhD degree programs are reviewed once each year for admission in the following Fall semester. Applications for Spring admission are not considered. All application information must have been received by December 5 for an applicant to be considered for admission to the MS/PhD program in Clinical Psychology, by January 15 for an applicant to be considered for admission to the MS/PhD program in Experimental Psychology, and by December 15 for an applicant to be considered for admission to the MS/PhD program in the MS/PhD program in School Psychology. The following items are required for admission:

1. A completed Departmental application form and completed University application form.
2. A grade point average of at least 2.75/4.0 in all undergraduate course work. Applicants with undergraduate records at this minimum level are not ordinarily admitted. An official transcript of *all* undergraduate and graduate coursework must be sent.
3. A minimum of 18 semester hours in undergraduate psychology courses, including courses in Quantitative Methods (Psychological Statistics) and Experimental Design. Students lacking some or all of these prerequisite courses, but presenting an exceptional undergraduate record, may nevertheless be granted graduate admission. However, students may be asked to remove such deficiencies before or during their first academic year.

4. GRE scores (Verbal, Quantitative, and Written Analytical).
5. Letters of recommendation from at least three persons familiar with the applicant's academic background and aptitude for graduate work in psychology, specifying in detail the applicant's capabilities for graduate study and for future performance as a psychologist.
6. An essay of approximately 1200 words indicating the specific graduate program being applied to, and describing the applicant's prior research and applied experience, current research and applied interests, and career goals. Prior research involvement is weighted heavily.
7. A willingness to be interviewed in person or by phone by members of the department faculty, should that be requested.

Program Requirements

Credit Hours:

A minimum of 33 semester hours of graduate credit beyond the bachelor's degree is required for the MS degree in Psychology, and a minimum of 80 semester hours of graduate credit beyond the bachelor's degree is required for the PhD degree in Psychology. All work for graduate credit must be approved by, and must be completed at a level of performance satisfactory to the graduate faculty of the department. Students also may take coursework for degree credit outside the department with program approval.

Transfer Credit:

Students with graduate credits earned at another institution, upon matriculation at The University of Memphis, may petition to have these credits applied toward the total number of hours required to earn their degree at The University of Memphis and to use transfer credits as substitutes for specific courses required for the degree. Decisions about such substitutions are made by the psychology department Graduate Coordinator. The number of transfer credits accepted as substitutions for specific courses varies by degree program. Substitutions are not granted for any of the Clinical Psychology program's core curriculum.

Enrollment:

MS/ PhD degree candidates are expected to carry a minimum of 9 credits per semester and to devote full time during their enrollment to pursuit of degree-related activities.

Research:

All MS/PhD degree students are expected to be active in research collaboratively with members of the department faculty each semester they are enrolled.

Master's Thesis and Comprehensive Examination:

Each PhD student is expected to complete an independent research project, culminating in a master's thesis. The thesis is intended to be a demonstration of the student's ability to plan, organize, conduct, and report a research/scholarly project. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Only 3 hours of thesis credit (PSYC 7996) can count toward the degree. Upon completion of the thesis, the student takes an oral examination that assesses not only mastery of the thesis topic but also broader awareness of the theoretical and empirical issues in contemporary psychology. This oral examination serves as the MS comprehensive examination.

Second Milestone Project:

After completing the requirements of the master's thesis, all PhD students will complete a second milestone, usually in the third year of graduate work, which varies by graduate program in Psychology. Students in the Experimental Psychology PhD program can satisfy this requirement with a (a) a Specialty Examination;(b) a Major Area Paper (MAP); (c) a grant proposal with the student as Principal Investigator submitted for review; or (d) an empirical manuscript submitted for publication. All alternatives require committees (three faculty members), proposal defenses, and final defenses.

Comprehensive Educational Requirements:

All MS/PhD students are required to complete

All MS/PhD students are required to complete PSYC 7301/PSYC 8301, and PSYC 7302/PSYC 8302 during the first two years. With permission of the Major Professor and Graduate Coordinator, students may substitute PSYC 7303/PSYC 8303 for PSYC 7302/PSYC 8302 as their required course. Clinical Psychology and School Psychology MS/PhD students are required to complete PSYC 7000/PSYC 8000. Also, for both semesters in the first year, all MS/PhD students must attend weekly colloquium series to acquaint them with issues of research and professional ethics and professional opportunities in the department and in the discipline.

PSYC 7301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 8301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 7302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 8302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 7303 - Adv Statistics Psych II

(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

PSYC 8303 - Adv Statistics Psych II

(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

Must complete two additional

All MS/PhD students must complete two additional statistics/quantitative/methodology course from the following list (or a substituted course approved by the student's major professor and the Graduate Coordinator):

PSYC 7303 - Adv Statistics Psych II

(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

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(3) Intermediate and advanced topics related to analysis of variance, including fixed and random effects, repeated measures, non-orthogonal designs, and the analysis of covariance; traditional analysis of variance concerns within framework of general linear model; scales of measurement, planned and post hoc comparisons, power analysis and concept of effect size. PREREQUISITE(S): PSYC 7302 or equivalent.

PSYC 7304 - Meas Th & Psychomet

(3) Measurement theory and psycho-metrics involved in the construction and evaluation of psychological measurement instruments will be stressed. Particular emphasis will be placed on theory and techniques of psychological measurement, scale and inventory construction, reliability, validity, evaluation of measurement quality, classical and contemporary measurement theory, and standardization. Restricted by program or permit. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

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PSYC 7305 - Quant Meth Review Rsch

(3) (same as PUBH 7305-PUBH 8305) (same as PUBH 7305-8305). Quantitative procedures (meta-analysis) for reviewing research findings in psychology and other social sciences; techniques for locating and coding research studies, calculating effect sizes, and analyzing study findings. PREREQUISITE(S): Psychology graduate student or permission of instructor.

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PSYC 7306 - Linear Struct Modeling

(3) An applied introduction to cross sectional and longitudinal structural equation modeling with single or multiple groups, including: path analysis, confirmatory factor analysis, measurement invariance, mediation, moderation, mixture modeling, latent growth curves, exploratory structural equation modeling and other latent variable models which include applications to experimental and non-experimental data. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

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(3) History and nature of program evaluation, review of different approaches taken to evaluation by variety of major theorists in the field; practice in evaluation.

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(3) Multivariate analysis of variance (MANOVA) with independent designs and its extension to repeated measures ANOVA. Goals include review conceptual bases, learn SPSS procedures, analyze simple and complex designs, and learn special post hoc procedures. PREREQUISITE(S): PSYC 7302 or equivalent.

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(3) Instruction in the use of mixed-model regression with a focus on design and analysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

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(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pursuing a career in research. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents

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(3) Examines history and current practice of research stemming from a human science philosophy, introducing a variety of qualitative research methodologies; examines differences and similarities in human and natural sciences in order to appreciate the significance of epistemology on research practice. PREREQUISITE/COREQUISITE: PSYC 7301 or permission of instructor. PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

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Must complete at least one course in each of the following areas

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Biological Bases of Behavior:

PSYC 7441 - Psyc/Medical Illness

(3) Addresses application of psychological principles to promote coping with medical disability and optimal healing; diagnostic interviewing and medical consulting skills emphasized; psychological and cognitive impact on various medical diseases and disorders reviewed; biological bases of behavior emphasized. Restricted by Program or by Permit.

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PSYC 7701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 8701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 7705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

PSYC 8705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

Cognitive-Affective Bases of Behavior:

PSYC 7208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

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(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 7211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

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PSYC 7222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

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PSYC 7407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 8407 - Cognition & Emotion

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Social Bases of Behavior:

PSYC 7215 - Organizational Psyc

(3) The course deals with the major organizational determinants of individual and group behavior and performance. The characteristics of organization structure and climate are explored from both a classical and a contemporary viewpoint. Organization change and development theories are examined plus the major ancillary theoretical positions on leadership, individual and group performance, behavior modification, selection and training. PREREQUISITE(S): Permission of instructor.

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PSYC 7217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

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PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

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PSYC 7220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

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Individual Bases of Behavior:

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

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PSYC 7412 - Psychopathology

(3) Survey of the manifestations of abnormal behavior and psychological processes; detailed analysis of clinical and experimental literature concerning psychological and psychiatric disorders and their etiology. Historical principles are emphasized. Restricted by Program or by Permit.

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PSYC 7416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

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PSYC 7420 - Personal Construct Thry

(3) In-depth seminar on personal construct theory, a cognitively oriented theory of personality stemming from the work of George Kelly. Philosophical assumptions and basic theory; use of repertory grid technique and its application to research on such topics as cognitive complexity, development, interpersonal relationships, psychopathology, and psychotherapy. Restricted by Program or by Permit.

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PSYC 7516 - Issues Psychothrpy Rsch

(3) Research evidence pertaining to basic questions about psychotherapy and its effectiveness; classic contributions and current research findings.

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Dissertation and Final Examination:

The dissertation is viewed as the capstone of the student's academic training, reflecting the student's capacity for independent research. Dissertation credit hours (PSYC 9000) must be taken for a minimum of 6 hours and can be taken for a maximum of 9 credit hours. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Upon completion of an independent written dissertation research project acceptable to the faculty, each student will take a final oral examination oriented toward, but not exclusively on, the student's dissertation research and major area of specialization.

PSYC 9000 - Dissertation

(1-9) Independent research for Doctor of Philosophy degree. Application for writing a dissertation must be filled out on an approved form after consultation with the major professor and filed with the Graduate School. Only 9 hours may be counted toward degree requirements. Student must be enrolled in this course during the semester in which the student expects to graduate. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Psychology - School Psychology, (PhD)

MS/PhD Degree Program

There are three broad programs within the MS/PhD degree program: Clinical Psychology (APA accredited), School Psychology (APA accredited), and Experimental Psychology. Across these doctoral programs, faculty and students participate in five research areas: Clinical Health Psychology; Behavioral Neuroscience; Child and Family Studies; Cognitive Psychology; and Psychotherapy Research. Students interested in other areas should contact the department for further information.

In each of these programs, the MS is preparatory to continuation in the program. In order to be advanced to doctoral study, a student must have satisfactorily completed all requirements for the MS (including a thesis that is empirical and psychological) at The University of Memphis, or have completed an equivalent degree, with empirical thesis, from another institution. Students possessing a master's degree without a thesis will be required to complete a thesis before being advanced to doctoral study.

Across the MS/PhD degree programs, the general training objectives are: (1) understanding of theoretical principles and practices of psychology; (2) development of expertise in experimental design, data analysis, and oral and written presentation of research results; and (3) being competitive for professional positions in psychology.

Program Admission and Prerequisites

Applications for each of the MS/PhD degree programs are reviewed once each year for admission in the following Fall semester. Applications for Spring admission are not considered. All application information must have been received by December 5 for an applicant to be considered for admission to the MS/PhD program in Clinical Psychology, by January 15 for an applicant to be considered for admission to the MS/PhD program in Experimental Psychology, and

by December 15 for an applicant to be considered for admission to the MS/PhD program in the MS/PhD program in School Psychology. The following items are required for admission:

1. A completed Departmental application form and completed University application form.
2. A grade point average of at least 2.75/4.0 in all undergraduate course work. Applicants with undergraduate records at this minimum level are not ordinarily admitted. An official transcript of *all* undergraduate and graduate coursework must be sent.
3. A minimum of 18 semester hours in undergraduate psychology courses, including courses in Quantitative Methods (Psychological Statistics) and Experimental Design. Students lacking some or all of these prerequisite courses, but presenting an exceptional undergraduate record, may nevertheless be granted graduate admission. However, students may be asked to remove such deficiencies before or during their first academic year.
4. GRE scores (Verbal, Quantitative, and Written Analytical).
5. Letters of recommendation from at least three persons familiar with the applicant's academic background and aptitude for graduate work in psychology, specifying in detail the applicant's capabilities for graduate study and for future performance as a psychologist.
6. An essay of approximately 1200 words indicating the specific graduate program being applied to, and describing the applicant's prior research and applied experience, current research and applied interests, and career goals. Prior research involvement is weighted heavily.
7. A willingness to be interviewed in person or by phone by members of the department faculty, should that be requested.

Program Requirements

Credit Hours:

A minimum of 33 semester hours of graduate credit beyond the bachelor's degree is required for the MS degree in Psychology, and a minimum of 80 semester hours of graduate credit beyond the bachelor's degree is required for the PhD degree in Psychology. All work for graduate credit must be approved by, and must be completed at a level of performance satisfactory to the graduate faculty of the department. Students also may take coursework for degree credit outside the department with program approval.

Transfer Credit:

Students with graduate credits earned at another institution, upon matriculation at The University of Memphis, may petition to have these credits applied toward the total number of hours required to earn their degree at The University of Memphis and to use transfer credits as substitutes for specific courses required for the degree. Decisions about such substitutions are made by the psychology department Graduate Coordinator. The number of transfer credits accepted as substitutions for specific courses varies by degree program. Substitutions are not granted for any of the Clinical Psychology program's core curriculum.

Enrollment:

MS/ PhD degree candidates are expected to carry a minimum of 9 credits per semester and to devote full time during their enrollment to pursuit of degree-related activities.

Research:

All MS/PhD degree students are expected to be active in research collaboratively with members of the department faculty each semester they are enrolled.

Master's Thesis and Comprehensive Examination:

Each PhD student is expected to complete an independent research project, culminating in a master's thesis. The thesis is intended to be a demonstration of the student's ability to plan, organize, conduct, and report a research/scholarly project. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Only 3 hours of thesis credit (PSYC 7996) can count toward the degree. Upon completion of the thesis, the student takes an oral examination that assesses not only mastery of the thesis topic but also broader awareness of the theoretical and empirical issues in contemporary psychology. This oral examination serves as the MS comprehensive examination.

Second Milestone Project:

After completing the requirements of the master's thesis, all PhD students will complete a second milestone, usually in the third year of graduate work, which varies by graduate program in Psychology. Students in the Experimental Psychology PhD program can satisfy this requirement with a (a) a Specialty Examination;(b) a Major Area Paper (MAP); (c) a grant proposal with the student as Principal Investigator submitted for review; or (d) an empirical manuscript submitted for publication. All alternatives require committees (three faculty members), proposal defenses, and final defenses.

Comprehensive Educational Requirements:

All MS/PhD students are required to complete

All MS/PhD students are required to complete PSYC 7301/PSYC 8301, and PSYC 7302/PSYC 8302 during the first two years. With permission of the Major Professor and Graduate Coordinator, students may substitute PSYC 7303/PSYC 8303 for PSYC 7302/PSYC 8302 as their required course. Clinical Psychology and School Psychology MS/PhD students are required to complete PSYC 7000/PSYC 8000. Also, for both semesters in the first year, all MS/PhD students must attend weekly colloquium series to acquaint them with issues of research and professional ethics and professional opportunities in the department and in the discipline.

PSYC 7301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

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(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

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(3) Addresses application of psychological principles to promote coping with medical disability and optimal healing; diagnostic interviewing and medical consulting skills emphasized; psychological and cognitive impact on various medical diseases and disorders reviewed; biological bases of behavior emphasized. Restricted by Program or by Permit.

PSYC 7701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

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PSYC 7705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

PSYC 8705 - Neuropsychopharmacology

(3) Overview of basic principles of neuropharmacology and contemporary issues in clinical psychopharmacology; introduces principles of pharmacokinetics and dynamics, drug-receptor pharmacology, neuroanalytical methodology, and chemical neuroanatomy of the brain; culminates with overviews of contemporary drug treatment strategies for a range of cognitive, pathological, and neurological disorders, including substance abuse.

Cognitive-Affective Bases of Behavior:

PSYC 7208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 8208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 7211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

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PSYC 7222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

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(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 7407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 8407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

Social Bases of Behavior:

PSYC 7215 - Organizational Psyc

(3) The course deals with the major organizational determinants of individual and group behavior and performance. The characteristics of organization structure and climate are explored from both a classical and a contemporary viewpoint. Organization change and development theories are examined plus the major ancillary theoretical positions

on leadership, individual and group performance, behavior modification, selection and training. PREREQUISITE(S): Permission of instructor.

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(3) The course deals with the major organizational determinants of individual and group behavior and performance. The characteristics of organization structure and climate are explored from both a classical and a contemporary viewpoint. Organization change and development theories are examined plus the major ancillary theoretical positions on leadership, individual and group performance, behavior modification, selection and training. PREREQUISITE(S): Permission of instructor.

PSYC 7217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

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PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

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PSYC 7220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

PSYC 8220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

Individual Bases of Behavior:

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

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PSYC 7412 - Psychopathology

(3) Survey of the manifestations of abnormal behavior and psychological processes; detailed analysis of clinical and experimental literature concerning psychological and psychiatric disorders and their etiology. Historical principles are emphasized. Restricted by Program or by Permit.

PSYC 8412 - Psychopathology

(3) Survey of the manifestations of abnormal behavior and psychological processes; detailed analysis of clinical and experimental literature concerning psychological and psychiatric disorders and their etiology. Historical principles are emphasized. Restricted by Program or by Permit.

PSYC 7416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

PSYC 8416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is

placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

PSYC 7420 - Personal Construct Thry

(3) In-depth seminar on personal construct theory, a cognitively oriented theory of personality stemming from the work of George Kelly. Philosophical assumptions and basic theory; use of repertory grid technique and its application to research on such topics as cognitive complexity, development, interpersonal relationships, psychopathology, and psychotherapy. Restricted by Program or by Permit.

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PSYC 7516 - Issues Psychothrpy Rsch

(3) Research evidence pertaining to basic questions about psychotherapy and its effectiveness; classic contributions and current research findings.

PSYC 8516 - Issues Psychothrpy Rsch

(3) Research evidence pertaining to basic questions about psychotherapy and its effectiveness; classic contributions and current research findings.

Dissertation and Final Examination:

The dissertation is viewed as the capstone of the student's academic training, reflecting the student's capacity for independent research. Dissertation credit hours (PSYC 9000) must be taken for a minimum of 6 hours and can be taken for a maximum of 9 credit hours. Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before beginning to write. Upon completion of an independent written dissertation research project acceptable to the faculty, each student will take a final oral examination oriented toward, but not exclusively on, the student's dissertation research and major area of specialization.

PSYC 9000 - Dissertation

(1-9) Independent research for Doctor of Philosophy degree. Application for writing a dissertation must be filled out on an approved form after consultation with the major professor and filed with the Graduate School. Only 9 hours may be counted toward degree requirements. Student must be enrolled in this course during the semester in which the student expects to graduate. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

School Psychology:

Students in the School Psychology doctoral program must meet these additional requirements:

Additional Courses:

Students must complete PSYC 7416/PSYC 8416, PSYC 7800/PSYC 8800, PSYC 7802/PSYC 8802, PSYC 7803/PSYC 8803, PSYC 7804/PSYC 8804, PSYC 7805/PSYC 8805, PSYC 7806/PSYC 8806, LEAD 6000, EDPR 7151/EDPR 8151, SPED 7000/8000, LITL 7542/LITL 8542, and COUN 7750/COUN 8750 or PSYC 7434/PSYC 8434 (Clinical Psychotherapies: Appreciating Our Differences).

PSYC 7416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

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PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

PSYC 8800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

PSYC 7802 - Child Disability/Family

(3) An overview of childhood disability and family considerations applied to psychological services in school and agency settings; agency and family visitations provide experiential learning in addition to theory and research. PREREQUISITE(S): Course on characteristics of exceptional children or permission of instructor.

PSYC 8802 - Child Disability/Family

(3) An overview of childhood disability and family considerations applied to psychological services in school and agency settings; agency and family visitations provide experiential learning in addition to theory and research. PREREQUISITE(S): Course on characteristics of exceptional children or permission of instructor.

PSYC 7803 - Psych Ed Assessmnt I

(3) Critical analysis of intellectual assessment including skill development in administration, scoring, and interpretation of major individual tests of intelligence; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit.

PSYC 8803 - Psych Ed Assessmnt I

(3) Critical analysis of intellectual assessment including skill development in administration, scoring, and interpretation of major individual tests of intelligence; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit.

PSYC 7804 - Psych Ed Assessmnt II

(3) Critical analysis of personality assessment including skill development in administration, scoring, and interpretation of major personality assessment techniques; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit. PREREQUISITE(S): School psychology students must have a grade of 3.0 or higher in PSYC 7803.

PSYC 8804 - Psych Ed Assessmnt II

(3) Critical analysis of personality assessment including skill development in administration, scoring, and interpretation of major personality assessment techniques; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit. PREREQUISITE(S): School psychology students must have a grade of 3.0 or higher in PSYC 7803.

PSYC 7805 - Psych Consultation

(3) This course teaches the theory and skills needed for providing consultation to students and families in educational and clinical settings; focusing on an ecological, problem-centered model, content will include factors influencing the consultation process at the individual, group, and system level. Restricted by Program or by Permit. PREREQUISITE(S): School psychology students must have a grade of 3.0 or higher in PSYC 7803 and PSYC 7804.

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PSYC 7806 - Sch Psych Interventions

(3) Comprehensive review of psychosocial interventions for use with children, adolescents, and their families and educators; counseling theories; crisis response; dual emphasis on empirically-validated interventions and on the practical application of skills in educational and clinical settings. Restricted by Program or by Permit. PREREQUISITE(S): School Psychology students must have a grade of 3.0 or higher in PSYC 7803 and PSYC 7804.

PSYC 8806 - Sch Psych Interventions

(3) Comprehensive review of psychosocial interventions for use with children, adolescents, and their families and educators; counseling theories; crisis response; dual emphasis on empirically-validated interventions and on the practical application of skills in educational and clinical settings. Restricted by Program or by Permit. PREREQUISITE(S): School Psychology students must have a grade of 3.0 or higher in PSYC 7803 and PSYC 7804.

LEAD 6000 - Educ/Schl/Am Society

(3) (EDFD 7003-8003) Interdisciplinary study of educational policies and practices in American society; role and function of the school and the teacher; analysis of major problems and issues facing contemporary public education.

Five hours of school visitation required. (Fulfills foundations requirement for graduate students seeking teacher licensure.)

EDPR 7151 - Individual Differences **

(3) (EDPS 7151-8151) Theoretical foundations of instructional models designed to optimize student learning; topics include theories of intelligence, theories of learning, learning styles, gender differences, cultural differences, tracking and ability grouping, assessment, response to intervention, and the use of technology. All of these topics are explored as they relate to individual differences in learning.

EDPR 8151 - Individual Differences

(3) (EDPS 7151-8151) Theoretical foundations of instructional models designed to optimize student learning; topics include theories of intelligence, theories of learning, learning styles, gender differences, cultural differences, tracking and ability grouping, assessment, response to intervention, and the use of technology. All of these topics are explored as they relate to individual differences in learning.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

- SPED 8000

LITL 7542 - Alt Proced Reading Prob

(3) Application of differentiated instruction within a clinical setting to meet the needs of the struggling literacy learner. PREREQUISITE(S): LITL 7540 and LITL 7541 or permission of instructor.

LITL 8542 - Alt Proced Reading Prob

(3) Application of differentiated instruction within a clinical setting to meet the needs of the struggling literacy learner. PREREQUISITE(S): LITL 7540 and LITL 7541 or permission of instructor.

COUN 7750 - Multicultural Counseling

(3) (8784) (8784). Theory and research on individual and group multicultural counseling with particular attention to ethnic and racial sectors of society in the US. Grades of S, U, or IP will be given.

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or

PSYC 7434 - Clin Psychotherapies

(3) In-depth study of methods of psychotherapy and intervention strategies, their basic assumptions, spheres of applicability, and typical outcomes. Therapeutic approach covered will depend upon the particular instructor. May be repeated for maximum of 20 credits with change in topic. May be repeated for maximum of 20 credits with change in topic. Restricted by Program or by Permit.

PSYC 8434 - Clin Psychotherapies

(3) In-depth study of methods of psychotherapy and intervention strategies, their basic assumptions, spheres of applicability, and typical outcomes. Therapeutic approach covered will depend upon the particular instructor. May be repeated for maximum of 20 credits with change in topic. May be repeated for maximum of 20 credits with change in topic. Restricted by Program or by Permit.

Subspecialization:

Students must complete up to 12 hours of elective courses in an area of subspecialization determined in consultation with the major professor.

Practica:

Students must complete PSYC 7614/PSYC 8614 (6 hours) and PSYC 8809 (6 hours) while in practicum placements.

PSYC 7614 - Prac School Psyc

(3) Supervised experience in the application of psychological procedures in educational and clinical settings. A minimum of two practica are required. First practicum requires grades of 3.0 or better in PSYC 7803 and PSYC 7804; second requires 3.0 or better in PSYC 7805 and PSYC 7806, and S in first practicum. May be repeated for a maximum of 12 credits. Restricted by Program or by Permit. Grades of S, U, or IP will be given.

PSYC 8614 - Prac School Psyc

(3) Supervised experience in the application of psychological procedures in educational and clinical settings. A minimum of two practica are required. First practicum requires grades of 3.0 or better in PSYC 7803 and PSYC 7804; second requires 3.0 or better in PSYC 7805 and PSYC 7806, and S in first practicum. May be repeated for a maximum of 12 credits. Restricted by Program or by Permit. Grades of S, U, or IP will be given.

PSYC 8809 - Adv Sch Psych Practicum

(3) Applied experience utilizing both direct and indirect school psychological services and supervision; students will assume the role of case manager providing comprehensive services for multiple clients; students will also be expected to supervise students in the beginning intervention practicum. Restricted by Program or by Permit. Grades of S, U, or IP will be given.

Internship:

Students must complete PSYC 8999 (6 hours) while engaged in a full-time, one-year internship in an agency approved by the program director. Permission must be secured before making application for internship. To be approved, the School Psychology faculty must judge the student to be academically and clinically ready for the internship. Students must successfully defend the dissertation proposal by the end of the spring semester of the year in which they intend to go on internship.

PSYC 8999 - Predoctoral Internship

(0) Psychology majors may not use this course to fulfill degree requirements.Restricted by Program or by Permit. Restricted by Program or by Permit.

Social and Behavioral Sciences, (PhD)

Doctor of Philosophy (PhD) Program

Satish Kedia, PhD
Professor and Graduate Program Coordinator
205 Robison Hall
901.678.1433

Email: skkedia@memphis.edu

The PhD degree in Social and Behavioral Sciences is the highest academic degree for individuals planning to pursue scholarly careers in this discipline. This program is designed for those who intend to teach and conduct original research utilizing rigorous scientific theories and methods to understand and influence the social and behavioral determinants of population health risk factors and outcomes. Graduates of the program are prepared to conduct innovative, interdisciplinary, and translational research in community settings with an emphasis on vulnerable populations, and to design, implement, administer, and evaluate public health interventions and policies. The program will emphasize urban health and health disparities issues in Tennessee and in the Mid-South region.

Program Admission

A research-based master's degree in a health-related or social/behavioral field is required for admission. Applicants who possess professional master's degrees (e.g., MPH) will be considered if they have appropriate research experience, such as having completed a thesis during master's training, or being employed in a professional research position. Applicants must show potential for further study by having maintained a GPA of at least a 3.0 average in their master's-level coursework. An acceptable, competitive score on the Graduate Record Examination (GRE) in general examination is required. Applicants already holding a doctoral degree or its professional equivalent may be exempted from the GRE requirement. Other professional school standardized test scores (MCAT, DAT, or LSAT,) may be substituted for the GRE by applicants who are working toward or who have already earned post-baccalaureate degrees in medicine, dentistry, management, or law from a United States accredited academic institution. Applicants whose native language is not English will be required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL IBT) or the International English Language Testing System (IELTS).

Letters of recommendation from three individuals (at least two letters from former professors or instructors but fewer may be acceptable in extenuating circumstances) familiar with the applicant's academic background or experience in public health related issues, specifying in detail the applicant's capabilities for graduate study and for future performance as a public health scholar, are required. Applicants must also submit a personal statement of purpose of approximately 750 to 1000 words indicating his/her present interests and career goals, including how the PhD in Social and Behavioral Sciences will prepare the candidate to achieve these goals.

Materials submitted will be reviewed by the faculty admissions committee. Admissions decisions are made based on the overall quality of the applicant's scholarship and academic ability (GPAs, GRE scores, undergraduate and graduate coursework completed, research conducted, relevant work experience, and recommendations) as well as the applicant's "fit" for the program in terms of academic background, research interests, and career goals. Some applicants may be invited for a face-to-face or telephone interview with representatives of the Admissions Committee.

Program Prerequisites

All doctoral students are required to fulfill the following pre-requisites (9 credit hours) or document equivalent coursework. These three courses will not count toward the required 54 hours of doctoral study:

PUBH 8150 - Biostatistical Methods I

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 8170 - Epidemiology in PUBH

(3) This doctoral level course provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies.

PUBH 8160 - Soc/Behav Science Principles

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities.

Program Requirements

Credit Hours:

A minimum of 54 semester hours of graduate credit beyond the master's degree is required for the PhD in Social and Behavioral Sciences. All work for doctoral credit must be approved by, and must be completed at a level of performance satisfactory to, the graduate faculty of the Division of Social and Behavioral Sciences. Students also may take coursework for degree credit outside the School of Public Health with advisor approval.

Transfer Credit:

Graduate School regulations must be followed regarding accepting academic credits from another institution. Courses proposed for transfer credit must meet the following two requirements. (a) The University of Memphis Board of Trustees requires a minimum of 750 contact minutes for each semester credit (2250 for a 3-hour course). (b) The Tennessee Conference of Graduate Schools requires a minimum of 3 hours of class work per week for 3 hours of credit. Grades earned at another institution will not be computed in the University cumulative grade point average, nor will they be accepted for transfer, unless they are "B" (3.0) or better. No credit will be transferred unless it meets the approval of the major advisor and program graduate coordinator.

Enrollment:

Full-time students are expected to carry a minimum of 9 credits per semester, and to devote full time during their enrollment to the pursuit of degree-related activities. Full-time students with graduate assistantships are required to enroll for 9 credits each semester. Part-time students are expected to carry a minimum of 6 credits per semester, unless permission is granted from the advisor for a reduced course load.

Research:

All doctoral students are expected to be active in research collaboratively with members of the Division faculty each semester they are enrolled. Students may receive credit for research involvement by enrolling in PUBH 8800 - Guided Research in PUBH.

Comprehensive Examination:

Upon completion of required coursework and prior to enrolling in dissertation hours (PUBH 9000), the student must successfully complete a written and oral comprehensive examination. The examination will assess mastery of areas covered in the student's program. The content of the examination for each student will consist of core competencies in public health. The student will be given the following options for the written component of the comprehensive exam: 1. systematic review paper, suitable for submission to a journal; 2. empirical manuscript, appropriate for submission to a journal; and 3. submission of a grant with student as primary investigator in the form of a NIH F31 or a NIH R36 appllication. Other grant mechanisms may be approved at the discretion of the student's Comprehensive Exam committee. During the oral component of the Comprehensive Exam, mastery of the subject area will be further assessed through a question/answer session with the committee. The questions will consist of both materials covered in the written component of the exam and general knowledge in the field of public health, including methods, theory, and subject matter pertaining to the student's research area. The student's advisory committee will be responsible for organizing and evaluating the comprehensive examination.

Dissertation:

To fulfill the requirements for the PhD in Social and Behavioral Sciences, the student must write and defend a dissertation. The dissertation must adhere to the format outlined by the Graduate School. The dissertation topic will be determined by the student in consultation with the advisor with input from the advisory committee.

Residency Requirements:

The last thirty semester hours of credit for the doctoral degree must be earned at the University of Memphis. Only the number of dissertation hours accepted by the program toward the degree (9) will be accepted as part of the last 30 hours.

Curriculum Requirements:

The SBS doctoral program is a 54 semester hour degree program, with 45 hours of graduate coursework beyond the master's degree, and 9 hours of PUBH 9000 for dissertation. Students are required to take 12 credit hours of SBS core courses, 3 credit hours of doctoral seminar, 12 credit hours of research methods courses, 6 credit hours of biostatistics, 12 credit hours of elective courses, and 9 credit hours of dissertation.

Social and Behavioral Sciences Core (12 credit hours)

PUBH 8130 - Social Determinants of Health

(3) This course focuses on the systematic study of the economic and social conditions which determine health. It examines the social gradient in health and explores how social influences such as poverty, social capital, job security, neighborhood characteristics, social support, transportation, discrimination, and stress affect health and longevity. It also explores structural interventions in shaping social environments that are conducive to better health. PRE-REQUISITE: PUBH 7160/8160 OR PERMISSION OF INSTRUCTOR

PUBH 8132 - Health Program Evaluation

(3) This graduate seminar provides qualitative and quantitative perspectives on health program evaluation. The course examines various models, theories, methods, and processes in evaluating community and public health programs. It is a practice-oriented course and facilitates students developing applied skills in the field of health program evaluation.

PUBH 8340 - Behavioral Intervention Develp

(3) This course provides training in the development of theory-based behavioral interventions that are relevant to public health research and practice. Focuses on community and population level strategies and methods.

PUBH 8161 - Health Behavior Theories

(3) This course provides a multidisciplinary theoretical approach to the study of health and health behavior. Emphasis is on the use of psychosocial theories in health-related practice, policy-making, and research. Other theoretical perspectives, such as the ecological and biopsychosocial models, are addressed in order to integrate these theoretical perspectives.

Doctoral Seminar Core (3 credit hours)

PUBH 8901 - Doctoral Professional Dev Sem

(3) This is one of two required seminar courses for all doctoral students in the School of Public Health. The seminar will address a variety of professional and personal issues that are vital to success as a doctoral student and public health professional. Topics include developing positive mentor/mentee relationships, time management, manuscript and grant writing, reviewing otherâ€™s scientific work, delivering poster and oral presentations, teaching skills, preparing curriculum vitae, networking and job negotiation/survival skills. PRE-REQUISITE: Enrollment as a doctoral student in the School of Public Health. PREREQUISITE(S): SCMS 3711 or SCMS 7020 .

Research Methods Core (12 credit hours)

Quantitative Methods Course (3 credit hours) – Select one

PUBH 8604 - Res Methods in Soc/Behav Sci

(3) This course provides a comprehensive introduction to step-by-step research process, including research design, data collection, interpretation, and guidelines for writing and presenting results in social and behavioral sciences. It covers a range of research methods, including observational techniques, survey research, focus groups, and other types of unstructured data collection methods. Emphasis is placed on understanding the strengths, weaknesses, and underlying logic of different procedures for obtaining empirical evidence for rigorous population health research.

PSYC 8301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

Quantitative Elective Courses (6 credit hours) – Select two

PUBH 8104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 8141 - Epidemiologic Survey Method

(3) This course provides students in Public Health with the basic elements in designing and performing survey research. The course describes the initial steps in formulating and focusing the research question and proceeds to the key steps in performing survey research, i.e., identifying the target population, obtaining an appropriate sample, designing the survey instrument and implementing it.

PUBH 8172 - Epidemiology PUBH II

(3) This course is designed for epidemiology majors and other students requiring a more thorough knowledge of the concepts and methods used in epidemiological research. This course stresses analytical study designs and etiologic research. Topics include exposure-disease associations, threats to internal validity and their control, and valid interpretation of study results, including concepts of association, causality, and effect modification. PRE-REQUISITES: PUBH 7150 AND PUBH 7170, OR PERMISSION OF INSTRUCTOR PREREQUISITE(S): Permission of instructor.

PUBH 8174 - Epidemiology PUBH III

(3) This course is designed for doctoral and advanced master's degree students. The course focuses on the nature of causality in biological systems and the methods by which it may be determined. The course also focuses on extracting, organizing and interpreting various evidence to support public health and medical practices. Both observational and experimental study designs are considered. Landmark studies from the epidemiologic literature will be extensively used to illustrate these issues. PRE-REQUISITES: PUBH 7150, PUBH 7170, AND PUBH 7172, OR PERMISSION OF INSTRUCTOR.

PUBH 8450 - Randomized Clinical Trials

(3) The purpose of this course is to provide students with a thorough grounding in the conduct of randomized clinical trials (RCTs) including design, management, evaluation, and resource acquisition. Emphasis is placed on RCTs that are relevant to public health research and practice. PREREQUISITE(S): MKTG 3010 and 4901 (or equivalents); or MKTG 7060; or permission of instructor.

Qualitative Courses (3 credit hours) – Select one

PUBH 8334 - Comm Based Part Resrch Mthds

(3) This course familiarizes students with key historical underpinnings of community based participatory research (CBPR), principles of CBPR practice, and methodological considerations in building community partnerships; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also address cultural competence; working with diverse populations; ethical considerations; as well as funding and Institutional Review Board issues.

PUBH 8347 - Qualitative Mtds Hlth Research

(3) This course provides an overview of qualitative research methods commonly used in health related research, including the basic skills needed for data collection and analysis and an understanding of philosophical and epistemological roots. Students will learn to develop and critique a qualitative research proposal in terms of design, technique, analysis and interpretation. PREREQUISITE(S): Permission of instructor.

Biostatistics Core (6 credit hours)

Biostatistics II (3 credit hours)

PUBH 8152 - Biostatistical Methods II

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

Select one additional course:

PSYC 8302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PUBH 8104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PSYC 8304 - Meas Th & Psychomet

(3) Measurement theory and psycho-metrics involved in the construction and evaluation of psychological measurement instruments will be stressed. Particular emphasis will be placed on theory and techniques of psychological measurement, scale and inventory construction, reliability, validity, evaluation of measurement quality, classical and contemporary measurement theory, and standardization. Restricted by program or permit. PREREQUISITE(S): PSYC 7301 and PSYC 7302 or equivalents.

PUBH 8305 - Quant Meth Review Rsch

(3) (same as PSYC 7305-8305). This course focuses on quantitative strategies for reviewing research findings in the social sciences. These quantitative review techniques (often referred to as â€œmeta-analysisâ€) can help investigators summarize and resolve conflicts in past research. The course should be particularly useful to graduate students who are planning to conduct literature review as part of a research project, masterâ€™s thesis, or doctoral dissertation. PRE-REQUISITES: Students enrolled in this course are expected to have completed PSYC 7302/8302 or an equivalent graduate-level statistics course, and to have a basic understanding of the analysis of variance and multiple regression.

PUBH 8306 - Linear Struct Modeling

(3) (PSYC 7306-8306). The purpose of this course is to provide students with an introduction to structural equation modeling (SEM). An emphasis will be placed on helping students use/apply SEM methodology to answer research questions in their areas of interest. After completing this course, students should be able to (1) conduct structural equation analyses using SAS, AMOS, and Mplus, (2) communicate results of structural equation analyses in both written and verbal form, (3) evaluate strengths and limitations of studies employing SEM techniques, and (4) provide consultation to colleagues on SEM related issues. PRE-REQUISITES: PUBH 7152 OR EQUIVALENT. PREREQUISITE(S): MKTG 3010 and 4901 (or equivalents); or MKTG 7060; or permission of instructor.

PUBH 8308 - Appl Multivariate Stat

(3) (PSYC 7308-8308). Covers multivariate analysis of variance (MANOVA) with independent designs and extensions to repeated measures and ANOVA. Goals include review of conceptual bases, learning SPSS and SAS procedures, learning analysis of simple and complex designs, and learning special post-hoc procedures. PRE-REQUISITES: PUBH 7152/8152 OR EQUIVALENT. May be repeated for a maximum of 12 credit hours

PUBH 8310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310.

PUBH 8311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

Elective Courses (12 Credit hours)

Public Health Elective Courses (6 credit hours)

PUBH 8140 - Epidemiology Chronic Disease

(3) This course is designed to provide graduate students with knowledge on major chronic diseases and skill on applying various epidemiologic methods to design and conduct epidemiological studies on chronic diseases. The course covers selected topics in chronic disease with critical analysis of the current epidemiologic literature.

PUBH 8333 - Addictive Behaviors

(3) This course provides public health students with an introduction to the historical, clinical, epidemiological, and public policy issues related to addictive behaviors, including alcohol, tobacco, illicit drugs, and gambling. Students will be exposed to a variety of methodological approaches used by social and behavioral scientists to study addictive behaviors, including ethnography, surveys, geographical information systems, and clinical trials.

PUBH 8335 - Struct/Environ Iss/Urban Comm

(3) This course focuses on concepts of risk and burden of disease in urban communities. It examines contemporary issues and challenges of the social, cultural, built, and physical environments of urban communities. Key topics include public health and urban health; roots of health inequality; risk and burden of disearse; stress, socio-economic and structural influences on health; and community-based approaches (CBPR) to address public health concerns in urban communities.

PUBH 8336 - Women's Health

(3) This course examines topics in women's health in the United States; the programs, services, and policies that affect women's health; and methodological issues in research about women's health. the epidemiology, measurement and interpretation of these factors, and how these factors can be translated into interventions, programs, and policy, will be of major interest.

PUBH 8337 - Public Health Nutrition

(3) This course examines dietary intake and nutrition behaviors from a public health perspective. Topics covered include dietary intake measurement for the monitoring of population health; socioecological factors impacting eating behaviors from infancy into adulthood; and the role of diet in the development of diseases with public health implications (e.g., obesity, malnutrition).3

PUBH 8338 - Critical Issues in Global Hlth

(3) This course focuses on critical issues in global health emphasizing the multidisciplinary approach to understanding global health problems as they occur within and across borders. Concepts include the interplay between global stressors such as population, urbanization, economics, environment, and war; and their effects on the spread of infectious and chronic diseases, nutrition, and environmental health. PREREQUISITE(S): Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of instructor

PUBH 8341 - Physical Activity/Public Hlth

(3) This course is an overview of physical activity programming and interventions within the public health framework. Students will study issues germane to physical activity and public health; acquire knowledge of current research, best practices, guidelines and recommendations for physical activity; and develop skills integral to the design, implementation, and evaluation of public health programs that are intended to promote physical activity in specific populations.

PUBH 8342 - Epidemiology Min/Ethnic Pop

(3) This course provides an evidence-based approach to the study of the epidemiology and heatlh disparities of racial and ethnic groups in the U.S. Emphasis is placed on historical events and immigration policies that have contributed to the prominent size of these populations, identification of data sources to describe this demographic imperative and health status, and on socio-political, cultural, and religious influences that inform public policy on health disparities.

PUBH 8343 - Tobacco Use:Cause,Conseq,Ctrl

(3) 3

PUBH 8345 - Health Literacy

(3) (Same as COMM 7345-8345) This course will introduce students to the issues of health literacy from a public health perpective. We will explore the impact of health literacy on access to care, vulnerable populations, management of chronic illness, mental health, healthcare costs, and several other areas. PREREQUISITE(S): Permission of instructor

PUBH 8346 - Public Mental Health

(3) This course provides an overview of mental health issues from a public health perspective. Topics include differentiating mental health from mental illness, socio-economic disparities in mental illness, community-based services for the diagnosis, treatment, and prevention of prevalent mental illnesses, and major mental heatlh policy issues in the United States.

PUBH 8400 - Special Problems

(3) Independent investigation of a research problem or directed readings, in a selected area of public health chosen in consultation with the instructor. Only six hours of credit may be applied to a degree. May be repeated for a maximum of 6 credits.

PUBH 8447 - Public Health Genomics

(3) This course introduces students to the field of public health genomics through providing an overview of the field and evaluating challenges associated with the translation of genomic information into public health practices. The course materials will be presented on selected topics including: historical background of the field, genetic testing and counseling, communication of genomic information to public, using genomic information in disease prevention and health promotion efforts, genomic information in health care practices, ethical issues, genetics and race/health disparities, and implications of genomic information for communities.

PUBH 8800 - Guided Research in PUBH

(1-6) Students will conduct public health-related research under the mentorship of a faculty member.

Note:

* Up to 3 credit hours of PUBH 8800 may be applied toward the Electives requirement.

Other Elective Courses (6 credit hours)

EDPR 8109 - Infant Development

(3) (EDPS 7109-8109) Infancy and toddlerhood from developmental research issues perspective; empirical studies and contemporary issues relating to factors influencing infant development.

EDPR 8110 - Erly Chldhd Dvlpmnt

(3) Introduction to contemporary theories, research and issues in young children's physical, cognitive, social, and emotional development with an emphasis on the cultural nature of development.

EDPR 8165 - Social Devlpmnt/Child

(3) Current theory and research on children's social development, with an emphasis on enculturation and socialization with parents, teachers, siblings, and peers in childhood.

ESCI 8613 - GIS and Human Health

(3) Fundamental concepts in using GIS to map and analyze geographical distributions of populations at risk, health outcomes, and risk factors; to explore associations between risk factors and health outcomes; and to address health problems.

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

PSYC 8416 - Child Psychopathology

(3) A survey of the major theoretical formulations of childhood disorders, including learning, developmental, psychoanalytic, and family systems theories. Organic, familial, and sociocultural influences are discussed. Emphasis is placed on basic research that contributes to our understanding of these difficulties. Traditional approaches to intervention are reviewed along with family treatment.

PSYC 8506 - Sem Clinical Psyc

(3)

SOCI 8851 - Medical Sociology

(3) Sociological understandings of society, demographic processes, organizations, behavior, and health. May be repeated for a maximum of 9 credits.

Dissertation (9 credit hours at the University of Memphis)

PUBH 9000 - Dissertation

Questions about the SBS PhD Program curriculum and degree requirements:

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Social and Behavioral Sciences Doctoral Program
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School Psychology, (EdS)

MA and EdS Degree

This program is offered collaboratively with the College of Education and coursework from both areas is required. Students entering the program must complete both the MA and the EdS degrees, including an internship of one school year, in order to obtain an endorsement for licensure. The EdS degree is an advanced sequence in the specialty and is to be pursued only by persons who have completed the MA degree or comparable degree with a concentration in school psychology, or who already hold school psychology credentials. The program is accredited by the Council for the Accreditation of Educator Preparation (CAEP), and holds full approval from the National Association of School Psychologists (NASP)/CAEP. It is also formally approved by the Tennessee State Department of Education and leads to that agency's license in school psychology.

The overall goal of the MA/EdS program is that students will successfully complete the content domain-related requirements of the program, obtain credentialing for school-based practice from the Tennessee State Board of Education or comparable authority in other states, and become Nationally Certified School Psychologists (NCSP).

Program objectives are: (1) understanding of the nature of educational settings and ability to work cooperatively and effectively with parents, school personnel, and other professionals; (2) broad expertise in assessment and intervention at the individual, group, and system level; and (3) development of research and evaluation skills, including data analysis and oral and written communication of research.

Program Admission and Prerequisites

Enrollment in the program is limited. All application information must have been received by June 15 for an applicant to be considered for admission to the MA and EdS program in School Psychology. Applications will be reviewed as they are completed and applicants are encouraged to complete the application well in advance of the deadline. The following items are required for consideration for admission:

1. An undergraduate overall grade point average of 3.00/4.00. Applicants with an undergraduate GPA below this minimal level are admitted only if other supporting data are exceptional.
2. GRE scores (Verbal, Quantitative, and Written Analytical).
3. Letters of recommendation from at least three persons (professional educators, psychologists, and/or employers) familiar with the applicant's academic background, aptitude for graduate work in school psychology, and interest in working with school-age children in school settings.
4. Undergraduate preparation in Psychology and/or Education. It is strongly recommended that applicants have at least 18 undergraduate hours in Psychology and/or Education, with preparation in the psychology of learning, psychological appraisal/measurement, human growth and development, and foundations of education.
5. The program is pursued on a full-time basis and students enroll for 12 hours each semester. Enrolling for fewer hours is done with the permission of the program director.

Program Requirements—EdS Degree (minimum 30 hours)

Psychology courses (9 hours):

PSYC 7301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

or

- Research elective

PSYC 7614 - Prac School Psyc

(3) Supervised experience in the application of psychological procedures in educational and clinical settings. A minimum of two practica are required. First practicum requires grades of 3.0 or better in PSYC 7803 and PSYC 7804; second requires 3.0 or better in PSYC 7805 and PSYC 7806, and S in first practicum. May be repeated for a maximum of 12 credits. Restricted by Program or by Permit. Grades of S, U, or IP will be given.

PSYC 8807 - Academic Interventions

(3) Comprehensive review of evidenced-based academic interventions in the areas of reading, writing, and mathematics; theoretical foundations of literacy and mathematics; techniques to promote effective learning environments; collaboration with teachers and other educational professionals. Restricted by Program or by Permit

Education courses (15 hours):

LEAD 6000 - Educ/Schl/Am Society

(3) (EDFD 7003-8003) Interdisciplinary study of educational policies and practices in American society; role and function of the school and the teacher; analysis of major problems and issues facing contemporary public education. Five hours of school visitation required. (Fulfills foundations requirement for graduate students seeking teacher licensure.)

EDPR 7511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor.

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 7151 - Individual Differences **

(3) (EDPS 7151-8151) Theoretical foundations of instructional models designed to optimize student learning; topics include theories of intelligence, theories of learning, learning styles, gender differences, cultural differences, tracking and ability grouping, assessment, response to intervention, and the use of technology. All of these topics are explored as they relate to individual differences in learning.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

and two electives from COUN, EDPR, SPED.

School Psychology Internship

School Psychology Internship (PSYC 8812, 6-12 hours) is taken at or near the completion of other work.

PSYC 8812 - Intern: School Psyc

(3-6) Supervised field placement in school and/or community agency settings; requires a minimum of 1200 hours for the EdS, at least half of which must be in a school setting. Minimum of 6 hours or a maximum of 12 hours applied toward the degree. Restricted by Program or by Permit. PREREQUISITE(S): Permission of program director, grades of S in all previous practica. Doctoral program students complete PSYC 8999. Grades of S, U, or IP will be given.

Written examination

Biology, (Accelerated BS/MS)

Accelerated B.S./M.S. Program

This program allows outstanding undergraduates to begin coursework for the Master of Science with thesis in Biology during their senior year. Students are encouraged to begin planning to enter the accelerated B.S./M.S. program early in their undergraduate career, in consultation with their advisor in the Department of Biological Sciences. Undergraduates selected into this program begin a carefully tailored course of study allowing them to complete their B.S. degree while beginning research and coursework toward their M.S. To apply, students must have a minimum 3.25 grade point average and must submit two letters of recommendation and a copy of their transcript to the Department of Biological Sciences. Applications must be submitted by the middle of the junior year and must be sponsored by a graduate faculty member. Students must also apply to the Graduate School for combination senior status (nondegree), which allows them to take graduate courses in biology. To continue in the program past the B.S. students must apply for full admission into the Graduate School and into the Department of Biological Sciences M.S. program. Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs. Detailed program and application information is available in the Biology Advising and Resource Center.

Biomedical Engineering, (Accelerated BS/MS)

Accelerated BS/MS Program

This program allows outstanding undergraduates in biomedical engineering or an approved undergraduate discipline to begin the coursework for the Master of Science in Biomedical Engineering during their senior year. Students are encouraged to begin planning to enter the Accelerated BS/MS program early in their undergraduate career, in consultation with an advisor in the Department of Biomedical Engineering.

Working with the undergraduate and graduate academic coordinators, undergraduates selected into this program begin a carefully tailored course of study that will allow them to complete their BS degree while they also begin the coursework toward their MS

To apply, students must have a minimum 3.25 grade point average, and must submit two reference letters and a copy of their transcript to the Biomedical Engineering department. Each applicant will complete an interview with the graduate academic coordinator in biomedical engineering.

Students must also apply to the Graduate School for the accelerated BS/MS program, which allows them to take graduate courses in biomedical engineering. To continue in the program past the BS, students must apply for full admission into the Graduate School and into the Biomedical Engineering department's MS program.

Only in ABM programs, up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs. However, any graduate coursework will not apply to undergraduate GPA.

Civil Engineering, (Accelerated BS/MS)

Accelerated BS/MS Program

This program allows outstanding undergraduates to earn a bachelor's degree and master's degree in Civil Engineering in as little as five years by taking graduate-level technical electives that will count toward both degree programs. Specifically, students who are selected into this program can satisfy the undergraduate requirement of nine hours of technical electives by taking 6000-level courses that will then be counted toward their graduate degree program. However, any graduate coursework will not apply to the undergraduate GPA.

Students are encouraged to begin planning to enter the Accelerated B.S./M.S. program early in their undergraduate career in consultation with their advisor in the Department of Civil Engineering. Students with a minimum GPA of 3.25 may apply for the accelerated program once they have completed 15 credit-hours of 3000-level CIVL course work. In addition to an application form, students must have the recommendation of their undergraduate academic advisor and the concurrence of the department chair and graduate coordinator in the Department of Civil Engineering. In order to remain in the program, students must maintain a GPA of at least 3.25. To continue in the program past the B.S. degree, students must apply for full admission into the Graduate School and the Civil Engineering M.S. program.

Communication, (Accelerated BA/MA)

Accelerated B.A./M.A

This program allows outstanding undergraduates to begin the coursework for the Master of Arts in Communication during their senior year. Students must begin planning to enter the Accelerated B.A./M.A. program early in their undergraduate career, in consultation with their advisor in the Department of Communication.

Working with the undergraduate and graduate academic coordinators, undergraduates selected into this program begin a carefully tailored course of study which will allow them to complete their B.A. degree while they also begin the coursework toward their M.A.

To apply, students should have a minimum 3.25 grade point average. See departmental webpage for instructions on how to apply.

Up to 12 hours of graduate course work may be applied to both the undergraduate and graduate programs.At least 3 credit hours must be at the 7000 level.

Computer Engineering, (Accelerated BS/MS)

Accelerated BS/MS Program

This program allows outstanding undergraduates to begin the coursework for the Master of Science in Electrical or Computer Engineering during their senior year. Students are encouraged to begin planning to enter the Accelerated

BS/MS program early in their undergraduate career, in consultation with their advisor in the Department of Electrical and Computer Engineering. Working with the undergraduate and graduate academic coordinators, undergraduates, who are selected into this program, may choose EECE electives at the 6000 level that will allow them to complete their BS degree while also beginning the coursework toward their MS degree. However, any graduate coursework will not apply to the undergraduate GPA.

Students may apply for the program once they have completed one semester of junior course work. In order to remain in the program past the junior year, students must maintain a GPA of at least 3.25. Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs. To continue in the program past the BS, students must apply for full admission into the Graduate School and either the Electrical or Computer Engineering MS program during their senior year. Students that are eligible for the ABM program will have the GRE requirement waived.

Computer Science, (Accelerated BS/MS)

Accelerated B.S./M.S. Program

This program allows outstanding Majors in Computer Science to begin the coursework for the Master of Science in Computer Science while enrolled as undergraduates. Students are encouraged to consult their advisors and begin planning to enter the Accelerated B.S./M.S. program early in their undergraduate study. The 5-year program is designed to save both cost and time as it removes some typical requirements (e.g. taking the GRE exam) in a standard application for our M.S. program.

Applicants to the accelerated program must have met the following requirements:

- Complete COMP 1900, COMP 2150, COMP 2700, and at least two upper-division COMP courses by the end of the semester of application.
- Have a minimum 3.0 overall GPA, and a 3.6 GPA for COMP courses.

To be admitted to this program, students must submit a statement of purpose, two reference letters, a copy of their transcript to the Computer Science department office, and pass an interview with the graduate program coordinator in computer science.

The accelerated program allows up to 9 hours of graduate coursework to be applied to both the undergraduate and graduate programs. However, any graduate coursework will not apply to the undergraduate GPA.

To continue in the graduate program once the B.S. degree is completed, students must apply for full admission into the Graduate School and into the Computer Science department's M.S. program. The GRE requirement for graduate admission is waived for students in the accelerated program.

Economics, (Accelerated MA)

Master of Arts in Economics

The Department of Economics offers a graduate program leading to the Master of Arts degree. For program admissions, prerequisites, and degree requirements see the departmental listing in this section.

MA Degree Program

Program objectives are: (1) achievement of a solid foundation of knowledge in economic theory and economic analysis; (2) acquisition of an advanced level of knowledge in either applied economics or academic economics; (3)

acquisition of the quantitative skills to effectively address research problems and the ability to make significant professional contributions as a professional economist or within a functional area of business; and (4) ability to compete effectively for professional positions in the private or public sectors

Program Admission

1. Satisfactory performance on the Graduate Record Examination or the Graduate Management Admission Test.
2. Satisfactory undergraduate grade point average.

Program Prerequisites

At minimum, all students should have successfully completed at least one semester of calculus (MATH 1830, MATH 1910 or equivalent) and at least one semester of statistics (SCMS 2710, MATH 1530 or equivalent). It is suggested that prospective students also complete: a second semester of calculus (MATH 1920 or equivalent); courses in intermediate microeconomics (ECON 3310 or equivalent) and intermediate macroeconomics (ECON 3320 or equivalent); a course in matrix or linear algebra (MATH 3242 or equivalent).

Program Requirements

Each candidate has the choice of taking a written, comprehensive examination or writing a thesis at the end of course work. Regardless of which option is chosen, 18 hours of the student's course work must be devoted to the following: ECON 6810, ECON 7300, ECON 7310, ECON 7315 , ECON 7320, and ECON 7810.

1. Examination Option: Each candidate must complete a minimum of 33 semester hours of graduate course work, exclusive of MA program prerequisite courses and MBA Essential Foundations courses. The 33 hours must include a minimum of 21 hours of approved course work in Economics. The remaining 12 hours, with approval of the department graduate advisor, may be taken in collateral courses. At least 24 hours must be in courses designated for graduate students (7000 level or above). Each candidate must pass a written examination in economic theory. A maximum of two attempts within a year of the first attempt is permitted.
2. Thesis Option: Each candidate must complete a minimum of 30 semester hours of graduate course work, exclusive of MA program prerequisite courses, MBA Essential Foundations courses, and Thesis Hours. The 30 hours must include a minimum of 18 hours of approved course work in Economics. The remaining 12 hours, with approval of the department graduate advisor, may be taken in collateral courses. At least 21 hours must be in courses designated for graduate students (7000 level or above). Each student will register for at least 3 hours (and not more than 6 hours), write and defend a thesis under the guidance of a faculty committee. A student who fails to complete the thesis after having registered for the maximum degree credit allowable must register for thesis credit each academic semester until the thesis is completed. NOTE: Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Accelerated M.A. Program in Economics

This program permits outstanding undergraduate majors in Business Economics (B.B.A.) or Economics (B.A.) to begin coursework for the M.A. in Economics during their senior year. Students interested in this accelerated program are encouraged to begin planning for it early in their undergraduate careers, in consultation with both their undergraduate advisor and the M.A. Coordinator of the Department of Economics.

To be accepted into the Accelerated M.A. Program, students must have a grade point average of at least 3.25, and must submit two letters of reference and a copy of their transcript to the Department of Economics. Each applicant will also complete an interview with the M.A. Coordinator of the Department.

After being accepted into the program, the student will work closely with his or her undergraduate advisor and the M.A. Coordinator in order to develop a carefully tailored program of study so that he or she can begin work on the M.A. as they complete their undergraduate degree.

Students must also apply to the Graduate School for "combination status," which allows them to take graduate courses in Economics. To continue the Program once they have completed the B.B.A or B.A., students must apply for full admission into the Graduate School and into the M.A. Program in Economics.

Up to 9 hours of graduate coursework may be applied to both the Bachelor's and the M.A. degrees in Economics.

Electrical Engineering, (Accelerated BS/MS)

Accelerated BS/MS Program

This program allows outstanding undergraduates to begin the coursework for the Master of Science in Electrical or Computer Engineering during their senior year. Students are encouraged to begin planning to enter the Accelerated BS/MS program early in their undergraduate career, in consultation with their advisor in the Department of Electrical and Computer Engineering. Working with the undergraduate and graduate academic coordinators, undergraduates, who are selected into this program, may choose EECE electives at the 6000 level that will allow them to complete their BS degree while also beginning the coursework toward their MS degree. However, any graduate coursework will not apply to the undergraduate GPA.

Students may apply for the program once they have completed one semester of junior course work. In order to remain in the program past the junior year, students must maintain a GPA of at least 3.25. Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs. To continue in the program past the BS, students must apply for full admission into the Graduate School and either the Electrical or Computer Engineering MS program during their senior year. Students that are eligible for the ABM program will have the GRE requirement waived.

Engineering Technology (Accelerated BS/MS)

This program allows outstanding undergraduates to begin the coursework for the Master of Science in an engineering program during their senior year. Students are encouraged to begin planning to enter the Accelerated B.S./M.S. program early in their undergraduate career, in consultation with their advisor in their respective department.

Working with the undergraduate and graduate academic coordinators, undergraduates selected into this program begin a carefully tailored course of study which will allow them to complete their B.S. degree while they also begin the coursework toward their M.S.

To apply, students must have a minimum 3.25 grade point average and must submit two reference letters and a copy of their transcript to their respective engineering department. Each applicant will complete an interview with the graduate academic coordinator in their respective engineering department.

Students must also apply to the Graduate School for the accelerated B.S./M.S. program, which allows them to take graduate courses in their respective engineering department. To continue in the program past the B.S., students must apply for full admission into the Graduate School and into their respective engineering department's M.S. program.

Only in ABM programs, up to 9 hours of graduate coursework may be applied to both the undergraduate and graduate programs. However, any graduate coursework will not apply to undergraduate GPA.

English, (Accelerated BA/MA)

Accelerated BA/MA Program

This program allows outstanding undergraduates to begin the coursework for the Master of Arts in English during their junior or senior year. Students are encouraged to begin planning to enter the Accelerated BA/MA program early in their undergraduate career, in consultation with their advisor in the Department of English.

Working with the undergraduate and graduate academic coordinators, undergraduates selected into this program begin a carefully tailored course of study that will allow them to complete their BA degree while also begin the coursework toward their MA.

To apply, students should have a minimum 3.25 grade point average, and must submit two reference letters and a copy of their transcript to the English department. *Exceptions to the minimum GPA will be considered on a case-by-case basis.* Each applicant will complete an interview with the graduate coordinator in English.

Students must also apply to the Graduate School for "combination senior" status, which allows them to take graduate courses in English. To continue in the program past the B.A., students must apply for admission into the Graduate School.

Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs.

Health Studies - Exercise, Sport and Movement Sciences Concentration, (Accelerated BS/MS)

MS Degree Program

Program objectives are: (1) to recognize the diverse nature of subject matter embodied in the respective program disciplines; (2) to understand the research findings and theoretical constructs undergirding the corresponding disciplines within the health studies umbrella, including the development of specialized skills needed for systematic inquiry; (3) to understand the critical role of diversity in delivering inclusive health studies services; (4) to develop effective leadership skills; and (5) to understand and embrace ethical standards of the respective disciplines.

Admission Requirements

1. Prospective students must apply to both the Graduate School and the School of Health Studies. In both cases, the applicant must submit an official transcript for undergraduate and graduate studies. Additionally, as part of the application to the Graduate School, an official report of Graduate Record Examination (GRE) scores must be submitted except:
    1. Health Promotion (HPRO): An applicant seeking admission to the HPRO concentration is not required to submit GRE scores. However, official GRE or other standardized test scores may be requested or submitted to support an application.
    2. Physical Education Teacher Education (PETE): An applicant seeking admission to the PETE concentration may opt to submit official scores of the PRAXIS II exams in lieu of the GRE.
2. An applicant must also submit the following to the School: 1) SHS Graduate Admission Application Form, 2) two letters of recommendation, and 3) a 300-500 word statement of goals including identification of the intended area of concentration. (Contact the school's academic services coordinator for application forms. School of Health Studies application forms are also available on-line at www.memphis.edu/shs/students/grad_admission.php.
3. An applicant must have graduated with a minimum baccalaureate GPA of 2.5.
4. Completion of an appropriate undergraduate major and a strong background in discipline-specific courses:

1. Exercise, Sport and Movement Sciences: anatomy and physiology, health sciences, exercise physiology, anatomic kinesiology, biomechanics, and motor learning
2. Health Promotion: science-oriented courses such as, but not limited to, nutrition, biology, biochemistry, health sciences, chemistry, and psychology
3. Physical Education Teacher Education: anatomic kinesiology, anatomy and physiology, biology, exercise physiology, health sciences, motor learning, nutrition, and sport psychology

5. Completion of undergraduate work deemed by the concentration committee as prerequisite to graduate courses.
6. Student admissions to the respective programs within the Health Studies (HS) major are differentially restricted to enable Graduate Faculty within each concentration to closely mentor their students. To ensure maximum consideration for admission into a specific SHS concentration, the following dates are provided: May 1 for summer and fall and November 1 for the spring semester. The admission committee may request a personal interview. Multiple criteria will be used when considering applicant admission, including, but not limited to, undergraduate and graduate grade point average, GRE/PRAXIS II scores, personal goals statement, relevant employment history, and letters of recommendation.

Program Requirements

A minimum of 30 hours is required for the major although respective concentrations may require additional credit hours.

Program Research Core (6 hours):

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

and

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

or

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

Concentration Requirements:

Exercise, Sport and Movement Sciences (18 hours):

ESMS 7020 - Pub/Prop in Health & Biomed

(3) (EXSS 7020). Steps involved in preparing external funding proposals and manuscripts for publication. Particular attention given to the following: organizing document components, effective writing techniques, documentation issues, interpretation of findings, sentence structure, and reference citing. Identification of appropriate journals for publication consideration as well as common and novel funding sources (federal, state, local, and private) for supporting research work.

ESMS 7123 - Mech Analysis Mtr Skill

(3) (PHED 7123)(EXSS 7123) Experiences that will enhance the understanding and practical application of the laws of mechanical physics to the fundamental techniques utilized in the performance of physical activities.

ESMS 7163 - Advanced Motor Learning

(3) (PHED 7163)(EXSS 7163) Analysis of research evidence related to motor skill learning and performance; emphasis on feedback mechanisms, practice variables, and retention and transfer of skills.

ESMS 7201 - Phys Exer Musculoskltl

(3) (EXSS 7201) An analysis of the physiological bases of musculoskeletal performance as well as specific adaptations that occur consequent to various regimens of exercise; discussion of selected techniques for assessing musculoskeletal function and structure.

ESMS 7202 - Phys Ex Mtbolc/Cardresp

(3) (EXSS 7202) An analysis of the acute and chronic metabolic/cardiorespiratory bases of human performance and fitness under various internal and external environmental conditions; discussion of selected techniques for assessing metabolic/cardiorespiratory function and structure.

EDPR 7542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8542 or permission of instructor. Grades of S, U, or IP will be given.

or

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

Guided electives selected with approval of the advisor:

Exercise, Sport and Movement Sciences (6 hours)

Culminating Experience (3-9 hours)

(Consult Graduate School Calendar for submission deadlines -):

Exercise and Sport Science:

ESMS 7850 - Research Lab Residency in ESMS

(1-6) (EXSS 7850) Capstone experience focused on the development and/or application of research evidence to professional practice in ESMS. Involves 40 contact hours per credit hour and is typically undertaken in one of the ESMS Human Performance Laboratories, although other UM campus sites focused on evidenced-based practice may be considered for approval. PREREQUISITE(S): Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of Major Professor, ESMS Program Coordinator, and Director of the laboratory at which the residency is to be performed.

or

ESMS 7950 - Applied Project in ESMS

(1-6) (EXSS 7950) Scholarly capstone experience in which students integrate and apply discipline-specific knowledge, skills, and insights in developing a product related to their professional goals as approved by a three-person project committee. PREREQUISITE(S): Completion of 18 credit hours in the program of study with a minimum graduate GPA of 3.00 and permission of instructor. Grades of S, U, or IP will be given.

or

HMSE 7996 - Thesis

(1-6) (FITW/HLTH/PHED /RECR 7996) Application for writing a thesis must be filled out on an approved form after consultation with the major professor and filed with the Director of Graduate Programs. Grades of S, U, or IP will be given.

Note:

* Must be under the tutelage of a Graduate Faculty member with Full status at either one of the ESMS Human Performance Laboratories or at another site on campus, and involves 40 contact hours per credit hour. In order for residency arrangements to be formalized, they must first receive written or electronic approval by the student's Major Professor, the ESMS Program Coordinator, and the Director of the laboratory in which training is to occur.

** Students choosing the thesis option should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Other Requirements

1. Successful completion of an oral or written comprehensive examination (successful defense of the Research Laboratory Residency in ESMS, Applied Project, or Thesis may serve this purpose). (Consult Graduate School Calendar for submission deadlines)
2. Consult Graduate School Calendar for *Apply to Graduate* submission deadlines

(Accelerated BS/MS)

1. An Accelerated Bachelor's/Master's (ABM) Program is offered by the School of Health Studies:

1. BS, Health Studies with a concentration in Exercise, Sport and Movement Sciences (ESMS)/ MS, Health Studies (HS) with a concentration in Exercise, Sport and Movement Science (ESMS)

   The Accelerated Bachelor's/Master's (ABM) degree program HS EXSS)/ HS (ESMS) provides qualified UM senior undergraduate students the opportunity to satisfy course requirements, including elective hours, for the bachelor's degree in HS with a concentration in EXSS that also may be subsequently applied on a prearranged basis to the master's degree in HS with a concentration in EXSS that may satisfy some of its degree requirements.

For students who work closely with their advisors in planning their course of study in the School of Health Studies, this option offers the opportunity of simultaneously satisfying partial degree requirements for a bachelor's and a master's degree in an accelerated program of study. Upon completion of the undergraduate degree with a satisfactory undergraduate grade point average and a grade of "B" or better in all graduate courses completed, the student may move to full graduate student status, and the preapproved graduate courses taken as an undergraduate may be applied toward the pre-specified graduate program of study.

Students may use up to nine credit hours of designated courses in meeting the requirements of both the HS/EXSS bachelor's and HS/EXSS master's degrees.. Courses considered for this purpose may include 4000/6000-level cognates and/or 7000-level courses. Undergraduate students will register for the 6000- or 7000-level courses, but fees will be levied at the undergraduate rate. Students applying for this program must:

1. Have completed at least 18 hours of course work at UM before taking courses as part of the ABM program;
2. Have a UM GPA of 3.25 or better
3. Be within 30 semester hours of graduation
4. Have written approval of the SHS Director, the program coordinator(s) of both the respective undergraduate and graduate programs, and the SHS Academic Services Coordinator in order for specific graduate courses being acceptable for dual credit in the undergraduate and master's degree programs;
5. Meet all requirements for admission (including the GRE) into the specified graduate program (except for receipt of the undergraduate degree); and
6. Submit an application for admission to the ABM Degree Program, along with all necessary admissions documentation to the Graduate School by the deadline dates listed below.

A maximum total of nine semester hours of preapproved graduate coursework may be considered for dual credit in the undergraduate and graduate degree programs and a maximum total academic load of 15 hours during the semester in which any of the graduate courses are taken.

Students interested in this option must concurrently meet in person with the SHS Director, the program coordinator(s) for respective undergraduate and graduate programs in question, as well as the SHS Academic Services Coordinator, and receive their written approval of the application. Final acceptance into the ABM program is contingent upon approval by the Vice Provost for Graduate Programs. Approvals apply only for the specific programs and courses designated in the application. Stipulated graduate courses for the ABM program are the only ones for which students in the undergraduate program are eligible to enroll, and completion of all allowable graduate courses is optional.

For application materials, contact the SHS Academic Services Coordinator at 901-678-5037 or go to www.memphis.edu/shs/students/admission_advising.php. Students may not apply online for this program. Submit application materials to the School of Health Studies no later than the following dates, after which school-approved applications will be submitted by the school to the Graduate School for consideration:

April 15 for fall term admission

October 15 for spring term admission

April 15 for summer term admission

Subsequent to admission into the ABM program and satisfactory completion of stipulated coursework approved for the designated programs of study, a maximum of 9 credit hours from the following graduate courses may be applied to the respective programs of study for both the undergraduate and graduate levels as follows:

Health Studies with a concentration in Exercise & Sport Science:

ESMS 6000 - Exer Test Interp Lab

(3) (EXSS 6000) Acquisition and practice of laboratory/clinical skills in measurement techniques, tools, and interpretations of physical performance and fitness; introduces theoretical and functional techniques of graded exercise testing for functional and/or diagnostic assessment. PREREQUISITE(S): BIOL 2010/2011 and 2020/2021; ESMS 2004, 2015, 3020, 3050, 3410, 3415, 3450, 3603, 3703, 3800, 3803; HSCI 3800, or permission of instructor.

or

ESMS 6603 - Adv Meth Strength Cond

(3) (EXSS 6603) Advanced study of training principles for strength and conditioning programs and their underlying physiological bases. PREREQUISITE(S): BIOL 2010/2011, 2020/2021; ESMS 3050, 3405, 3450, 3603, 3703, 3800, 3803; HPRO 2100, or permission of instructor. (F/Su).

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

ESMS 7020 - Pub/Prop in Health & Biomed

(3) (EXSS 7020). Steps involved in preparing external funding proposals and manuscripts for publication. Particular attention given to the following: organizing document components, effective writing techniques, documentation issues, interpretation of findings, sentence structure, and reference citing. Identification of appropriate journals for publication consideration as well as common and novel funding sources (federal, state, local, and private) for supporting research work.

Program Retention Policy

All MS degree students are regularly monitored for completion of any entry-level deficiencies by graduate faculty.

Program retention committees, comprised of selected graduate faculty within the corresponding programs of study, monitor the academic progress of all MS degree candidates in the respective programs. Each committee determines whether or not the student is making sufficient progress and, in case of deficiencies, may recommend additional work or the dismissal of the student from the program. For any student recommended for dismissal, an appeals process is available.

Health Studies Dietetics Concentration - Nutrition - Environmental Nutrition Concentration, (Accelerated BS/MS)

Accelerated BS/MS Program

An Accelerated Bachelor's/Master's (ABM) Program is offered by the School of Health Studies:

BS, Health Studies (HS) with a concentration in Dietetics (DIET)/ MS, Nutrition (NUTR) with a concentration in Environmental Nutrition (ENVN)

The Accelerated Bachelor's/Master's (ABM) degree program HS (DIET)/ NUTR (ENVN) provides qualified UM selected undergraduate students the opportunity to satisfy course requirements, including elective hours, for the bachelor's degree in HS with a concentration in DIET that also may be subsequently applied on a prearranged basis to the master's degree in NUTR with a concentration in ENVN that may satisfy some of its degree requirements.

For students who work closely with their advisors in planning their course of study in the School of Health Studies, this option offers the opportunity of simultaneously satisfying partial degree requirements for a bachelor's and a master's degree in an accelerated program of study. Upon completion of the undergraduate degree with a satisfactory undergraduate grade point average and a grade of "B" or better in all graduate courses completed, the student may move to full graduate student status, and the preapproved graduate courses taken as an undergraduate may be applied toward the pre-specified graduate program of study.

Admission Requirements

Students may use up to 12 credit hours of designated courses in meeting the requirements of both the HS/Dietetics bachelor's and NUTR/ CLNN master's degrees. Courses considered for this purpose may include 4000/6000-level cognates and/or 7000-level courses. Undergraduate students will register for the 6000- or 7000-level courses, but fees will be levied at the undergraduate rate.

Students applying for this program must:

1. Have completed at least 18 hours of course work at UM before taking courses as part of the ABM program;
2. Have a UM GPA of 3.25 or better
3. Be within 40 semester hours of graduation
4. Have written approval of the SHS Director of Academic Programs, the program coordinator(s) of both the respective undergraduate and graduate programs, and the SHS Director of Student Services in order for specific graduate courses being acceptable for dual credit in the undergraduate and master's degree programs;
5. Meet all requirements for admission into the specified graduate program (except for the GRE and completion of the undergraduate degree); and
6. Apply for admission to the ABM Program including all necessary admissions documentation to the Graduate School by the deadline dates listed below.

Nutrition with a concentration in Environmental Nutrition:

NUTR 7182 - Environmental Nutrition **

(3) Study of the relationships between food, nutrition, and the environment with emphasis on sustainability. PREREQUISITE(S): COMP 6040 or COMP 6041 or permission of instructor.

NUTR 7712 - Cultural Nutrition and Foods **

(3) Overview of traditional food practices locally and globally to develop understanding of food values. PREREQUISITE(S): PSYC 7301 and PSYC 7302 .

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

HPRO 7780 - Health Counseling **

(3) Introduces clinical counseling techniques focusing on the development and application of basic health counseling and lifestyle coaching skills. Self-evaluation, giving and receiving feedback and reflection upon the development of clinical skills and ethical tendencies is an essential part of this course.

Note:

A maximum total of 12 semester hours of preapproved graduate coursework may be considered for dual credit in the undergraduate and graduate degree programs and a maximum total academic load of 15 hours during the semester in which any of the graduate courses are taken.

Students interested in this option must meet in person with the SHS Director of Academic Programs, the program coordinator(s) for respective undergraduate and graduate programs in question, as well as the SHS Director of Student Services, and receive their written approval of the application. Final acceptance into the ABM program is contingent upon approval by the Dean of the Graduate School. Approvals apply only for the specific programs and courses designated in the application. Stipulated graduate courses for the ABM program are the only ones for which students in the undergraduate program are eligible to enroll, and completion of all allowable graduate courses is optional.

For application materials, contact the SHS Director of Student Services at 901-678-5037 or go to www.memphis.edu/shs/students/admission_advising.php. Submit application materials to the School of Health Studies no later than the following dates for optimal admission consideration, after which school-approved applications will be submitted by the school to the Graduate School for consideration:

1. April 15 for fall term admission
2. October 15 for spring term admission
3. April 15 for summer term admission

Subsequent to admission into the ABM program and satisfactory completion of stipulated coursework approved for the designated programs of study, a maximum of 12 credit hours from the following graduate courses may be applied to the respective programs of study for both the undergraduate and graduate levels as follows:

Health Studies Dietetics Concentration - Nutrition Science, (Accelerated BS/MS)

Accelerated BS/MS Program

An Accelerated Bachelor's/Master's (ABM) Program is offered by the School of Health Studies:

BS, Health Studies (HS) with a concentration in Dietetics (DIET)/ MS, Nutrition (NUTR) with a concentration in Nutrition Science (NS)

The Accelerated Bachelor's/Master's (ABM) degree program HS DIET/ NUTR (NS) provides qualified UM selected undergraduate students the opportunity to satisfy course requirements, including elective hours, for the bachelor's degree in HS with a concentration in DIET that also may be subsequently applied on a prearranged basis to the master's degree in NUTR with a concentration in NS that may satisfy some of its degree requirements.

For students who work closely with their advisors in planning their course of study in the School of Health Studies, this option offers the opportunity of simultaneously satisfying partial degree requirements for a bachelor's and a master's degree in an accelerated program of study. Upon completion of the undergraduate degree with a satisfactory undergraduate grade point average and a grade of "B" or better in all graduate courses completed, the student may move to full graduate student status, and the preapproved graduate courses taken as an undergraduate may be applied toward the pre-specified graduate program of study.

Admission Requirements

Students may use up to 12 credit hours of designated courses in meeting the requirements of both the HS/Dietetics bachelor's and NUTR/ CLNN master's degrees. Courses considered for this purpose may include 4000/6000-level cognates and/or 7000-level courses. Undergraduate students will register for the 6000- or 7000-level courses, but fees will be levied at the undergraduate rate.

Students applying for this program must:

1. Have completed at least 18 hours of course work at UM before taking courses as part of the ABM program;
2. Have a UM GPA of 3.25 or better
3. Be within 40 semester hours of graduation
4. Have written approval of the SHS Director of Academic Programs, the program coordinator(s) of both the respective undergraduate and graduate programs, and the SHS Director of Student Services in order for specific graduate courses being acceptable for dual credit in the undergraduate and master's degree programs;
5. Meet all requirements for admission into the specified graduate program (except for the GRE and completion of the undergraduate degree); and
6. Apply for admission to the ABM Program including all necessary admissions documentation to the Graduate School by the deadline dates listed below.

Nutrition with a concentration in Nutrition Science:

NUTR 7412 - Cellular Nutrition I

(3) (CSED 7412). Generation, storage, and use of energy; metabolism of carbohydrate, protein, fat, and other macro and micronutrients; control of metabolic processes in normal, anabolic, and catabolic conditions. May be repeated for a maximum of 6 credit hours. Restricted by program or permit required. PREREQUISITE(S): Psychology graduate student or permission of instructor.

NUTR 7422 - Cellular Nutrition II

(3) (CSED 7422). Cellular and subcellular metabolism of the micro-nutrients; digestion, absorption, transport, utilization, and excretion of vitamins and minerals; interrelationships of micro- and macronutrients; recent advances in micronutrient research.

HMSE 7010 - Research Methods in HS **

(3) Introduction to health, nutrition, sport science, and/or exercise research/methodology. Addresses applicable research techniques and designs emphasizing planning, conducting, and reporting research, selecting appropriate statistical analyses, and interpreting findings. PREREQUISISTE: Permission of Instructor

ESMS 7020 - Pub/Prop in Health & Biomed

(3) (EXSS 7020). Steps involved in preparing external funding proposals and manuscripts for publication. Particular attention given to the following: organizing document components, effective writing techniques, documentation issues, interpretation of findings, sentence structure, and reference citing. Identification of appropriate journals for publication consideration as well as common and novel funding sources (federal, state, local, and private) for supporting research work.

Note:

A maximum total of 12 semester hours of preapproved graduate coursework may be considered for dual credit in the undergraduate and graduate degree programs and a maximum total academic load of 15 hours during the semester in which any of the graduate courses are taken.

Students interested in this option must meet in person with the SHS Director of Academic Programs, the program coordinator(s) for respective undergraduate and graduate programs in question, as well as the SHS Director of Student Services, and receive their written approval of the application. Final acceptance into the ABM program is contingent upon approval by the Dean of the Graduate School. Approvals apply only for the specific programs and courses designated in the application. Stipulated graduate courses for the ABM program are the only ones for which students in the undergraduate program are eligible to enroll, and completion of all allowable graduate courses is optional.

For application materials, contact the SHS Director of Student Services at 901-678-5037 or go to www.memphis.edu/shs/students/admission_advising.php. Submit application materials to the School of Health Studies no later than the following dates for optimal admission consideration, after which school-approved applications will be submitted by the school to the Graduate School for consideration:

1. April 15 for fall term admission
2. October 15 for spring term admission
3. April 15 for summer term admission

Subsequent to admission into the ABM program and satisfactory completion of stipulated coursework approved for the designated programs of study, a maximum of 12 credit hours from the following graduate courses may be applied to the respective programs of study for both the undergraduate and graduate levels as follows:

Health Studies Dietetics Concentration -Nutrition- Clinical Nutrition Concentration, (Accelerated BS/MS)

Accelerated BS/MS Program

An Accelerated Bachelor's/Master's (ABM) Program is offered by the School of Health Studies:

BS, Health Studies (HS) with a concentration in Dietetics (DIET)/ MS, Nutrition (NUTR) with a concentration in Clinical Nutrition (CLNN).

The Accelerated Bachelor's/Master's (ABM) degree program HS DIET/ NUTR (CLNN) provides qualified UM selected undergraduate students the opportunity to satisfy course requirements, including elective hours, for the bachelor's degree in HS with a concentration in DIET that also may be subsequently applied on a prearranged basis to the master's degree in NUTR with a concentration in CLNN that may satisfy some of its degree requirements.

For students who work closely with their advisors in planning their course of study in the School of Health Studies, this option offers the opportunity of simultaneously satisfying partial degree requirements for a bachelor's and a master's degree in an accelerated program of study. Upon completion of the undergraduate degree with a satisfactory undergraduate grade point average and a grade of "B" or better in all graduate courses completed, the student may

move to full graduate student status, and the preapproved graduate courses taken as an undergraduate may be applied toward the pre-specified graduate program of study.

Admission Requirements

Students may use up to 12 credit hours of designated courses in meeting the requirements of both the HS/Dietetics bachelor's and NUTR/ CLNN master's degrees. Courses considered for this purpose may include 4000/6000-level cognates and/or 7000-level courses. Undergraduate students will register for the 6000- or 7000-level courses, but fees will be levied at the undergraduate rate.

Students applying for this program must:

1. Have completed at least 18 hours of course work at UM before taking courses as part of the ABM program;
2. Have a UM GPA of 3.25 or better
3. Be within 40 semester hours of graduation
4. Have written approval of the SHS Director of Academic Programs, the program coordinator(s) of both the respective undergraduate and graduate programs, and the SHS Director of Student Services in order for specific graduate courses being acceptable for dual credit in the undergraduate and master's degree programs;
5. Meet all requirements for admission into the specified graduate program (except for the GRE and completion of the undergraduate degree); and
6. Apply for admission to the ABM Program including all necessary admissions documentation to the Graduate School by the deadline dates listed below.

Nutrition with a concentration in Nutrition Science:

NUTR 7412 - Cellular Nutrition I

(3) (CSED 7412). Generation, storage, and use of energy; metabolism of carbohydrate, protein, fat, and other macro and micronutrients; control of metabolic processes in normal, anabolic, and catabolic conditions. May be repeated for a maximum of 6 credit hours. Restricted by program or permit required. PREREQUISITE(S): Psychology graduate student or permission of instructor.

NUTR 7422 - Cellular Nutrition II

(3) (CSED 7422). Cellular and subcellular metabolism of the micro-nutrients; digestion, absorption, transport, utilization, and excretion of vitamins and minerals; interrelationships of micro- and macronutrients; recent advances in micronutrient research.

HPRO 7780 - Health Counseling **

(3) Introduces clinical counseling techniques focusing on the development and application of basic health counseling and lifestyle coaching skills. Self-evaluation, giving and receiving feedback and reflection upon the development of clinical skills and ethical tendencies is an essential part of this course.

NUTR 7522 - Clncl Nutritn/Food Servc Mgmt

(3) (CSED 7522). Influence of leadership/management styles/practices on clinical nutrition/food service management effectiveness.

Note:

A maximum total of 12 semester hours of preapproved graduate coursework may be considered for dual credit in the undergraduate and graduate degree programs and a maximum total academic load of 15 hours during the semester in which any of the graduate courses are taken.

Students interested in this option must meet in person with the SHS Director of Academic Programs, the program coordinator(s) for respective undergraduate and graduate programs in question, as well as the SHS Director of Student Services, and receive their written approval of the application. Final acceptance into the ABM program is contingent upon approval by the Dean of the Graduate School. Approvals apply only for the specific programs and courses designated in the application. Stipulated graduate courses for the ABM program are the only ones for which students in the undergraduate program are eligible to enroll, and completion of all allowable graduate courses is optional.

For application materials, contact the SHS Director of Student Services at 901-678-5037 or go to www.memphis.edu/shs/students/admission_advising.php. Submit application materials to the School of Health Studies no later than the following dates for optimal admission consideration, after which school-approved applications will be submitted by the school to the Graduate School for consideration:

1. April 15 for fall term admission
2. October 15 for spring term admission
3. April 15 for summer term admission

Subsequent to admission into the ABM program and satisfactory completion of stipulated coursework approved for the designated programs of study, a maximum of 12 credit hours from the following graduate courses may be applied to the respective programs of study for both the undergraduate and graduate levels as follows:

Information Systems, (Accelerated BBA/MS)

This program permits outstanding undergraduate majors in Business Information & Technology (B.B.A.) to begin coursework for the M.S. in Information Systems during their senior year. Students interested in this accelerated program are encouraged to begin planning for it early in their undergraduate careers, in consultation with both their undergraduate advisor and the M.S. Coordinator of the Department of Business Information & Technology.

To be accepted into the Accelerated M.S. Program, students must have a grade point average of at least 3.25, and must submit two letters of reference and a copy of their transcript to the Department of Business Information & Technology. Each applicant will also complete an interview with the M.S. Coordinator of the Department.

After being accepted into the program, the student will work closely with his or her undergraduate advisor and the M.S. Coordinator in order to develop a carefully tailored program of study so that he or she can begin work on the M.S. as they complete their undergraduate degree.

Students must also apply to the Graduate School for "combination status," which allows them to take graduate courses in Information Systems. To continue the Program once they have completed the B.B.A., students must apply for full admission into the Graduate School and into the M.S. Program in Information Systems.

Up to 9 hours of graduate coursework may be applied to both the Bachelor's and the M.S. degrees in Information Systems.

Mathematical Sciences - Applied Mathematics, Mathematics, and Statistics Concentrations, (Accelerated BS/MS)

MS Degree Program

Program objectives are (1) development of thorough background in mathematical sciences, including retention and integration of core knowledge; (2) development of research skills in mathematics; and (3) development of interdisciplinary opportunities and good oral and written communication skills.

General Program Prerequisites

1. An undergraduate degree with a major in mathematics or statistics is required. The minimum GPA is 2.5 on a 4.0 scale. Students whose major was not in mathematics or statistics will be considered on a case-by-case basis.
2. GRE General Test scores are required and are an important factor for admission. This requirement may be waived for applicants to the Teaching of Mathematics concentration who have a graduate degree (master's degree or higher) already or who have obtained the Graduate Certificate in the Teaching of Mathematics, who have a graduate GPA of 3.0 or above, and who have work experience in an education related field for 3 or more years.
3. Two letters of recommendation are required.
4. TOEFL scores are required for students whose native language is not English.

General Program Requirements

1. Satisfactory completion of 33 credit hours of graduate course work in a program approved by the department is required. At least 24 credit hours of course work have to be at the 7000 level or higher. At least 21 credit hours of course work have to be earned from courses offered by the Department of Mathematical Sciences.
2. Not more than three credit hours from graduate level seminars can be used to satisfy degree requirements.
3. Courses designed for the "Teaching of Mathematics" concentration can only be used to satisfy degree requirements in this concentration.
4. A passing grade on a comprehensive examination is required. Students may choose a thesis or non-thesis option.

Non-thesis Option

Each student must pass a final written four-hour comprehensive examination which may be broken into several parts at the department's discretion. The written comprehensive examination covers topics from four courses, each consisting of at least three credit hours of course work.

Thesis Option

Each student must identify a thesis advisor, enroll in at least three credit hours of MATH 7996 and submit a written thesis acceptable to the student's advisory committee. A student must present and defend the thesis before the advisory committee. The oral defense of the thesis will encompass material contained in the thesis and learned during course work and will count as the comprehensive examination. Up to six credit hours of MATH 7996 can be used to satisfy degree requirements.

MATH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Note:

Students should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

Specific Degree Requirements

Applied Mathematics Concentration

The following courses are required:

MATH 6242 - Linear Algebra

(3) Linear transformations polynomials, determinants, direct-sum decompositions diagonalizable operators, rational and Jordan form, inner product spaces, the spectral theorem.

MATH 6391 - Partial Diffrntl Equation I

(3) Laplace transforms; Fourier series; introduction to partial differential equations.

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

At least three of the following elective courses are required:

MATH 6721 - Numerical Analysis

(3) Derivation and application of computer-oriented, numerical methods for functional approximation, differentiation, quadrature, and solution of ordinary differential equations.

MATH 7016 - Fourier Analysis

(3) Facilitates understanding of some important facts abut Fourier series, Fourier transforms, and finite Fourier analysis, including applications to other sciences (optics, acoustics, particle physics, uncertainty principle) as well as links within mathematics (infinitude of primes, isoperimetric inequality). May be repeated for a maximum of 6 credit hours when topics change.

MATH 7351 - Real Variables II

(3) Metric spaces, Baire category theorem, Hahn Banach theorem, uniform boundedness principle, closed graph theorem, general measure, signed measures, Radon-Nikodym theorem, product measures, Fubini theorem. Grades of S, U, or IP will be given.

MATH 7361 - Complex Analysis

(3) A selection of advanced topics in complex analysis, including analytic functions, power series, mapping properties, complex integration, Cauchy's theorem and its consequences, sequences of analytic functions. May be repeated for a maximum of 6 credit hours when topics change.

MATH 7504 - Partial Differential Equations

(3) A selection of the following topics: Explicit and semi-explicit formulas for some classical partial differential equations, Maximum Principle, Sobolev spaces, harmonic analysis methods, parabolic, hyperbolic and elliptic equations, introduction to nonlinear partial differential equations. May be repeated for a maximum of 6 credit hours when topics change. PREREQUISITE(S): Permission of Instructor.

The program must include at least 12 credit hours in the following broadly defined core categories:

Calculus of Variations and Optimization, Control Theory, Differential Equations, Financial Mathematics, Mathematical Physics, Modeling, Numerical Analysis and Scientific Computation. At least 6 of these 12 credit hours must be taken in the same core category. MATH 7996 does not count towards the required credit hours in the core categories.

The written comprehensive examination for students choosing the non-thesis option includes as topics:

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

- six credit hours of course work in one of the core categories (see item c. above)
- plus an additional course approved by the department

Mathematics Concentration

The following courses are required:

MATH 6242 - Linear Algebra

(3) Linear transformations polynomials, determinants, direct-sum decompositions diagonalizable operators, rational and Jordan form, inner product spaces, the spectral theorem.

MATH 6411 - Topology

(3) Introductory set theory, metric spaces, topological spaces, continuous functions, separation axioms, separability and countability axioms, connectedness, and compactness. PREREQUISITE(S): Permission of instructor.

MATH 7261 - Algebraic Theory I

(3) Studies in group theory and ring theory, including Sylow theory and factorization theory.

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

At least four of the following elective courses are required:

MATH 7016 - Fourier Analysis

(3) Facilitates understanding of some important facts abut Fourier series, Fourier transforms, and finite Fourier analysis, including applications to other sciences (optics, acoustics, particle physics, uncertainty principle) as well as links within mathematics (infinitude of primes, isoperimetric inequality). May be repeated for a maximum of 6 credit hours when topics change.

MATH 7235 - Combinatorics

(3) (MATH 7793). Principles and techniques of combinatorial mathematics with a view toward applications in computer science; methods of enumeration, matching theory, paths and cycles, planarity, coloring problems, extremal problems.

MATH 7237 - Graph Theory

(3) Connectivity, Euler tours, and Hamilton cycles, matchings, coloring problems, planarity, and network flows; study of classical theorems due to Brooks, Menger, Kuratowski, Schur, Tutte, and Vizing.

MATH 7262 - Algebraic Theory II

(3) A continuation of Math 7261. Studies in field theory and modules, including free algebras, Galois theory, tensor products.

MATH 7351 - Real Variables II

(3) Metric spaces, Baire category theorem, Hahn Banach theorem, uniform boundedness principle, closed graph theorem, general measure, signed measures, Radon-Nikodym theorem, product measures, Fubini theorem. Grades of S, U, or IP will be given.

MATH 7352 - Ergodic Theory

(3) Examples of measure preserving transformations, Von Neumann and Birkhoff ergodic theorem, isomorphism, factors, ergodic decomposition, weak mixing, strong mixing, invariant measures for continuous transformations, unique ergodicity, applications to combinatorics and number theory (uniform distribution, continued fractions, Furstenberg correspondence principle, Roth and Sarkozy's theorem), entropy, asymptotic equipartition property. Grades of S, U, or IP will be given.

MATH 7355 - Functional Analysis I

(3) Vector spaces, Banach spaces, Hilbert spaces; linear functionals and operators in such spaces; spectral theory. PREREQUISITE(S): Permission of instructor.

MATH 7356 - Functional Analysis

(3) A continuation of MATH 7355-8355.

MATH 7361 - Complex Analysis

(3) A selection of advanced topics in complex analysis, including analytic functions, power series, mapping properties, complex integration, Cauchy's theorem and its consequences, sequences of analytic functions. May be repeated for a maximum of 6 credit hours when topics change.

MATH 7411 - Point Set Topology

(3) (6671) An axiomatic approach to compactness, separability, connnectedness, metrizability and other topological properties. PREREQUISITE(S): Permission of instructor.

The written comprehensive examination for students choosing the non-thesis option includes as topics:

MATH 7261 - Algebraic Theory I

(3) Studies in group theory and ring theory, including Sylow theory and factorization theory.

MATH 7350 - Real Variables I

(3) s-algebra, outer measure, Lebesque measure, measurable functions, differentiation, absolute continuity, Lp-spaces.

- Two additional courses approved by the department.

Statistics Concentration

The following courses are required:

MATH 6636 - Intro Statistical Theory

(3) Functions of two random variables; gamma, beta, multinomial, and bivariate normal distributions; Bayes estimators; maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing.

MATH 7642 - Experimental Design

(3) Fundamental concepts in designing experiments, justification of linear models, randomization, principle of blocking, use of concomitant observations, principle of confounding, fractional replication, composite designs, incomplete block designs. COREQUISITE(S): NURS 7990 or permission of instructor.

MATH 7643 - Least Sq/Regr Analysis

(3) Basic concepts of hypothesis testing and confidence intervals; simple and multiple regression analyses, model selection, Mallow's Cp, examination of residuals, Box-Cox transformation, influence diagnostics, multicolinearity, ridge-regression, probit, logit, and log-linear analyses; intensive use of SAS or other statistical packages. PREREQUISITE(S): Completion of 18 graduate level credit hours in music, including MUHL 7400 and MUHL 6801.

MATH 7647 - Non-Param Stat Meth

(3) Use of distribution-free statistics for estimation, hypothesis testing, and correlation measures in designing and analyzing experiments.

MATH 7654 - Inference Theory

(3) Bayes and maximum likelihood estimators, sufficient statistics; Rao-Blackwell Theorem, sampling distributions; unbiasedness, completeness and UMVU estimators; efficient estimators, Cramer-Rao inequality; simple robust estimators; UMP-tests; likelihood ratio tests, t-tests and F-tests.

MATH 7685 - Simulation & Computing

(3) Uniform random number generation and testing, generation methods for non-uniform random variables, simulating random numbers from specific distributions, Metropolis-Hastings algorithm, Markov Chain Monet-Carlo (MCMC), Gibbs sampling. PREREQUISITE(S): Two semesters (or equivalent) of undergraduate improvisation, and permission of instructor.

MATH 7762 - Survival Analysis

(3) Nonparametric estimation and comparison of survival functions: Kaplan-Meier Estimator and other estimators of hazard functions; parametric survival models; Gehan test, Mantel-Haenszel test and their extensions; Cox proportional hazard model: conditional likelihood, partial likelihood analysis, identification of prognostic and risk factors; applications to life-testing and analysis of survival data using statistical packages such as SAS. Grades of A-F, or IP will be given.

The following elective courses are required:

Either

MATH 7645 - Sampling Techniques

(3) Planning, execution, and analysis of sampling from finite populations; simple, stratified, multistage cluster and systematic sampling; ratio and regression estimates, estimation of variance.

or

MATH 7657 - Multivar Stat Meth

(3) Basic contents: multivariate normal distributions; Wishart distribution, Hotelling-T2, Matric-t and Beta distributions; generalized regression models and growth curve models; multivariate analysis of variance; principal component analysis; discriminant analysis; factor analysis; curve fitting procedures in multivariate cases. All topics will be illustrated by practical examples.

and either

MATH 7660 - App Time Series Analy

(3) Basic concepts and examples of stationary and nonstationary time series; random harmonic analysis; spectral density functions, model building procedures for time series models; model identification; diagnostic checking, smooth, forecasting and control; Box-Jenkin approach of time series analysis; some seasonal models. May be repeated when topic changes.

or

MATH 7670 - App Stochastic Models

(3) Markov chains with discrete time; classification of states, stationary distributions, absorption probabilities and absorption time; Markov chains with continuous time; birth-death processes, waiting time distributions, queuing

models, population growth models, Kolmogorov forward and backward equations, diffusion processes, Fokker-Planck equation; applications to genetic problems, etc. May be repeated when topic changes.

Credit for

Credit for both MATH 6637 and MATH 7643 is not permitted.

The written comprehensive examination for students choosing the non-thesis option includes as topics:

MATH 6636 - Intro Statistical Theory

(3) Functions of two random variables; gamma, beta, multinomial, and bivariate normal distributions; Bayes estimators; maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing.

MATH 7654 - Inference Theory

(3) Bayes and maximum likelihood estimators, sufficient statistics; Rao-Blackwell Theorem, sampling distributions; unbiasedness, completeness and UMVU estimators; efficient estimators, Cramer-Rao inequality; simple robust estimators; UMP-tests; likelihood ratio tests, t-tests and F-tests.

- Two additional courses approved by the department.

Students choosing the thesis option

Students choosing the thesis option may replace either of the two electives (see b.) by three credit hours of MATH 7996.

MATH 7996 - Thesis

(1-6) Grades of S, U, or IP will be given.

Accelerated BS/MS Degree Program

This program allows outstanding undergraduates to complete both a Bachelor of Science degree in Mathematical Sciences and a Master of Science degree in Mathematical Sciences with concentration in Applied Mathematics, Mathematics or Statistics. Students admitted into the program will follow a carefully designed program of study which allows them to begin course work for the Master of Science program during their senior year. Interested students are encouraged to consult with their undergraduate advisor in the Department of Mathematical Sciences and to begin planning to enter the accelerated BS/MS degree program early in their undergraduate career. Through careful coordination with their undergraduate and graduate advisors students will be able to graduate with both a bachelor's and master's degree within a five year period.

To apply, students must have finished 18 credit hours of course work in mathematics by the end of the semester of their application. Applicants must have a cumulative GPA of 3.00 (on a 4.0 scale) as well as a GPA of 3.30 (on a 4.0 scale) in their mathematics courses. The initial application for the accelerated BS/MS degree program consists of the following two parts:

1. A letter of intent including two letters of reference and a copy of the applicant's transcript to be submitted to the Department of Mathematical Sciences
2. Application with the Graduate School for "combination senior" status

To continue in the program beyond the bachelor's degree, students must also apply for full admission into the Graduate School and be accepted into the master's program by the Department of Mathematical Sciences. During their fifth and last year in the program, students must be graduate students working towards their MS degree.

Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs. Details on courses that can be applied will be available in the Department of Mathematical Sciences. However, any graduate course work will not be used to calculate the undergraduate GPA.

Mechanical Engineering, (Accelerated BSME/MS)

Accelerated B.S.M.E./M.S.

This program allows outstanding undergraduates to begin the coursework for the Master of Science in Mechanical Engineering during their senior year. Students are encouraged to begin planning to enter the Accelerated B.S.M.E./M.S. program early in their undergraduate career, in consultation with their advisor in the Department of Mechanical Engineering.

Working with the undergraduate and graduate academic coordinators, undergraduates selected into this program begin a carefully tailored course of study which will allow them to complete their B.S.M.E. degree while they also begin the coursework toward their M.S.

To apply, students must have a minimum 3.25 grade point average, and must submit two reference letters and a copy of their transcript to the Mechanical Engineering department. Each applicant will complete an interview with the graduate academic coordinator in mechanical engineering.

Students must also apply to the Graduate School for the accelerated B.S.M.E./M.S. program, which allows them to take graduate courses in mechanical engineering. To continue in the program past the B.S.M.E., students must apply for full admission into the Graduate School and into the Mechanical Engineering department's M.S. program.

Only in ABM programs, up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs. However, any graduate coursework will not apply to undergraduate GPA.

Nursing - Nursing Education Concentration, (RN-BSN-MSN)

MSN Degree

Admission

Because the University seeks to provide in as much as possible a reasonably safe environment for its health career students and their patients, students may be required during the course of the program to demonstrate their physical and/or emotional fitness to meet the essential requirements of the program. Such essential requirements include freedom from communicable diseases, the ability to perform certain physical tasks, and suitable emotional fitness. Any appraisal measures used to determine such physical and/or emotional fitness will be in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990, so as not to discriminate against any individual on the basis of disability.

Core performance standards for admission and progression:

1. Critical thinking ability sufficient for clinical judgment.
2. Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.
3. Communication abilities sufficient for interaction with others in verbal and written form.
4. Physical abilities sufficient to move from room to room and maneuver in small spaces.
5. Gross and fine motor abilities sufficient to provide safe and effective nursing care.
6. Auditory ability sufficient to monitor and assess health needs.
7. Visual ability sufficient for observation and assessment necessary in nursing care.
8. Tactile ability sufficient for physical assessment.

Admission Requirements

Admission to the program will be based on competitive selection from the pool of applicants. Multiple criteria will be used when considering applicant admission including, but not limited to, letter of interest, undergraduate and graduate grade point averages, professional experience, applicant interview, and letters of recommendation.

1. Admission Requirements for MSN Applicants:
    1. Admission to the University of Memphis Graduate School
    2. Admission to the Loewenberg College of Nursing graduate nursing program.
    3. An undergraduate minimum cumulative grade point average of 2.8 on a 4.0 scale.
    4. Letter of interest which discusses prior professional experience, future career goals, and reasons for pursuing graduate study.
    5. Letters of recommendation from three persons qualified and familiar to judge the applicant's academic and professional background and experience in nursing practice, specifying in detail the applicant's capabilities for graduate study and for future practice as an advanced practice nurse.
    6. Interview with LCON graduate faculty if requested by Admissions Committee.
    7. Submission of current professional resume
    8. Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score: paper based 550 or greater; internet based 79; or 213 computer based.
    9. Eligibility to practice as a Registered Nurse in Tennessee or in an approved state in which the clinical assignments are completed. Appropriate licensure/authorization must be obtained during the first semester following admission to the program.
    10. Students transferring from another graduate nursing program must submit a letter of good standing and transcript from the dean/director of the previous nursing program.
    11. The standardized admission test is successful completion of the NCLEX licensing examination.
    12. Successful completion of 3 semester hour or 4 quarter hour undergraduate statistics course.
2. Admission Requirements for individuals with a BSN Degree
    1. Completion of BSN
    2. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
3. Admission Requirements for Registered Nurse Applicants with a BA/BS non-nursing major
    1. An unrestricted registered nursing license to practice in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Completion of a 9-unit RN/MSN nursing bridge sequence. RN/MSN graduates will not be awarded the BSN degree.
4. Students admitted to MSN program, or post master's certificate programs must have and maintain while in the program:
    1. An unrestricted license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    2. Current CPR certification.
    3. Evidence of hepatitis B (Heptavax); measles, mumps, rubella (MMR); polio; tetanus, diptheria, pertussis (Tdap), and varicella vaccinations and/or titers if available.

4. Freedom from tuberculosis as evidenced by a negative PPD or health provider examination.
5. Annual flu shot vaccination, unless medically contraindicated.
6. Evidence of current professional malpractice insurance in the amount of $1,000,000 per occurrence and $6,000,000 in the aggregate.

Progression and Retention Requirements

1. Students in the Loewenberg College of Nursing graduate program must comply with all retention standards of the University of Memphis Graduate School.
2. Students must earn a grade of "B" or better in all clinical and lab courses (NURS 7102; NURS 7602; NURS 7604; NURS 7606; NURS 7609; NURS 7207; NURS 7209; NURS 7307; NURS 7309;NURS 7908 ; NURS 7909) in order to graduate.
3. Academic disqualification from the graduate nursing major will occur when the student:
    - fails to maintain a 3.0 GPA in graduate school.
    - fails to earn a grade of "B" (3.0) or better when repeating a course.
    - willfully misrepresents patient data or clinical practice.
    - willfully places any patient in physical or emotional jeopardy.
    - fails to maintain an active, unencumbered license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    - fails to disclose a felony conviction.
    - fails to disclose disciplinary action or diversion by any board of nursing (or equivalent).
    - fails to complete all degree requirements within five years of entering graduate nursing coursework.
4. All requirements for the MSN degree must be completed in 5 calendar years.

Accelerated Bachelor's to Master's (RN-BSN-MSN) Degree in Nursing Education (62 credit hours)

The MSN with a concentration in Nursing Education prepares the student as a nurse educator to teach in schools of nursing programs and in various health care system settings. Among their course of study, students will learn about nursing and educational theories, learning strategies, curricular development, program planning and evaluation, and develop skills in different teaching methodologies.This program is for registered nurses who do not have a bachelor's degree in nursing or another discipline or for those individuals with an associate degree or diploma in nursing.

Admission Requirements:

The applicant must:

1. Be admitted to the U of M as a degree seeking RN-BSN-MSN student.
2. Have a minimum college cumulative GPA of 2.8 complete Anatomy and Physiology I and II with lab and Microbiology with lab in seven (7) years of LCON admission with a grade of "C" or better.
3. Have completed the following prerequisite courses with a grade of "C" or better (English Comp I and II, Intro to Sociology or General Psychology, Math, and Nutrition).
4. Have an active, unencumbered RN license, or be eligible for licensure.
5. Be licensed in the state of TN or an approved state in which they will complete their clinical course work.
6. Complete and submit an application for admission to the Loewenberg College of Nursing RN-BSN-MSN Program for students without a BA or BS degree.
7. If transferring from another nursing program, applicants must submit a letter of good standing from the dean/director of the previous nursing program, along with a transcript, and meet LCON admission and progression standards as stated in the Undergraduate Catalog.

RN-BSN-MSN Education Concentration Progression and Retention Requirements

The student must:

1. While in undergraduate level courses comply with all the retention standards of the University of Memphis as stated in the Undergraduate Catalog.
2. While in graduate level courses comply with all retention and progression standards of the University of Memphis Graduate School.
3. Fulfill the general education requirements for the University of Memphis in order for BSN degree to be awarded.
4. Have a GPA of 2.8 or greater at the awarding of the BSN to successfully progress to the MSN program.
5. Successfully complete the undergraduate nursing courses prior to entering the graduate level courses. The courses counting toward both the BSN and MSN degree must be taken prior to entering other graduate nursing courses, or taken concurrently with another graduate course in the semester the BSN is awarded.
6. Follow the progression and retention requirements of both the LCON MSN Program and University of Memphis Graduate School upon receiving the BSN and after entering the MSN portion of the program.

RN-BSN-MSN Education Concentration Required Courses

- NURS 3005 - Professional Nursing (2)
- NURS 3006 - Professional Nursing Seminar (1)
- NURS 3000 - Pharmacology (3)
- NURS 4127 - Community Health Nursing (3)
- NURS 4129 - Community Health Nursing Practicum (1)
- NURS 4205 - Transitions into Professional Nursing Practice (4)
- NURS 4206 - Transitions into Professional Nursing Practice Practicum (8)

NURS 7101 - Adv Health Assessment **

(3) Focuses on development of diagnostic reasoning skills, emphasizing application of these skills in the presence of abnormal findings uncovered during physical examination of individuals across the lifespan. PREREQUISITE(S): Undergraduate course in health assessment; admission to MSN program. COREQUISITE(S): NURS 7102

NURS 7102 - Adv Health Assmt/Clinic **

(1) This clinical course emphasizes application of techniques to perform targeted and comprehensive advanced health assessment of the adult client; develops synthesis, critical analysis, interpretation of physical assessment data, diagnostic reasoning, and clinical judgment. Students must achieve a grade of B" or better to progress. COREQUISITE NURS 7101"

NURS 7103 - Adv Pathophysiology **

(3) Exploration of theoretical foundations of phenomena that alter health status across the life span; provides foundation for practitioner courses related to diagnosis and treatment of disease processes. PREREQUISITE(S): PREREQUISITE: Undergraduate course in pathophysiology. PREREQUISITE: Admission to MSN program or permission of instructor.

NURS 7002 - Adv Nursing Research **

(3) Systematic examination and application of the research process; critically examines concept of evidenced-based practice and its application to nursing. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7000 - Theoretical Foundations **

(3) Exploration of theory development in nursing; analysis of selected nursing and related theories; relevance of theory to practice, education, research, and administration; includes process of theory development. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7001 - Health Care Policy **

(3) Primary focus on analysis of health-care systems; examines public and private health-care delivery systems; explores future challenges and processes to improve systems. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7003 - Adv Role Development **

(3) Provides an in-depth understanding of the legal, historical, political, social, and ethical aspects of advanced nursing; examines traditional and emerging roles for advanced nursing. PREREQUISITE(S): Admission to MSN program or permission of instructor.

NURS 7990 - Scholarly Synthesis **

(3) As a culminating experience, this course provides the student with the opportunity to complete a scholarly project that demonstrates a synthesis of knowledge acquired in graduate study. The student will write a state of the science paper using a prescribed methodology for literature review and submit the paper as a manuscript for publication. The paper topic and content must be approved by a supervising faculty member and course coordinator.

NURS 7104 - Adv Pharmacology **

(3) Focus on pharmacological actions of drugs commonly prescribed in primary care settings; emphasizes pharmacokinetic and pharmacodynamic principles of drugs, side effects, therapeutic dosages, and drug interactions; integrates legal, ethical, and economic factors of prescriptive authority. PREREQUISITE(S): Evidence of successful completion of undergraduate pharmacology course; admission to MSN program or permission of instructor.

NURS 7204 - Curriculum Design & Ed Theory **

(3) The course introduces the student to traditional and contemporary considerations for curriculum planning and design as applied to nursing education. An emphasis is placed on curriculum designs and explores major research based theories of adult and nursing education. These concepts will be applied to a variety of settings and/or levels of education.

NURS 7205 - Evaluation Mthds in NursingEdu **

(3) Analysis of testing, benchmarking, and evaluation methods in the clinical practice of nursing across classroom, seminar, and electronic formats; includes evaluation methods to insure competency in the clinical area.

NURS 7207 - Clinical Focus Practicum **

(2) Use of theory, clinical concepts, and nursing research in delivery of care to specific patient populations from a social, cultural, psychological, physical, spiritual, and economic perspective for the advanced practice nurse. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): Completion of all non-practicum MSN education courses.

NURS 7209 - Nursing Education Practicum **

(4) Integrates theory in a reality context; provides opportunities to participate in all phases of teaching and to experiment with different teaching methods. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): Completion of all non-practicum MSN education courses.

Plus one of the following clinical focus courses (3)

NURS 7505 - Advanced Adult Health Nursing **

(3) Pre- or Co-Requisites: NURS 7101, 7102, 7103, 7104

NURS 7525 - Ecg/Crit Care Nurses **

(3)

NURS 7635 - Advanced Pediatric Nursing **

(3) This course focuses on health maintenance and health promotion for children and their families experiencing both acute and chronic illness/disabilities are addressed. May be repeated for a maximum of 6 credit hours with permission of the chair or graduate coordinator.

NURS 7515 - Adv Psych/Mentl Health Nursing

(3) Pre-Requisites: NURS 7101, 7102, 7103, 7104

NURS 7545 - Adv Womens Hlth/Perinatal Nurs **

(3) Pre- or Co-Requisites: NURS 7101, 7102, 7103, 7104 PREREQUISITE(S): r.

Note:

* COUNTS TOWARD BOTH BSN AND MSN; AFTER COMPLETION OF ALL ABOVE BSN AWARDED

Physics, (Accelerated BS/MS)

Dual Degree BS-MS Accelerated Program

Highly motivated and talented students may pursue an undergraduate degree (B.S.) in Physics followed by a graduate (M.S.) in Physics in a special five-year program. This option requires serious commitment, careful planning with the student's advisor, and summer research work leading toward a Master's thesis. Carefully tailored course of study allow students in this program to complete their B.S. degree while they also begin the coursework towards their M.S.

Students interested in pursuing this option should contact both the undergraduate and graduate advisors in the Department of Physics and Materials Science early in their undergraduate career.

To apply, students should have a minimum 3.25 grade point average, and must submit two reference letters and a copy of their transcripts to the Chair of the Graduate Committee of the Department. *Exceptions to the minimum GPA will be considered on a case-by-case basis.* Each applicant will complete an interview with the graduate coordinator in the Department of Physics and Materials Science.

Students must apply to the Graduate School for "combination senior" status, which allows them to take graduate courses in Physics. To continue in the program past the B.S., students must apply for admission into the Graduate School.

Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs.

Political Science, (Accelerated BA/MA)

Accelerated B.A./M.A Program

This program allows outstanding undergraduates to begin the coursework for the Master of Arts in Political Science during their senior year. Students are encouraged to begin planning to enter the Accelerated B.A./M.A. program early in their undergraduate career, in consultation with their advisor in the Department of Political Science.

Working with the undergraduate and graduate academic coordinators, undergraduates selected into this program begin a carefully tailored course of study which will allow them to complete their B.A. degree while they also begin the coursework toward their M.A.

To apply, students should have a minimum 3.25 grade point average, and must submit two reference letters and a copy of their transcript to the Political Science department. *Exceptions to the minimum* GPA *will be considered on a case-by-case basis*. Each applicant will complete an interview with the graduate academic coordinator in political science.

Students must also apply to the Graduate School for "combination senior" status, which allows them to take graduate courses in political science. To continue in the program past the B.A., students must apply for admission into the Graduate School and into the Political Science department's MA program.

Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs.

Sociology, (Accelerated BA/MA)

Accelerated B.A./M.A.

This program allows outstanding undergraduates to begin the coursework for the Master of Arts in Sociology during their senior year. Students are encouraged to begin planning to enter the Accelerated B.A./M.A. program early in their undergraduate career, in consultation with their advisor in the Department of Sociology.

Working with the undergraduate and graduate academic coordinators, undergraduates selected into this program begin a carefully tailored course of study which will allow them to complete their B.A. degree while they also begin the coursework toward their M.A.

To apply, students should have a minimum 3.25 grade point average, and must submit two reference letters and a copy of their transcript to the Sociology department. *Exceptions to the minimum GPA will be considered on a case-by-case basis*. Each applicant will complete an interview with the graduate academic coordinator in sociology.

Students must also apply to the Graduate School for "combination senior" status, which allows them to take graduate courses in sociology. To continue in the program past the B.A., students must apply for full admission into the Graduate School and into the Sociology department's M.A. program.

Up to 9 hours of graduate course work may be applied to both the undergraduate and graduate programs.

Students in the accelerated B.A./M.A. program in sociology may choose either the thesis or the non-thesis option for the M.A.

Sport Commerce (Accelerated BS/MS)

An Accelerated Bachelor's/Master's (ABM) Program is offered by the KWS with a BS, Sport & Leisure Management (SLM)/MS in Sport and Hospitality Management with a concentration in Sport Commerce (SPRT). The ABM degree program SLM/ SPRT provides qualified UM senior undergraduate students the opportunity to satisfy course requirements, including elective hours, for the bachelor's degree in SLM that also may be subsequently applied on a prearranged basis to the master's degree in SPRT that may satisfy some of its degree requirements.

For students who work closely with their advisors in planning their course of study in SLM, this option offers the opportunity of simultaneously satisfying partial degree requirements for a bachelor's and a master's degree in an accelerated program of study. Upon completion of the undergraduate degree with a satisfactory undergraduate grade point average and a grade of "B" or better in all graduate courses completed, the student may move to full graduate student status, and the preapproved graduate courses taken as an undergraduate may be applied toward the pre-specified graduate program of study.

Students may use up to nine credit hours of designated courses in meeting the requirements of both the SLM bachelor's and SPRT master's degrees. Courses considered for this purpose may include 4000/6000-level cognates and/or 7000-level courses. Undergraduate students will register for the 6000- or 7000-level courses, but fees will be levied at the undergraduate rate. Students applying for this program must:

Admission Requirements

1. Have completed at least 18 hours of course work at UM before taking courses as part of the ABM program;
2. Have a UM GPA of 3.25 or better
3. Be within 30 semester hours of graduation
4. Meet with and receive written approval of the KWS Director, the program coordinator(s) of both the respective undergraduate and graduate programs, and the KWS Academic Services Coordinator in order for specific graduate courses being acceptable for dual credit in the undergraduate and master's degree programs;
5. Meet all requirements for admission into the specified graduate program (except for receipt of the undergraduate degree); and
6. Submit an application for admission to the ABM Degree Program, along with all necessary admissions documentation to the Graduate School by the deadline dates listed below.

A maximum total of nine semester hours of preapproved graduate coursework may be considered for dual credit in the undergraduate and graduate degree programs and a maximum total academic load of 15 hours during the semester in which any of the graduate courses are taken.

Final acceptance into the ABM program is contingent upon approval by the Dean of the Graduate School. Approvals apply only for the specific programs and courses designated in the application. Stipulated graduate courses for the ABM program are the only ones for which students in the undergraduate program are eligible to enroll, and completion of all allowable graduate courses is optional.

For application materials, contact the KWS Academic Services Coordinator at 901-678-2962. Students may not apply online for this program. Submit application materials to the KWS no later than the following dates, after which school-approved applications will be submitted by the school to the Graduate School for consideration:

- June 15 for fall term admission
- October 15 for spring term admission
- April 15 for summer term admission

Subsequent to admission into the ABM program and satisfactory completion of stipulated coursework approved for the designated programs of study, a maximum of 9 credit hours from the following graduate courses may be applied to the respective programs of study for both the undergraduate and graduate levels as follows:

Program Requirements

SLC 6001 - Sprt Sales/Rev Prod I

(3) Analyzes and produces skills essential to revenue production and sales processes commonly found in the sport business. PREREQUISITE(S): PREREQUISITE: Permission of instructor.

SLC 6002 - Sprt Sales/Rev Prod II

(3) Focuses on producing skills essential to managing existing customer sales commonly found in sport business. PREREQUISITE(S): PREREQUISITE: SLC 6001.

SLC 6622 - Fan Behavior/Rivalry

(3) Overview of factors that influence sport fan behavior including why people become fans of sport teams, influence of rivalry on fan behavior, and expected outcomes of fan behavior and rivalry.

or

SLC 6800 - Adv Computer Apps in SPRT **

(3) (HMEC, CSED 6602) Evolution, current application, and future potential of computers for sport commerce. PREREQUISITE(S): Permission of instructor.

SPRT 7010 - Research&Data Analysis in SHM **

(3) Overview of systematic, structured problem solving for decision making in sport and hospitality management services. Overview of research concepts, ethical issues, and process. Includes introduction to qualitative and quantitative research designs, data collection, analysis, and dissemination of findings.

SPRT 7321 - Theoretical Foundations **

(3) Influence of historical, philosophical, and social elements upon sport and leisure management policies, practices, and programs.

SPRT 7503 - Strat Mgmt Sprt Cmrce Org

(3) Analysis of theoretical and practical issues relevant to management and administration of sport and leisure organizations; application of organizational analysis, managing change and external environments; understanding and managing power and organizational culture of sport commerce.

SPRT 7600 - Readings in SPRT

(3) Directed readings in the area of sport and leisure; materials related to strengthen areas of study. May be repeated for a maximum of 9 credits. Grades of A-F, or IP will be given.

or

SPRT 7603 - Admin of Athletics

(3) Examination of sport within American higher education and related institutions. Designed to prepare students for a career in intercollegiate athletics management. Examination of athletic departments as well as the governing associations and related institutions that impact each other. Reviewing case studies from institutions of various institutional size, conferences, associations, and divisions, this course further provides students a comprehensive view of athletic administration procedures.

Political Science, (MA/JD)

Dual MA-JD Program

Program Admission

Admission to the dual program will require separate admission to each program. However, for applications to the joint program, the Political Science Department will accept LSAT scores in lieu of the GRE. Students are admitted into each program separately; completion of one degree is not contingent upon completion of both.

Program Requirements

Dual Credit

Students may earn up to a maximum of sixteen hours of dual credit for law courses taken at the law school. The following courses will qualify for both the JD and MA in Political Science:

Law Courses Required at Law School:

Constitutional Law 4 hours, Criminal Law 3 hours, Criminal Procedure I 3 hours

Law School Electives:

Administrative Law 3 hours, Criminal Procedure II 2 hours, Federal Courts A 2 hours, Federal Courts B 2 hours, Civil Rights 3 hours, Constitutional Law Seminar 2 hours, Tennessee Constitutional Law 2 hours, Jurisprudence 2 hours, International Law 3 hours, Comparative Law 3 hours, Immigration Law 3 hours, Environmental Law 3 hours

Other Requirements

1. For students in the dual program, their first year of law school must include only classes that are part of the JD program.
2. With the above exceptions, all the normal requirements for admission and graduation for a JD and for an MA in Political Science apply.

3. See the Law School's Academic Regulations, pp. 14-16, for current JD requirements.

Professional - Law Concentration, (MBA/JD)

Master of Business Administration

An MBA is designed for those students who are interested in managerial careers -- for those with leadership aspirations and abilities. Specific program objectives include:

1. acquisition of managerial-level knowledge of and skills in economics, financial reporting and analysis, operations, strategic use of science and technology, and creating customer and societal value in the global arena;
2. acquisition of managerial-level knowledge of and skills in creativity and innovation, leadership and team-building, ethics and law;
3. acquisition of managerial-level knowledge of and appreciation for the global implications of all business decision-making.

Program Admission

Applicants to all MBA programs must have:

1. An undergraduate degree from an accredited college or institution.
2. A Graduate School application for admission and the appropriate fee.
3. An official transcript from each college or university attended.
4. Applicants must present an acceptable score on a recent (five years or less) Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). Official GRE or GMAT scores are required for admission. Admission is competitive based on standardized test scores, cumulative grade point averages, (etc.).
5. A current resume
6. A personal statement of interest
7. Response to the required essay questions (available at http://www.mba.memphis.edu)
8. Two letters of recommendation

A separate application and additional information materials must be submitted for admission to the Executive concentration (www.memphis.edu/executivemba/) , the International MBA (www.memphis.edu/internationalmba/), or the CD-MBA concentration (www.memphis.edu/cdmba/). Business experience requirements include one year work experience for the MBA and at least five years professional or managerial experience for the Executive concentration.

Arrangements for taking the GMAT can be made by using www.mba.com. Arrangements for taking the GRE can made by writing to the Educational Testing Service, P.O. Box 6000, Princeton, New Jersey 08541-6000, by calling 1-866-473-4373, or by using www.ets.org.

Registration packets for the GRE may be obtained from the Testing Center on campus in John W. Brister (JWB) Hall room 112.

Applicants with at least five years of managerial experience may choose to submit a portfolio of professional accomplishments in lieu of a GMAT or GRE score. An admissions committee will review each applicant's portfolio of professional accomplishments to decide if a GMAT/GRE waiver is warranted. If an applicant's portfolio is not adequate to warrant a GMAT/GRE waiver, that applicant will be asked to submit a GMAT or GRE score, as per standard admission procedure. Applicants who request a GMAT/GRE waiver must submit their portfolios to the department academic advisor.

Qualified applicants may enter the MBA or the MBA with Law concentration in either the Fall or Spring semesters, while admission to the International MBA, the MBA with Executive concentration, and the CD-MBA is for Fall only.

MBA Preparatory Knowledge

Students entering the MBA programs are expected to be fluent in the language of business; students are expected to have a working understanding of key concepts in economics, finance, and accounting. In addition, students are expected to have a working proficiency in statistics. If students have deficiencies in the basic concepts and skills of business, they may be counseled (by the MBA Program Director and/or the MBA program staff) to take preparatory courses and/or secure self-paced review materials. There are no prerequisite courses to the MBA programs.

MBA Program Requirements

Each candidate for an MBA degree must complete a minimum of 33 semester hours of course work that include 30 hours of Core Knowledge and Skills. Students who desire a concentration are required to take an additional 15 hours of coursework beyond the 30 hour Core as per the specifications of each concentration. Students who do not desire an MBA concentration are required to take a 3 hour elective (approved by the MBA Program Director) beyond the 30 hour Core.

Core Knowledge and Skills (30 hours):

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

ACCT 7080 - Financial/Managerial Acct Mgrs **

(3) Use of accounting information by an organization's investors, creditors, regulatory authorities and managers; develops financial credit analysis skills useful in business decision making; analysis of accounting information useful for monitoring efficiency, quality, and timeliness of an operation; pricing and costing of products and services; planning and performance measurement.

ECON 7100 - Econ for Global Executive **

(3) Essential economic theory and its application to business and economic issues. Consumer behavior, managerial economics and strategy, market structure in a global context.

MKTG 7555 - Creativity and Innovation **

(2) Focused analysis and discussion of imaginative, creative processes used for innovation in business contexts; explores theoretical underpinnings of creativity and innovation, with special attention to environmental effects on

individual and group creativity; creativity knowledge is applied in areas of ideation, innovation management, and product design. May be repeated for a maximum of 6 credit hours when topics change

MGMT 7135 - Seminar in Leadership **

(2) Theoretical and practical consideration of leadership in high performing business organizations; detailed analysis of relevant organizational behavior concepts; particular focus on theories of motivation, styles of leadership, and emotional intelligence.

ACCT 7050 - Corp Governance/Bus Ethics **

(2) Detailed analysis of the role of corporate governance in the free enterprise system and capital markets; focused consideration of moral principles, ethical standards, and corporate code of business ethics.

SCMS 7313 - Global Operations Mgmt **

(3) (ISDS 7/8313) Acquisition, transformation, and distribution of goods and services within the global supply chain; covers concepts, tools, and strategies to design and manage operations, such as strategic implications, performance measurement, process management, sourcing, operations design, quality, inventory, logistics, enabling information systems and technology, and global issues among other topics.

SCMS 7110 - Intro to Business Analytics **

(3) (ISDS 7110) Statistical concepts and tools, optimization and simulation techniques useful in understanding, assessing, and controlling operations of business and society.

MKTG 7140 - Global Strategic Marketing **

(3) Marketing strategy and in-depth analysis of issues impacting global management of marketing, including: interrelationships among global business environments and strategies, analysis value creating global strategies, competitive intelligence gathering, customer segment analysis, integrated marketing technologies, customer relationship management.

MGMT 7160 - Global Strategic Mgmt **

(3) (7410) Decisions and actions for the development and implementation of long-term plans that determine organizational performance; role of top management decision making in establishing the firm's mission; focus on strategic analysis of alternative actions; evaluation of environmental conditions, industry characteristics, and organizational capabilities in determining strategy in a global context.

MBA with Concentration in Law (MBA/JD)

Core Knowledge and Skills courses are identical to the MBA program. Electives for this concentration are offered through the Cecil B. Humphreys School of Law and must be approved by the Director of MBA Programs in the Fogelman College. For JD/MBA students, the director of the MBA program will have the discretion to approve course substitutions of up to 9 credits from the following list of courses offered by the law school:

- Administrative Law (311)
- Antitrust (318)

- Arbitration/Labor (315)
- Banking Law (385)
- Bankruptcy Reorganization Seminar (442)
- Business Organizations II (319)
- Commercial Paper (323)
- Corporate Finance (384)
- Debtor-Creditor Relations (327)
- Employment & Labor Law Seminar (443)
- Environmental Law (328)
- Environmental Law Seminar (438)
- Comparative Law Seminar (441)
- Immigration Law (337)
- Labor Law (343)
- Land Use Planning (344)
- Non-Profit Organizations (370)
- Problems in Bankruptcy (354)
- Partnership Tax (352)
- Realty Transactions (358)
- Sales (359)
- Securities Regulations (361)
- Unfair Trade Practices (366)
- International Finance (338)
- International law (340)
- Transnational Legal Problems (365)

Note:

To facilitate customization, students are encouraged to consult with the director of the MBA program to add to this list in order to complement their desired course plan.

Public Health, (MPH/JD)

A program of study leading to both a Master of Public Health (MPH) from the School of Public Health and a Juris Doctorate (JD) from the Cecil C. Humphreys School of Law is offered. Students must meet the following requirements:

Admission Criteria and Process

Candidates for the program must meet the entrance requirements and procedures for admission to both the Juris Doctor and the Master of Public Health degree programs. Both programs must be informed by the student at the time of application to the second program that he/she intends to pursue the dual JD/MPH program.

Eligible Grades

Law School courses that are to be credited toward the MPH degree must carry a grade of C or higher but will not be counted in the grade point average for the MPH degree program.

Program Completion Requirements

A student must satisfy the curriculum requirements for each degree before either degree is awarded.

The MPH, a 42-credit program, will allow 15 credits of appropriate law courses to be credited toward both MPH and JD degrees.

Award of Degree

A student enrolled in the dual degree program may receive the JD degree or the MPH degree when he or she has satisfied the requirements for either degree.

Admission

A potential student must make separate application to, and be independently accepted to, both the JD and MPH programs. However, for applicants to the dual program, the School of Public Health will accept LSAT scores in lieu of the GRE. Application to both programs at the same time is encouraged. This dual program is designed for students who wish to complete both degrees simultaneously. Students are admitted into each program separately; completion of one degree is not contingent upon completion of both.

School Psychology, (MA/EdS)

MA and EdS Degree

This program is offered collaboratively with the College of Education and coursework from both areas is required. Students entering the program must complete both the MA and the EdS degrees, including an internship of one school year, in order to obtain an endorsement for licensure. The EdS degree is an advanced sequence in the specialty and is to be pursued only by persons who have completed the MA degree or comparable degree with a concentration in school psychology, or who already hold school psychology credentials. The program is accredited by the Council for the Accreditation of Educator Preparation (CAEP), and holds full approval from the National Association of School Psychologists (NASP)/CAEP. It is also formally approved by the Tennessee State Department of Education and leads to that agency's license in school psychology.

The overall goal of the MA/EdS program is that students will successfully complete the content domain-related requirements of the program, obtain credentialing for school-based practice from the Tennessee State Board of Education or comparable authority in other states, and become Nationally Certified School Psychologists (NCSP).

Program objectives are: (1) understanding of the nature of educational settings and ability to work cooperatively and effectively with parents, school personnel, and other professionals; (2) broad expertise in assessment and intervention at the individual, group, and system level; and (3) development of research and evaluation skills, including data analysis and oral and written communication of research.

Program Admission and Prerequisites

Enrollment in the program is limited. All application information must have been received by June 15 for an applicant to be considered for admission to the MA and EdS program in School Psychology. Applications will be reviewed as they are completed and applicants are encouraged to complete the application well in advance of the deadline. The following items are required for consideration for admission:

1. An undergraduate overall grade point average of 3.00/4.00. Applicants with an undergraduate GPA below this minimal level are admitted only if other supporting data are exceptional.
2. GRE scores (Verbal, Quantitative, and Written Analytical).
3. Letters of recommendation from at least three persons (professional educators, psychologists, and/or employers) familiar with the applicant's academic background, aptitude for graduate work in school psychology, and interest in working with school-age children in school settings.
4. Undergraduate preparation in Psychology and/or Education. It is strongly recommended that applicants have at least 18 undergraduate hours in Psychology and/or Education, with preparation in the psychology of learning, psychological appraisal/measurement, human growth and development, and foundations of education.
5. The program is pursued on a full-time basis and students enroll for 12 hours each semester. Enrolling for fewer hours is done with the permission of the program director.

Program Requirements—MA Degree (30 hours)

Psychology courses (22 hours):

PSYC 7800 - Intro School Psychology

(3) Survey of school psychology including historical foundations, roles and functions, school and community practices, standards and ethics, issues, technological developments; trends in credentialing and practice at the state and national level.

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 7802 - Child Disability/Family

(3) An overview of childhood disability and family considerations applied to psychological services in school and agency settings; agency and family visitations provide experiential learning in addition to theory and research. PREREQUISITE(S): Course on characteristics of exceptional children or permission of instructor.

PSYC 7803 - Psych Ed Assessmnt I

(3) Critical analysis of intellectual assessment including skill development in administration, scoring, and interpretation of major individual tests of intelligence; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit.

PSYC 7804 - Psych Ed Assessmnt II

(3) Critical analysis of personality assessment including skill development in administration, scoring, and interpretation of major personality assessment techniques; related psychoeducational instruments with emphasis on case study data collection and report writing. Restricted by Program or by Permit. PREREQUISITE(S): School psychology students must have a grade of 3.0 or higher in PSYC 7803.

PSYC 7805 - Psych Consultation

(3) This course teaches the theory and skills needed for providing consultation to students and families in educational and clinical settings; focusing on an ecological, problem-centered model, content will include factors influencing the consultation process at the individual, group, and system level. Restricted by Program or by Permit. PREREQUISITE(S): School psychology students must have a grade of 3.0 or higher in PSYC 7803 and PSYC 7804.

PSYC 7806 - Sch Psych Interventions

(3) Comprehensive review of psychosocial interventions for use with children, adolescents, and their families and educators; counseling theories; crisis response; dual emphasis on empirically-validated interventions and on the practical application of skills in educational and clinical settings. Restricted by Program or by Permit. PREREQUISITE(S): School Psychology students must have a grade of 3.0 or higher in PSYC 7803 and PSYC 7804.

Education courses (15 hours):

EDPR 7151 - Individual Differences **

(3) (EDPS 7151-8151) Theoretical foundations of instructional models designed to optimize student learning; topics include theories of intelligence, theories of learning, learning styles, gender differences, cultural differences, tracking and ability grouping, assessment, response to intervention, and the use of technology. All of these topics are explored as they relate to individual differences in learning.

EDPR 7511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor.

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

LEAD 6000 - Educ/Schl/Am Society

(3) (EDFD 7003-8003) Interdisciplinary study of educational policies and practices in American society; role and function of the school and the teacher; analysis of major problems and issues facing contemporary public education. Five hours of school visitation required. (Fulfills foundations requirement for graduate students seeking teacher licensure.)

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

Written and oral examinations

Participation in service experiences

Participation in service experiences in the Psychological Services Center or other agency placements for training purposes.

Program Requirements—EdS Degree (minimum 30 hours)

Psychology courses (9 hours):

PSYC 7301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

or

- Research elective

PSYC 7614 - Prac School Psyc

(3) Supervised experience in the application of psychological procedures in educational and clinical settings. A minimum of two practica are required. First practicum requires grades of 3.0 or better in PSYC 7803 and PSYC 7804; second requires 3.0 or better in PSYC 7805 and PSYC 7806, and S in first practicum. May be repeated for a maximum of 12 credits. Restricted by Program or by Permit. Grades of S, U, or IP will be given.

PSYC 8807 - Academic Interventions

(3) Comprehensive review of evidenced-based academic interventions in the areas of reading, writing, and mathematics; theoretical foundations of literacy and mathematics; techniques to promote effective learning environments; collaboration with teachers and other educational professionals. Restricted by Program or by Permit

Education courses (15 hours):

LEAD 6000 - Educ/Schl/Am Society

(3) (EDFD 7003-8003) Interdisciplinary study of educational policies and practices in American society; role and function of the school and the teacher; analysis of major problems and issues facing contemporary public education. Five hours of school visitation required. (Fulfills foundations requirement for graduate students seeking teacher licensure.)

EDPR 7511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor.

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 7151 - Individual Differences **

(3) (EDPS 7151-8151) Theoretical foundations of instructional models designed to optimize student learning; topics include theories of intelligence, theories of learning, learning styles, gender differences, cultural differences, tracking and ability grouping, assessment, response to intervention, and the use of technology. All of these topics are explored as they relate to individual differences in learning.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

and two electives from COUN, EDPR, SPED.

School Psychology Internship

School Psychology Internship (PSYC 8812, 6-12 hours) is taken at or near the completion of other work.

PSYC 8812 - Intern: School Psyc

(3-6) Supervised field placement in school and/or community agency settings; requires a minimum of 1200 hours for the EdS, at least half of which must be in a school setting. Minimum of 6 hours or a maximum of 12 hours applied toward the degree. Restricted by Program or by Permit. PREREQUISITE(S): Permission of program director, grades of S in all previous practica. Doctoral program students complete PSYC 8999. Grades of S, U, or IP will be given.

Written examination

Social Work, (MSW/MPH)

Dual MSW-MPH

A program of study leading to both a Master of Social Work (MSW) and a Master of Public Health (MPH) is offered. Students must meet the following requirements.

Program Admission

Admission to the dual program will require separate admission to each program. Students are admitted to each program separately and must meet ALL admissions criteria for each degree. Completion of one degree is not contingent upon completion of both.

Program Requirements

Students may earn up to a maximum of twelve hours of dual credit. The following courses will qualify for both the MSW and the MPH.

- PUBH 7132 may be substituted for SWRK 7026.
- PUBH 7985 may be substituted for either SWRK 7053 or SWRK 7054.
- Electives in either of the two programs may be shared.

Social Work, (MSW/MS)

Dual MSW-MS

A program of study leading to both a Master of Social Work (MSW) and a Master of Science in Instruction and Curriculum Leadership with a concentration in Special Education/Applied Behavior Analysis (MS) is offered. Students must meet the following requirements.

Program Admission

Admission to the dual program will require separate admission to each program. Students are admitted to each program separately and must meet ALL admissions criteria for each degree. Completion of one degree is not contingent upon completion of both.

Program Requirements

Students may earn up to a maximum of twelve hours of dual credit. The following courses will qualify for both the MSW and the MS.

- EDPR 7521 may be substituted for SWRK 7025.
- SPED 7519 may be repeated and may be substituted for SWRK 7053 or SWRK 7054.
- Electives in either of the two programs may be shared.

African American Literature Graduate Certificate

Certificate Program

The African American Literature certificate provides training to students interested in teaching African American Literature. The goal of the training is to 1) provide students with the preparation they need to teach African American Literature, and 2) give official recognition of preparation to help students qualify for jobs both within and outside the United States.

Admission Requirements

1. Students eligible to take courses as non-degree seeking students at the University of Memphis can complete the certificate requirements.
2. Applicants should send a letter of intent and two letters of recommendation to the Department of English Graduate Office. Applicants must also apply and send official transcripts to the University of Memphis Graduate School.

3. An overall minimum grade point average of 2.75 in English or a related area is recommended at the undergraduate level.
4. Since up to 15 credit hours from the certificate program may count toward the MA, MFA, or PhD degrees, it is expected that many already-admitted students will earn the certificate on their way to the MA, MFA, or PhD degree. Such students wishing to earn the Certificate must apply to the Certificate Program through the Graduate School.

Program Requirements

Fifteen (15) Semester Credit Hours

The certificate program requires completion of fifteen (15) semester credit hours, including:

Twelve (12) Credit Hours

Twelve (12) credit hours must be met by satisfactory completion of any four (4) of the following core courses:

ENGL 7326 - African American Literature of Memphis and the Mid-South

(3) Focuses on the rise of African American literature from the cultural matrix that became Memphis, a gathering point and crossroads for African American writers of all genres from 1867 Reconstructionist writings to the present southern Hip Hop Writers movement. May be repeated for a maximum of 9 credit hours

ENGL 7327 - Studies in Form and Genre: African American Literature

(3) Examination of the development of an African American literary genre such as African American poetry, the slave narrative, or the African American novel. Through study of both primary and secondary texts, students will gain an understanding of the historical context in which a specific African American literary genre emerged, as well as become conversant in the critical discussions in which these literary forms are defined and theorized. May be repeated for a maximum of 6 credit hours when topic changes. PREREQUISITE(S): ENGL 8805 and ENGL 8809

ENGL 7328 - Studies in Major Authors: African American Literature

(3) Study of the works of selected writers or cultural figures, as well as examination of the scholarship framing the author's career. May be repeated for a maximum of 9 credit hours when topic changes.

ENGL 7329 - African American Literature, Beginnings to 1850

(3) Survey of African American literature from the Colonial Period to 1850.

ENGL 7332 - Literature of the African Diaspora

(3) Examination of literatures of the African diaspora outside of the U.S. May include Anglophone literatures, as well as literatures taught in translation. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7335 - African American Literature, 1989-Present

(3) Survey of African American writing from 1989 to the present, situated in relation to recent developments in theory and other arts as well as contemporary cultural and political contexts.

ENGL 7336 - African American Literary Theory

(3) Examination of the critical movements in African American Literary Theory from 1900 to present.

ENGL 7337 - African-American Literature, 1930-1988

(3) Survey of African American literature from 1930-1988

ENGL 7338 - Amiri Baraka and the Black Arts Movement

(3) Studies in the work of Amiri Baraka and other writers of the Black Arts Movement.

ENGL 7468 - Literature of the Harlem Renaissance

(3) Examination of poetry, prose, and drama from the period known as the Harlem Renaissance" within the context of space

ENGL 7469 - African American Women Writers

(3) Examines the variety of ways black women writers have reclaimed the creative power of agency, emphasizing areas of difference as well as continuity within the African American literary tradition; combines considerations of context, both historical and political, with rigorous textual and theoretical analyses. May be repeated for a maximum of 9 credit hours when topic changes.

Three (3) Elective Hours

Three (3) elective hours may be selected from one of the following courses, provided it has an African American Literature component:

ENGL 7281 - Studies in Early American Literature

(3) Studies in selected topics in American Literature from European-American contact until 1800. May be repeated for a maximum of 6 credit hours when topic changes. May be repeated 10 times for a maximum of 30 credit hours Grades of A-F, or IP will be given.

ENGL 7294 - Studies in 19th-Century American Literature

(3) Studies in selected topics in American Literature from 1800-1900. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7391 - Modern American Novel

(3) Intensive study of American novels.

ENGL 7392 - American Poetry

(3) Intensive study of American poetry.

ENGL 7393 - American Drama

(3) Intensive study of American drama.

ENGL 7464 - Contemporary American Literature

(3) Authors, works, genres, and literary styles in development of contemporary American literature. May be repeated for a maximum of 9 credit hours when topics change.

Retention Requirements

Same as retention policies applicable to Department of English graduate degree programs.

Graduation Requirements

Following the deadlines in the semester in which they intend to graduate, certificate candidates must file an Apply to Graduate Card with the Graduate School and a Candidacy form with the Graduate Coordinator for English.

Analytical Chemistry Graduate Certificate

Admission Requirements

Students will have a U.S. equivalent bachelor's degree with a satisfactory record of undergraduate coursework in chemistry or related areas. GRE is not required.

Program Requirements

CHEM 6211 - Instrumntl Analysis

(3) Topics in modern analytical instrumental analysis; atomic and molecular spectroscopy, mass spectrometry, electroanalytical chemistry and chromatograhpy. Three lectures hours per week. PREREQUISITE(S): CHEM 3211 with at least C-.

CHEM 6416 - Molecular Spectroscopy

(3) Theory, instrumentation and applications of NMR, FT-IR, mass spectrometry, and UV-visible spectroscopy. Application and theory of other spectroscopic methods will be discussed briefly. Three lecture hours per week. PREREQUISITE(S): CHEM 3310 and 3411.

CHEM 7211 - Adv Analytical Chem I

(3) Advanced treatment of topics in atomic and molecular spectroscopy, mass spectrometry, and surface analysis techniques. PREREQUISITE(S): CHEM 6211 or permission of instructor.

CHEM 7212 - Adv Analytical Chem II

(3) Advanced treatment of topics in electrochemical methods and separation techniques. PREREQUISITE(S): CHEM 6211 or permission of instructor.

Graduation Requirements

12 credit hours with a cumulative GPA of at least 3.00.

Retention Requirements

The graduate certificate program will follow the program retention plans outlined in the Chemistry Graduate Handbook.

Applied Lean Leadership Graduate Certificate

Graduate Certificate

Program Admission

Students must have completed a bachelor's degree with a cumulate grade point average of at least 2.5 and apply for admission to the Graduate School with the classification of "Graduate Certificate." To apply students must submit:

1. Transcripts of undergraduate degree program and any prior graduate study to Graduate Admissions;
2. A letter describing their intent to pursue the certificate and its relevance to their career goals to the Graduate Coordinator for the Department of Engineering Technology;
3. When seeking to waive a course prerequisite, two professional letters of recommendation describing pertinent work experience must be sent to the Graduate Coordinator for the Department of Engineering Technology.

Program Requirements

Completion of 12 semester hours distributed as follows:

Required courses: Total 6 credits

TECH 7105 - Project Plan & Scheduling **

(3) Contemporary methods used in project planning and scheduling; emphasis on critical path method (CPM) with computer application; solution of actual problems stressed. Deep dive through the Project Management Body of Knowledge (PMBOK) is accomplished along with a progression of project management scenarios to analyze.

TECH 7401 - Lean Fundamentals **

(3) Basic concepts and terminology of Lean, including review of published seminal works and case studies. Concepts covered include: kanban, visual factory & 5S, kaizen, standard work, takt time, flow, poke-yoke, PDCA, SMED and other tools & techniques of Lean.

Note:

*Course prerequisites will be waived for students who have demonstrated relevant work experience

Electives: 6 credit hours chosen from the following:

TECH 7402 - Adv Quality Control

(3) Methods for improved process and product design; cost of quality, measurement systems analysis, process capability, design of experiments and analysis, continuous improvement and review of quality standards. Grades of A-F, or IP will be given.

TECH 7404 - Wrld/Clas Manfct Concpt **

(3) World-class manufacturing and Lean concepts including Value Stream Mapping, Training Within Industry (TWI), Standard Work, 5S tools, Ergonomics, Human factors and Cellular Manufacturing. COREQUISITE: TECH 7401

TECH 7406 - Material Handling/Auto

(3) Analysis, design, and evaluation of traditional and contemporary approaches to materials handling; analytical and computer procedures for designing handling systems. Grades of A-F, or IP will be given.

TECH 7408 - Production Processes

(3) A coordinated study of manufacturing processes and equipment, operation sequence planning, economic aspects of equipment selection, tooling and processing a product from product design to final assembly for quantity production.

TECH 7414 - Manuf Strat/Syst Design

(3) Manufacturing strategy and systems design, including concepts of value stream mapping, theory of constraints, lean and six sigma (TLS) combined use, implementing and sustaining change and overcoming resistance, executive alignment and strategy. COREQUISITE(S): TECH 7401

Note:

*Course prerequisites will be waived for students who have demonstrated relevant work experience

Students may enroll in up to two electives from the Fogelman College of Business and Economics. Selection of the two business electives must be approved by the student's academic advisor and the Associate Dean of the Fogelman College.

Graduation:

1. Students must file and "Apply to Graduate" with the Graduate School at the beginning of the semester in which they will complete their 12-semester-hour requirement for the certificate.
2. A minimum grade of "B" in each course applicable to the certificate and a minimum overall GPA of 3.0 is required.
3. Students must also submit a Graduate Certificate Program Candidacy Form to the Engineering Technology Graduate Coordinator in order to verify information and collect approvals and signatures required for the Graduate School.

Augmentative and Alternative Communication (AAC) Graduate Certificate

Program Description

The purpose of the "Augmentative and Alternative Communication (AAC)" certificate is to provide training to practicing speech-language pathologists (SLPs) and teachers on supporting the language development of children with significant language disabilities. The certificate requires a firm background in typical language development as well as language disorders and then moves on to applying this knowledge to the specialized area of AAC. Once these prerequisites are complete, the certificate allows for an elective in a related field.

According to the 2016 Schools Survey data from ASHA, 55.1% of practicing SLPs have students who have complex communication needs and require AAC on their caseloads. And yet, according to a 2012 survey by Anderson and colleagues, 85% of SLPs don't feel they have the knowledge of AAC to meet the needs of their caseload. This certificate offers these clinicians the opportunity to enhance their knowledge and experience working with individuals with complex communication needs and apply this information to their daily work demands.

Admission Requirements

To be eligible for the Graduate Certificate Program in Augmentative and Alternative Communication:

1. Applicants must enroll as a graduate student at the University of Memphis or have a completed Master's degree in Speech Language Pathology or a related field with a GPA of at least 3.00.
2. Applicants who do not speak English as their primary language are required to meet the University's minimum TOEFL score.
3. To apply, students must submit an application form, a current or completed graduate transcript, and a one-page letter of intent to the School of Communication Sciences and Disorders for review. Letters of intent should describe reasons for pursuing the certificate, relevant background and experiences, and/or professional goals or plans.
4. Admission to this certificate program does not imply acceptance into any graduate program at the School of Communication Sciences and Disorders or within the university.

Program Requirements

Students are required to take the 3 required courses listed below along with one 3-hour elective. If the student has two years of experience working as a speech-language pathologist, AUSP 7006/AUSP 8006 and AUSP 7300/AUSP 8300 can be waived, and these students would be required to complete a total of 9 instead of 12 credits. These credits will include AUSP 7308/AUSP 8308 (required), one elective related to Autism, and any other elective from the list below:

Required Courses (9 credit hours):

AUSP 7006 - Lang & Speech Devel

(3) Normal acquisition and maintenance of speech and language, theoretical formulations about language and speech behavior, and approaches to its study. Students observe and describe the language of children of various ages whose development is within normal range.

AUSP 8006 - Lang & Speech Devel

(3) Normal acquisition and maintenance of speech and language, theoretical formulations about language and speech behavior, and approaches to its study. Students observe and describe the language of children of various ages whose development is within normal range.

AUSP 7300 - Lang Dis In Children

(3) Perceptual, social, and cognitive correlates of language disorders associated with specific language impairment, phonological disorders, mental retardation, autism, and hearing impairment; assessment, diagnosis, and treatment of language disorders in young children (0-6 years).

AUSP 8300 - Lang Dis In Children

(3) Perceptual, social, and cognitive correlates of language disorders associated with specific language impairment, phonological disorders, mental retardation, autism, and hearing impairment; assessment, diagnosis, and treatment of language disorders in young children (0ars).

AUSP 7308 - Augmentative/Alternatv Comm

(3) Comprehensive overview of theoretical and practical issues related to use of augmentative and alternative communication (AAC) systems; assessment and intervention strategies for children and adults in need of AAC.

AUSP 8308 - Augmentative/Alternatv Comm

(3) Comprehensive overview of theoretical and practical issues related to use of augmentative and alternative communication (AAC) systems; assessment and intervention strategies for children and adults in need of AAC.

Electives (3 credit hours):

AUSP 6205 - ASL for Speech, Audio, & Educ

(3) This course presents (1) basic vocabulary and grammar of American Sign Language appropriate for use in the classroom and therapy setting and (2) specific topics, information, and strategies that provide exposure to elements of Deaf Culture and the Deaf community for speech-language pathologists, audiologists, and educators.

AUSP 6300 - Autism: Communic & Socializtn

(3) Nature and origin of autism, presenting up-to-date information about proposed causes, both genetic and environmental. The course will also provide a view of progress made in treatment of autism, especially when identification of the disorder can be made early in life.

AUSP 7212 - Autism Spect Disord/Rel Disabl

(3) Review of characteristics and etiology of autism spectrum disorders, including strategies for language and communication evaluation, assessment, and intervention with children, adolescents and adults with autism spectrum disorders and related severe communicative disabilities.

AUSP 7302 - Lang Disordrs/Adults I

(4) This course addresses communicative and cognitive deficits associated with focal and non-focal neurological disease; differential diagnosis, assessment, and management of adults with aphasia and right hemisphere communication disorders; traumatic brain injury, dementia, and other disorders. PREREQUISITE(S): AUSP 7003/AUSP 8003 and AUSP 7010/AUSP 8010, or permission of instructor.

AUSP 7303 - Lang Disordrs/Adults II

(3) Communicative and cognitive deficits associated with nonfocal neurological disease; differential diagnosis, assessment, and management of individuals with traumatic brain injury, dementia, and other disorders. PREREQUISITE(S): AUSP 7003/AUSP 8003 andAUSP 7010/AUSP 8010 or permission of instructor

PSYC 7802 - Child Disability/Family

(3) An overview of childhood disability and family considerations applied to psychological services in school and agency settings; agency and family visitations provide experiential learning in addition to theory and research. PREREQUISITE(S): Course on characteristics of exceptional children or permission of instructor.

PSYC 8802 - Child Disability/Family

(3) An overview of childhood disability and family considerations applied to psychological services in school and agency settings; agency and family visitations provide experiential learning in addition to theory and research. PREREQUISITE(S): Course on characteristics of exceptional children or permission of instructor.

Retention/Graduation Requirements

1. Students must complete all three of the required courses (9 credits) and one elective (3 credits) for a total of 12 credits with a minimum grade of B (GPA = 3.00) in each course.
2. In the semester of graduation, the student must submit an Intent to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the Director of Graduate Studies by the deadline specified by the Graduate School.

For additional information contact

Lisa Lucks Mendel, PhD
Associate Dean of Graduate Studies
901.678.5800
lmendel@memphis.edu

Additional References

American Speech-Language-Hearing Association. (2016). 2016 Schools Survey report: SLP caseload characteristics.

Available from www.asha.org/research/memberdata/schoolssurvey/.

Anderson, A. (2012). ATIA Survey Data. Presented at the annual convention of the Assistive Technology Industry Association; January 26 –28; Orlando, FL.

Autism Studies Graduate Certificate

Graduate Certificate

The purpose of the Graduate Certificate in Autism Studies is to provide practical educational training to individuals who are presently working within healthcare, adult disability and/or educational settings. This certificate course sequence will provide a) an overview of autism spectrum disorders, b) instruction in making evidence-based treatment decisions, and c) advanced instruction in designing, implementing, and monitoring evidence-based instructional and behavior/classroom management programs.

Program Requirements

SPED 7600 - Intro to Aut Spec Dis

(3) This course will provide an overview of autism spectrum disorders from the diagnosis and early intervention phase to working with families, therapists, and staff in both educational and community settings. The course will be grounded in research-based theory and will assist the learner with evidence-based decision making from a practical standpoint. Legal and ethical issues will be discussed related to diagnosis, treatment selections, and working effectively with families.

SPED 8600 - Intro to Aut Spec Dis

(3) This course will provide an overview of autism spectrum disorders from the diagnosis and early intervention phase to working with families, therapists, and staff in both educational and community settings. The course will be grounded in research-based theory and will assist with the learner with evidence-based decision making from a practical standpoint. Legal and ethical issues will be discussed related to diagnosis, treatment selections, and working effectively with families.

SPED 7601 - ASD: Class Mgmt and Design

(3) This course will introduce common behavior management strategies shown to be effective for children with autism. These strategies will focus on both individual and group contingencies. Further, this course will discuss functional behavior assessment interpretation and treatment design, as well as data collection methods. PREREQUISITE(S): SPED 7600 (Introduction to Autism Spectrum Disorders) and SPED 7602 (ASD: Instruct Methods I).

SPED 8601 - ASD: Class Mgmt and Design

(3) (ISDS 7020) This course will introduce common behavior management strategies shown to be effective for children with autism. These strategies will focus on both individual and group contingencies. Further, this course will discuss functional behavior assessment interpretation and treatment design, as well as data collection methods.

SPED 7602 - ASD: Instruct Methods I

(3) This course will introduce evidence based methods of instruction specific to teaching academic and social skills to children with autism. Additionally, this course will focus on distinguishing between evidence-based and unsupported but common strategies in treatment of autism.

SPED 8602 - ASD: Instruct Methods I

(3) (ISDS 7080) This course will introduce evidence- based methods of instruction specific to teaching academic and social skills to children with autism. Additionally, this course will focus on distinguishing between evidence-based and unsupported but common strategies in treatment of autism. Course may be repeated for a maximum of 6 credits.

SPED 7603 - ASD: Instruct Methods II

(3) This course will introduce methods of instruction specific to facilitating communication for students with autism. Additionally, this course will focus on assistive technologies related to the academic instruction, communication (AAC) and behavior modification of students with autism. Course content will emphasis data driven instructional practice, manual and technology-based data acquisition practices, data presentation and using data to drive instructional practice. PREREQUISITE(S): SPED 7600 7600 (Intro to Autism Spectrum Disorders),SPED 7601(Classroom Design and Data Collection), SPED 7602 (ASD: Instruct Methods I).

SPED 8603 - ASD: Instruct Methods II

(3) (ISDS 7110) This course will introduce methods of instruction specific to facilitating communication for students with autism. Additionally, this course will focus on assistive technologies related to the academic instruction, communication (AAC) and behavior modification of students with autism. Course content will emphasis data driven instructional practice, manual and technology-based data acquisition practices, data presentation and using data to drive instructional practice.

Graduation Requirements

In order to graduate with the certificate, students must:

1. Complete all four required courses with an average grade of B (3.0) or higher, for a total of 12 credit hours.
2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to Graduate Analyst in Ball Hall 215 (3798 Walker Ave., Memphis, TN 38152) by the deadline specified by the Graduate School.

Aviation Human Factors Graduate Certificate

This program is for pilots and others in aviation to further their knowledge of human factors in aviation.

Admission Requirements

Applicants must have an undergraduate degree and a GPA of 2.75 or higher. The applicant must also submit:

1. Resume: The applicant's resumé should include the applicant's established employment history in the aviation industry, academic history, current contact information, and any additional relevant information, such as professional skills, training, presentations, publications, etc.
2. Reference letter: This letter must come directly from the reference and should come from someone who has evaluated the applicant's work. (This can be either in their capacity as an employee or as a student.)
3. Personal essay: Applicants must submit a brief, original essay (approximately 500-600 words) that addresses why they chose to apply to the program and how the program will help them achieve specific professional goals.

Program Requirements

The Graduate Certificate in Aviation Human Factors requires a 3 credit Foundations course, 12 credits of electives, and successfully passing the Comprehensive Exam.

Foundation

AVIA 7110 - Foundations AV Human Factors

(3) This course includes elements of pilot performance, human factors in aircraft design, and vehicles and systems as they relate to the human-machine interface. Topics also include flight discipline, pilot proficiency, team-environment-risk, situational awareness, and decision making.

Electives

AVIA 7111 - Cognitive Ergonomics in AV

(2) This course introduces students to the basic concepts of human information processing, and to illustrate its application in the applied aeronautical context. Students are then made familiar with the concepts of workload and situation awareness, associated measurement techniques and their importance in all aspects of system design and evaluation. Students will also be exposed to the fundamental aspects of data collection and analysis.

AVIA 7113 - Judgment & Decision Making AV

(2) This course will introduce students to the major schools of thought in the study of decision making and the processes for improving aviation decision making. Students are then presented with information on the nature of error, its root causes and methods by which it may be mitigated. These concepts will be illustrated within an aviation context where applicable.

AVIA 7115 - Selection & Beh Health in AV

(2) This course will introduce students to the psychology of individual differences, in particular the constructs of personality and intelligence and their measurement. The areas of stress, psychosocial and environment stressors within and aviation environment will be discussed. The effects of such stressors on human performance will be addressed.

AVIA 7117 - Flight Deck Ergonomics

(2) This course will provide an introduction to the human factors issues linked to flight deck design. The module will provide students with an understanding of the human factors basis of the design of displays and controls, the use of automation, human computer interactions on the commercial flight deck.

AVIA 7119 - Training and Simulation

(2) This course will provide students with an overview of the training life-cycle, training methods and media, and the evaluation of training. The application of the concepts will be illustrated in the applied aeronautical context as appropriate. The role of simulation in an aviation training context will also be discussed.

AVIA 7121 - HF Techniques and Methods

(2) This course will introduce the principles of Crew/Team Resource Management. It will include the scientific literature behind non-technical skills (e.g. decision making, communication, leadership/team working, situation

awareness and fatigue management) relevant in real-world modern environments. Students will also be introduced to the process of identifying, training and assessing Non-technical Skills in the applied aeronautical context.

Capstone

AVIA 7998 - Comprehensive Exam

(0) The comprehensive exam is completed in the final semester of the program in which the student expects to graduate. A grade of "pass" is required to graduate. The comprehensive exam is a test of the student's comprehension of the body of knowledge for the aviation discipline. Grades of S/U, or IP will be given.

Graduation Requirements

Students must successfully pass all courses (15 credits) in the program in line with all Graduate School requirements.

Retention Requirements

Students will be required to meet all Graduate School retention requirements to stay in the program.

Bioinformatics Graduate Certificate

Graduate Certificate

The Certificate in Bioinformatics will provide training in genomics, statistics and computer science to students with a background in other scientific disciplines. The goals of the program are to provide:

1. Knowledge of probability and statistics, statistical tools, and application of statistical methods to genomics and health related areas.
2. Knowledge of computer programming, data structures and algorithm design.
3. Knowledge of genomic technologies and analysis of genomic data.

Admission Requirements:

To apply for admission, students must fill out the University of Memphis online application. Applicants must have a bachelor's degree in science or engineering with a minimum GPA of 2.75. International students must have a TOEFL score of 550 (paper-based), 213 (computer-based), or 79 (internet-based).

Applicants must also submit the following documents to the Bioinformatics program coordinator (bioinformatics@memphis.edu):

1. A one page personal statement about their research interests, prior preparation and experience related to the objectives of the program, and long-range career/professional plans.
2. Two letters of recommendation.

Students who are currently enrolled in a Master's or Doctoral program at the University of Memphis or other universities will be eligible for admission into the Bioinformatics Certificate Program based on the recommendation from their graduate advisor.

Program Requirements:

Completion of 15 semester hours distributed as follows:

COMP 6001 - Intro to Python Programming

(3) Basic concepts in computer programming. Incorporates object oriented concepts, variables, flow control statements, arrays and lists, debugging and testing. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor. NOTE: This course may not be used to fulfill requirements for the Computer Science major or Computer Science minor PREREQUISITE(S): permission of instructor; COMP 2700 recommended.

or

BINF 7201 - Special Topics in Bioinformatics

(3) PREREQUISITE(S): permission of instructor.

COMP 6030 - Desgn/Anlys Algorithms

(3) Asymptotic behavior of programs; basic paradigms in algorithm design: greedy, divide-and-conquer, dynamic programming; analysis of efficiency, and optimality of representative algorithms, including graph, pattern matching, numerical, randomized, and approximation algorithms; approaches to lower bound analysis; basic parallel algorithms. NOTE: Computer Science majors may not use this course to fulfill degree requirements. NOTE: Computer Science majors may not use this course to fulfill degree requirements PREREQUISITE(S): COMP 2150 and 3410 or permission of instructor.

BIOL 6490 - Intro Genomics/Bioinformatics

(3) Survey of modern genomics and bioinformatics approaches used to gain a deeper understanding of biological systems; brief review of basic chemistry, molecular and evolutionary biology; experimental and bioinformatics methods for predicting RNA folding, generating and analyzing genome-scale DNA sequence data, and performing functional genomics analyses of gene expression, DNA methylation, and chromatin immunoprecipitation data; real-world applications of genomics and bioinformatics in medicine and agriculture. Three lecture hours per week. PREREQUISITE(S): BIOL 3130 and BIOL 3072, or permission of instructor.

or

BINF 7701 - Adv. Genomics & Bioinformatics

(3) Accelerated introduction to molecular and genomic sciences, covering basic concepts of gene and protein structure/function, genome sequencing and annotation, single nucleotide polymorphism, genetic variation, gene expression, and functional genomics and systems biology. PREREQUISITE(S): Permission of Instructor.

MATH 6611 - Intro Applied Statistics

(3) (6671) Binomial, hypergeometric, Poisson, multinomial and normal distributions; test of hypotheses, chi-square test, t-tests, F- test, nonparametric tests; correlation analysis.Credit earned for this course may not be applied toward requirements for the Mathematical Sciences major. Students who have a calculus background are encouraged to take MATH 6635 or 6614 instead of this course. PREREQUISITE(S): 6 hours in mathematics at level of MATH 1710 or above.

or

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

or

PUBH 7153 - Biostat. in Bioinformatics

(3) This course is offered every other year to Master (7000 level) and Doctoral (8000 level) students. This course focuses on statistical methods in application to bioinformatics data and other large data sets with similar features. Students will be introduced to R programming, a commonly used programming language implemented in bioinformatics data analyses. This will be an applied course with focus on learning the methods, applying the methods, and programming in R.

or

BIOL 7708 - Special Topics in Biology

(1-4) Current topics of special interest in biology PREREQUISITE(S): Permission of instructor.

Graduation Requirements:

1. Student must complete all five required courses with an average grade of B (3.0) or higher, for a total of 15 credit hours.
2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Business Information Assurance Graduate Certificate

The Business Information Assurance (BIA) certificate prepares students to perform critical activities needed to properly manage an organization's assets related to a wide range of information security/privacy threats. Training related to effective managerial methodologies has become increasingly important in planning for possible breaches of security and handling resulting problems.

Admission Requirements

1. Same as College and University requirements.
2. The certificate can be pursued concurrently with other graduate programs at the University.
3. Non-degree seeking graduate students may also pursue this certificate program of study. To be approved for the program, these students must submit evidence of this non-degree-seeking graduate student status, along with the completed application form, to the Department of Business Information and Technology for review.
4. Acceptance into the certificate program is not an implied acceptance into any master's degree program.

Program Requirements

This program requires completion of 12 semester credit hours, as follows:

Six hours (two courses) from this group:

MIS 7455 - Cyber Ethics in IT

(3) Business ethics and computer ethics issues and concepts in an online environment, including relevant topics such as privacy, freedom of expression, intellectual property, software development and testing, and related IT management decisions. PREREQUISITE(S): 9 hours of graduate credit or permission of instructor.

MIS 7670 - Information Security Mgmt

(3) Comprehensive survey of technical and managerial aspects of computer and network security in the business environment. Emphasis is on managerial issues and decisions related to selecting and managing all aspects of information security.

ACCT 7242 - Advanced Auditing

(3) (0551)(6241). Auditing of computer-based accounting systems; emphasis on audit software and computer auditing techniques used to evaluate accounting system controls and test accounting data integrity; nature and use of expert systems in accounting with emphasis on their use as an audit tool. PREREQUISITE(S): ACCT 3120 PREREQUISITE(S) or COREQUISITE(S): ACCT 4240.

ACCT 7241 - Internal Auditing **

(3) Authoritative internal audit standards, ethics of internal auditors, techniques of efficiency and effectiveness audits. PREREQUISITE(S): ACCT 4240.

*COMP 7900 - Cyber Ethics may be substituted for MIS 7455.

Six hours (two courses) from this group:

MIS 7160 - Mobile Application Development

(3) Introduction to the technology of computing; processor operation including fetch/execute, input/output, instruction types, interrupt handling, addressing schemes and multiprocessing; business systems software including operating systems from single-user single-task to multi-user multitask; major current operating systems.

MIS 7615 - Enterprise Network & Security

(3) Introduction to concepts and terminology of data communication, network design, and distributed information systems; topics include equipment protocols and architectures, transmission alternatives, the communications environment, regulatory issues, and network pricing and management.

MIS 7650 - Info Syst Global Enterprise **

(3) Information systems and their roles and applications in global enterprises, including conceptual foundations, business applications, impacts on organizational behavior, and how IT may be used to implement global strategies to gain competitive advantage.

FIR 7155 - Global Financial Mgmt **

(3) Theory and practice of modern financial theory as currently practiced in an interdependent global economy by corporate financial managers, financial consultants, and managers of financial institutions.

ACCT 7420 - Acct Databases/Systems

(3) Accounting systems analysis and design; advanced system analysis tools; integrating accounting and computer controls; ACCESS; queries; forms and reports; achieving database normalization; development of working accounting model; project; lab environment. PREREQUISITE(S): ACCT 3110.

CJUS 6180 - Corp/White Collar Crime **

(3) Organizational and occupational crime in comparison to other types of criminality; emphasis on causes, frequency, control, and social impact. Grades of S, U, or IP will be given.

Graduation Requirements

1. To obtain the certificate, a student must complete four courses, with two selected from the first group of courses and two selected from the second group courses, for a total of 12 credit hours.
2. A minimum grade of B is required for each of the four courses.
3. In the semester of graduation, the student must submit an Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Business Project Management Graduate Certificate

Graduate Certificate

Graduate certificate program in Business Project Management prepares individuals for project management team work and to be project managers with specific emphasis on the integration of information systems and business processes. This certificate program will address the importance of project management education and address the need for trained professionals in project management.

The objectives of the certificate program include: Provide knowledge of the theoretical and practical concepts of managing IT projects, Understand and be able to perform project management activities, Understand and be able to use project management tools and techniques, Understand the role of project managers in the modern organization, Explore unique and particular challenges resulting from rapid technological change in dynamic business environments, and Exploring the role of the IS business professional in change management

Admissions Requirements:

Same as College and University requirements.

The certificate can be pursued concurrently with other graduate programs at the University.

Non-degree seeking applicants must submit a brief (1-2 pages) statement that describes educational and work experiences in business, including their background in project management. GMAT and GRE scores are not required. However, acceptance into the certificate program is not an implied acceptance into any master's degree program.

Program Requirements:

The following 4 courses must be satisfactorily completed for a total of 12 hours of credit.

One course from this group:

MIS 7605 - Bus Database Systems

(3) Management of database for effective support of management information systems. Topics include characteristics and design of schemas and subschemas for hierarchical, network, and relational data models.

COMP 7115 - Database Systems

(3) Review of the relational model; query processing and optimization; physical database design and tuning; transaction processing; concurrency control; crash recovery; database buffer management; database security. PREREQUISITE(S): COMP 6730 or COMP 6720 or permission of instructor.

One course from this group:

MIS 7610 - Sys Analysis & Design **

(3) Comprehensive structured approach to application system development process; emphasis on requirements analysis, logical specifications, structured design, and implementation of information systems.

COMP 7012 - Fndtns/Software Engr

(3) (Same as EECE 7012-EECE 8012) (Same as EECE 7012-8012). Covers project management; software disciplines (requirements, analysis, design, implementation, testing); software modeling notations; mapping designs to code. Students work in teams to develop a significant software system. PREREQUISITE(S): COMP 7713 or COMP 7715 or permission of instructor.

COMP 8012 - Fndtns/Software Engr

(3) (Same as EECE 7012-EECE 8012) (Same as EECE 7012-8012). Covers project management; software disciplines (requirements, analysis, design, implementation, testing); software modeling notations; mapping designs to code. Students work in teams to develop a significant software system.

Both courses below:

MIS 7671 - Project/Change Mgmt

(3) Overview of theoretical and practical concepts in management of IT projects; explores unique and particular challenges resulting from rapid technological change and dynamic business environments; difficulty of managing changes in organizations resulting from introducing or revising information systems, emphasizing change management

role of the IS specialist. PREREQUISITE or COREQUISITE: MIS 7610 or equivalent PREREQUISITE(S) or COREQUISITE(S): PSYC 7610 or equivalent

MIS 6672 - Project Mgmt Tools/Lead

(3) Computer-based project management tools and project management leadership roles and techniques.

Graduation Requirements:

The student must complete all 4 required courses with an average grade of B (3.0) or higher, for a total of 12 credit hours.

In the semester of graduation, the student must submit an Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Career and College Counseling Graduate Certificate

Graduate Certificate

Admission to program

1. Students currently admitted to a graduate program at the U of M or other university in the social or behavioral sciences, or students already holding a graduate degree in the social or behavioral sciences, may apply for admission to the Graduate Certification Program in Career and College Counseling.
2. Non-degree seeking students who hold a bachelor's degree or higher who meet the University of Memphis's graduate school requirements. Students must apply to both the certification program and graduate school as a non-degree seeking student.

Application Process

1. In state student must submit copy of their Tennessee Bureau of Investigations background check. http://www.memphis.edu/tep/pdfs/TBI-BackgroundCheck.pdf
2. Out of state students must submit proof of a commensurate state endorsed background check.
3. If you are eligible to apply for the certification program
    - Complete the certification application
    - Submit two letters of recommendation from a current or previous employers, and or previous university instructor
    - Student GRE scores
    - A sealed copy of official student transcripts
    - Copy of background check
    - A letter describing the reasons why the student is applying for the certification programs that discusses how the program supports students prior interests and experience and future career goals.
4. For students with no graduate program experience, a minimum undergraduate grade point of average of 2. 7 5 is recommended for admission at the undergraduate level.

Program Requirements

The online program is designed to be completed in one year across four semesters: Summer I & II, Fall and Spring. The classes are designed to build student's knowledge base incrementally and it is recommended that courses are taken in the following sequence

General Education including transfer of 19 hour pre-major paths

Major Field Core:

- COUN 7824-COUN 8824 College Admission Counseling (3 hours) Summer I
- COUN 7825-COUN 8825 Strategies for College and Career Counseling in K-12 Settings (3 hours) Summer II
- COUN 7826-COUN 8826 School Counseling to Close the Achievement Gap (3 hours) Fall
- COUN 7827-COUN 8827 Capstone Course in College and Career Counseling (3 hours) Spring

Note:

Students concurrently enrolled in the Masters program or working toward school counseling licensure can substitute this capstone course for a Secondary Practicum or Internship class. Students electing this option can expect to spend time in a high school and college setting working alongside the college counselors, academic advisors, and career counselors.

Clinical Mental Health Counseling Graduate Certificate

The University of Memphis' Certificate in Clinical Mental Health Counseling is intended for individuals who are currently pursuing a Masters degree in school counseling at The University of Memphis, or have obtained a Masters degree in school counseling, rehabilitation counseling, or college counseling. The certificate will allow students to complete Tennessee's Licensed Professional Counselor (LPC) educational requirements as well as the State's Mental Health Service Provider (MHSP) educational requirements.

Admission Requirements

1. Hold a graduate degree in counseling
2. Currently enrolled in the School Counseling or Rehabilitation Program at The University of Memphis
3. Minimum Masters GPA of 3.0

Program Requirements

COUN 7710 - Addiction Counseling

(3) Overview of substance use and addictive behaviors including common legal and ethical issues, prevention, assessment, diagnosis, treatment planning and interventions with an emphasis on the Transtheoretical Stages of Change model and Motivational Interviewing techniques. PREREQUISITE(S): COUN 7571 and enrollment in a COUN or CPSY degree program or consent of instructor.

COUN 7885 - Legal/Eth Issues Coun

(3) (CPSY 7785-8785) (CPSY 7785-8785). Examination of existing and needed legislation affecting counseling and psychology, review of critical court cases; ethical standards of professional counseling and psychological organizations; survey of responsibilities and liabilities.

COUN 7630 - Clinical Mental Health Coun

(3) Overview of skills and knowledge unique to mental health counselors; topics include but not limited to: mental health service delivery, assessment for mental disorders, psychotropic medications, the history of mental health counseling, advocacy, social justice, and preventive mental health concepts. PREREQUISITE(S): CJUS 7128.

COUN 7632 - Intern Cmty/Mntl Hlth

(4-9) (7698-8698) (7698-8698). Supervised counseling experience in an appropriate community/mental health setting. The student will be involved in agency services for a minimum of 300 hours (half-time, for 4 hours) or 600 hours (full-time, for 9 hours). May be repeated by half-time students for a maximum of 9 semester hours. May be repeated by half-time students for a maximum of 9 semester hours PREREQUISITE(S): Permission of Coordinator of Graduate Studies

COUN 7700 - Spiritual Issues in Counseling

(3) Various spiritual worldviews and issues as well as counseling interventions and ethical concerns will be discussed in the context of recently developed multicultural and spiritual counseling competencies. This course focuses on the importance of spiritual and/or religious values and beliefs that impact the mental health and emotional well being of persons living in diverse communities.

CPSY 7700 - Intrvntns Mntl Disordrs

(3) Covers assessment and diagnosis of mental disorders utilizing DSM-IV classification system and common counseling approaches for each of the major mental disorders; includes current understandings of the etiology, prevention, and treatment of each mental disorder; differential diagnosis using the DSM-IV manual; counseling approaches and case management; and psychopharmacology. PREREQUISITE(S): COUN 7630 and COUN 7571.

Cognitive Science Graduate Certificate

The primary objective of this certificate is to supply graduate students interested in Cognitive Science with interdisciplinary training in the 3 major fields of Cognitive Science, Cognitive Psychology, Artificial Intelligence, and Linguistics. The focus of these courses is to develop core competencies to support research in cognitive science as well as applications in human-computer interaction, information systems, advertising and marketing, and design. While the program will be administered by the Institute for Intelligent Systems, the courses are being taught by seven different departments in four different colleges (Arts and Sciences, Communication Sciences and Disorder, Engineering, and Education).

Admissions Requirements

Applicants to the Cognitive Science Graduate Certificate may be admitted in any semester. The certificate will be promoted across all departments in the University and within the Institute for Intelligent Systems. Students currently admitted to a graduate program at the U of M may apply for admission. In rare instances, students who have not been admitted to a graduate program must apply to the Graduate School for admission as Non-Degree Seeking students; they will be considered for admission on an individual basis.

Program Requirements

The program requires completion of 15 semester credit hours distributed as follows:

The following course is required:

The following course is required: PSYC 7514-PSYC 8514, Seminar: Cognitive Science (Same as COMP 7514-COMP 8514 and PHIL 7514-PHIL 8514)

One of the following courses is required:

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 7208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 8208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 7211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

PSYC 8211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

PSYC 7217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

PSYC 8217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

PSYC 8219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

PSYC 7220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

PSYC 8220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

PSYC 7222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 8222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 7407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 8407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 7314 - Programming Computation in Psych

(3) (PSYC 7503) Restricted to Program or by Permit.

PSYC 8314 - Programming Computation in Psych

(3) (PSYC 8503) Restricted to Program or by Permit.

PSYC 7701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 8701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

AUSP 6300 - Autism: Communic & Socializtn

(3) Nature and origin of autism, presenting up-to-date information about proposed causes, both genetic and environmental. The course will also provide a view of progress made in treatment of autism, especially when identification of the disorder can be made early in life.

One of the following courses is required:

AUSP 8017 - Digitl Signl Proc Sp/Hear

(3) Survey of modern methods for processing of physiological and acoustic signals: interfacing components; analog-digital and digital-analog conversion; mathematical basics for signal processing applications; programming concepts.

EECE 7216 - Computer Vision

(3) Principles and applications of computer vision, advanced image processing techniques as applied to computer vision, shape analysis, and object recognition.

EECE 8216 - Computer Vision

(3) Principles and applications of computer vision, advanced image processing techniques as applied to computer vision, shape analysis, and object recognition.

EECE 7262 - Logicl Fndtns Artf Intl

(3) (Same as COMP 7750-8750) (Same as COMP 7750-8750)Logical foundations of artificial intelligence, predicate calculus, declarative knowledge, inference, resolution strategies, non-monotonic reasoning, induction, probabilistic logic, belief, state and change, and intelligent-agent architecture.

EECE 8262 - Logicl Fndtns Artf Intl

(3) (Same as COMP 7750-8750) (Same as COMP 7750-8750)Logical foundations of artificial intelligence, predicate calculus, declarative knowledge, inference, resolution strategies, non-monotonic reasoning, induction, probabilistic logic, belief, state and change, and intelligent-agent architecture.

EECE 7266 - Prolog Proc/Intel Syst

(3) The engineering of intelligent systems using the PROLOG language for implementation; advanced PROLOG processing, hardware, and software architecture for PROLOG-based machines.

EECE 8266 - Prolog Proc/Intel Syst

(3) The engineering of intelligent systems using the PROLOG language for implementation; advanced PROLOG processing, hardware, and software architecture for PROLOG-based machines.

COMP 6720 - Intro Artificial Intlg

(3) (Same as EECE 6720.) Fundamentals of programming in LISP; central ideas of artificial intelligence, including heuristic search, problem solving, slot-and-filler structures and knowledge representation. PREREQUISITE(S): COMP 2150 or permission of instructor.

COMP 6730 - Expert Systems

(3) (Same as EECE 6730.) (Same as EECE 6730.) Fundamentals of programming in PROLOG, central ideas of expert system development, including knowledge representation, control structures, tools, knowledge acquisition, and knowledge engineering. PREREQUISITE(S): COMP 6601 or permission of instructor.

COMP 7118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S): Permission of instructor.

COMP 8118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S) or COREQUISITE(S): COUN 7411.

COMP 7150 - Fundamentals of Data Science **

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

COMP 8150 - Fundamentals of Data Science

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

COMP 7282 - Evolutionry Computation

(3) Computational implementation of biological analogies, such as genetic algorithms, genetic programming, embryonics, evolutionary engineering; representation, fitness functions, fitness landscapes, automatically defined functions; applications to optimization, machine learning, software development. Grades of S, U, or IP will be given.

COMP 8282 - Evolutionry Computation

(3) Computational implementation of biological analogies, such as genetic algorithms, genetic programming, embryonics, evolutionary engineering; representation, fitness functions, fitness landscapes, automatically defined functions; applications to optimization, machine learning, software development.

COMP 7720 - Artificial Intelligence

(3) (Same as EECE 7720-EECE 8720) (Same as EECE 7720-8720). Central issues of artificial intelligence, including game playing, planning, machine learning, common-sense reasoning, perception and action; implementations in LISP.

COMP 8720 - Artificial Intelligence

(3) (Same as EECE 7720-EECE 8720) (Same as EECE 7720-8720). Central issues of artificial intelligence, including game playing, planning, machine learning, common-sense reasoning, perception and action; implementations in LISP.

COMP 7740 - Neural Networks

(3) (Same as EECE 7740-EECE 8740) (Same as EECE 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, backpropagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive, and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

COMP 8740 - Neural Networks

(3) (Same as EECE 7740-8740) (Same as EECE 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, backpropagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive, and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

COMP 7745 - Machine Learning

(3) An introduction to machine learning: hypothesis spaces, formation and evaluation; concept learning, decision trees, linear regression and perceptrons; graphical models (naÃ¯ve Bayes, Bayes Nets, Hidden Markov Models); computational learning theory; Support Vector Machines; instance-based learning. Grades of S, U, or IP will be given.

COMP 8745 - Machine Learning

(3) An introduction to machine learning: hypothesis spaces, formation and evaluation; concept learning, decision trees, linear regression and perceptrons; graphical models (naÃ¯ve Bayes, Bayes Nets, Hidden Markov Models); computational learning theory; Support Vector Machines; instance-based learning.

COMP 7760 - Control Auto Agents

(3) Exploration and current applications of nontraditional control methods for design of autonomous agents, both in hardware and software, capable of operating in unusual and complex environments, such as subsumption architectures, adaptive fuzzy systems and software agents; novel learning and action selection paradigms. Grades of S, U, or IP will be given.

COMP 8760 - Control Auto Agents

(3) Exploration and current applications of nontraditional control methods for design of autonomous agents, both in hardware and software, capable of operating in unusual and complex environments, such as subsumption architectures, adaptive fuzzy systems and software agents; novel learning and action selection paradigms.

COMP 7770 - Knowledge Rep/Reason

(3) Focuses on long-standing issues of knowledge representation, including ontologies; knowledge structures; and representing events, actions, time, space, geometry, and common-sense knowledge. Student will complete a project using declarative language. Grades of S, U, or IP will be given.

COMP 8770 - Knowledge Rep/Reason

(3) Focuses on long-standing issues of knowledge representation, including ontologies; knowledge structures; and representing events, actions, time, space, geometry, and common-sense knowledge. Student will complete a project using declarative language.

COMP 7780 - Natural Lang Processng

(3) (Same as PSYC 7221-PSYC 8221) (Same as PSYC 7221-8221). Computational aspects, algorithms, and techniques for human language processing; topics include lexical analysis, syntactic parsing, semantics, word sense disambiguation, logic forms, dialog, and pragmatics; applications include question answering and information extraction among others. Grades of S, U, or IP will be given.

COMP 8780 - Natural Lang Processng

(3) (Same as PSYC 7221-PSYC 8221) (Same as PSYC 7221-8221). Computational aspects, algorithms, and techniques for human language processing; topics include lexical analysis, syntactic parsing, semantics, word sense disambiguation, logic forms, dialog, and pragmatics; applications include question answering and information extraction among others.

PSYC 7223 - Intelligent Tutoring

(3) Covers selected internet-based training systems and their links to cognition, education, and computing; focuses on learning environments, including basic theories in learning science, advanced learning technologies, software development, and applications in academic settings.

PSYC 8223 - Intelligent Tutoring

(3) Covers selected internet-based training systems and their links to cognition, education, and computing; focuses on learning environments, including basic theories in learning science, advanced learning technologies, software development, and applications in academic settings.

PSYC 7313 - Computational Models Cog Sci

(3) A survey of popular techniques used to model mental processes and experimental data. Both computational and mathematical models will be considered. Examples include: artificial neural networks for psycholinguistics, Bayesian methods for learning and categorization, general processing tree models for reaction time studies, diffusion and random walk processes of memory, and knowledge representation. The seminar will focus on conceptual issues while providing a brief mathematical introduction to the models for a general behavioral science audience.

PSYC 8313 - Computational Models Cog Sci

(3) A survey of popular techniques used to model mental processes and experimental data. Both computational and mathematical models will be considered. Examples include: artificial neural networks for psycholinguistics, Bayesian methods for learning and categorization, general processing tree models for reaction time studies, diffusion and random walk processes of memory, and knowledge representation. The seminar will focus on conceptual issues while providing a brief mathematical introduction to the models for a general behavioral science audience.

One of the following courses is required:

AUSP 7002 - Sem Comm Sciences

(1-3) Advanced study of selected aspects of basic sciences related to hearing, speech, or language; with different content, may be repeated for up to 6 hours credit at 7000 level or up to 12 hours at 8000 level. PREREQUISITE(S): Permission of instructor.

AUSP 8002 - Sem Comm Sciences

(1-3) Advanced study of selected aspects of basic sciences related to hearing, speech, or language; with different content, may be repeated for up to 6 hours credit at 7000 level or up to 12 hours at 8000 level. PREREQUISITE(S): Permission of instructor.

AUSP 7000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

AUSP 8000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

AUSP 7006 - Lang & Speech Devel

(3) Normal acquisition and maintenance of speech and language, theoretical formulations about language and speech behavior, and approaches to its study. Students observe and describe the language of children of various ages whose development is within normal range.

AUSP 8006 - Lang & Speech Devel

(3) Normal acquisition and maintenance of speech and language, theoretical formulations about language and speech behavior, and approaches to its study. Students observe and describe the language of children of various ages whose development is within normal range.

AUSP 7008 - Acoustic/Percept Phonetics

(3) Survey of experimental phonetics: acoustic phonetic theory; speech perception theory and research; techniques of acoustic analysis and synthesis. PREREQUISITE(S): Permission of instructor.

AUSP 8008 - Acoustic/Percept Phonetics

(3) Survey of experimental phonetics: acoustic phonetic theory; speech perception theory and research; techniques of acoustic analysis and synthesis. PREREQUISITE(S): Permission of instructor.

AUSP 7011 - Psycholinguistics

(3) Historical and recent trends in linguistics; relationship between brain, language, and cognition; knowledge and processes involved in speaking and listening; topics include nature of mental representations and organization of knowledge; speech perception; lexical, sentence, and discourse processing; speech and language production.

AUSP 8011 - Psycholinguistics

(3) Historical and recent trends in linguistics; relationship between brain, language, and cognition; knowledge and processes involved in speaking and listening; topics include nature of mental representations and organization of knowledge; speech perception; lexical, sentence, and discourse processing; speech and language production.

ENGL 7507 - Empirical Mthds Ling Rsrch

(3) Develop research questions and hypotheses, prepare language surveys, use linguistic databases, perform qualitative and quanitative analysis of linguistic data, use computational tools, and prepare findings for presentation, and publication of research on the study of language use.

ENGL 8507 - Empirical Mthds Ling Rsrch

(3) Develop research questions and hypotheses, prepare language surveys, use linguistic databases, perform qualitative and quanitative analysis of linguistic data, use computational tools, and prepare findings for presentation, and publication of research on the study of language use.

ENGL 7508 - Corpus Linguistics

(3) History, design, creation, interpretation, and applications of corpora in applied language research.

ENGL 8508 - Corpus Linguistics

(3) History, design, creation, interpretation, and applications of corpora in applied language research.

ENGL 7511 - Survey of Linguistics

(3) Introduction to the nature of language with emphasis on basic principles of English phonology, morphology, and syntax; emphasis on collecting and analyzing linguistic data for research purposes.

ENGL 8511 - Survey of Linguistics

(3) Introduction to the nature of language with emphasis on basic principles of English phonology, morphology, and syntax; emphasis on collecting and analyzing linguistic data for research purposes. PREREQUISITE(S): Permission of graduate coordinator

ENGL 7512 - Morphology and Syntax

(3) Study of English language structures emphasizing how form and meaning are integrally related.

ENGL 8512 - Morphology and Syntax

(3) Study of English language structures emphasizing how form and meaning are integrally related.

ENGL 7590 - Appl/Theory Linguistics

(3) Intensive study of specialized areas in English linguistics. Maybe repeated up to 9 hours with change of topic.

ENGL 8590 - Appl/Theory Linguistics

(3) Intensive study of specialized areas in English linguistics. Maybe repeated up to 9 hours with change of topic. May be repeated for a maximum of 9 credit hours

Electives: Total credits: 3 hours (1 course)

One of the following courses is required outside of the student's field. Other elective courses may be selected in consultation with the program director.

AUSP 6300 - Autism: Communic & Socializtn

(3) Nature and origin of autism, presenting up-to-date information about proposed causes, both genetic and environmental. The course will also provide a view of progress made in treatment of autism, especially when identification of the disorder can be made early in life.

AUSP 7002 - Sem Comm Sciences

(1-3) Advanced study of selected aspects of basic sciences related to hearing, speech, or language; with different content, may be repeated for up to 6 hours credit at 7000 level or up to 12 hours at 8000 level. PREREQUISITE(S): Permission of instructor.

AUSP 8002 - Sem Comm Sciences

(1-3) Advanced study of selected aspects of basic sciences related to hearing, speech, or language; with different content, may be repeated for up to 6 hours credit at 7000 level or up to 12 hours at 8000 level. PREREQUISITE(S): Permission of instructor.

AUSP 7000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

AUSP 8000 - Speech Science

(3) Contemporary survey of phonetic sciences; detailed discussion of neurological, physiological, acoustic, and perceptual processes involved in the production, transmission, and intelligibility of the speech signal.

AUSP 7006 - Lang & Speech Devel

(3) Normal acquisition and maintenance of speech and language, theoretical formulations about language and speech behavior, and approaches to its study. Students observe and describe the language of children of various ages whose development is within normal range.

AUSP 8006 - Lang & Speech Devel

(3) Normal acquisition and maintenance of speech and language, theoretical formulations about language and speech behavior, and approaches to its study. Students observe and describe the language of children of various ages whose development is within normal range.

AUSP 7008 - Acoustic/Percept Phonetics

(3) Survey of experimental phonetics: acoustic phonetic theory; speech perception theory and research; techniques of acoustic analysis and synthesis. PREREQUISITE(S): Permission of instructor.

AUSP 8008 - Acoustic/Percept Phonetics

(3) Survey of experimental phonetics: acoustic phonetic theory; speech perception theory and research; techniques of acoustic analysis and synthesis. PREREQUISITE(S): Permission of instructor.

AUSP 7011 - Psycholinguistics

(3) Historical and recent trends in linguistics; relationship between brain, language, and cognition; knowledge and processes involved in speaking and listening; topics include nature of mental representations and organization of knowledge; speech perception; lexical, sentence, and discourse processing; speech and language production.

AUSP 8011 - Psycholinguistics

(3) Historical and recent trends in linguistics; relationship between brain, language, and cognition; knowledge and processes involved in speaking and listening; topics include nature of mental representations and organization of knowledge; speech perception; lexical, sentence, and discourse processing; speech and language production.

AUSP 8017 - Digitl Signl Proc Sp/Hear

(3) Survey of modern methods for processing of physiological and acoustic signals: interfacing components; analog-digital and digital-analog conversion; mathematical basics for signal processing applications; programming concepts.

AUSP 8112 - Sem Audiology

(3) Detailed study of selected topics in audiology. With different content, may be repeated for up to 6 hours at the 7000 level or 12 hours at the 8000 level. PREREQUISITE(S): permission of instructor.

EECE 7216 - Computer Vision

(3) Principles and applications of computer vision, advanced image processing techniques as applied to computer vision, shape analysis, and object recognition.

EECE 8216 - Computer Vision

(3) Principles and applications of computer vision, advanced image processing techniques as applied to computer vision, shape analysis, and object recognition.

EECE 7262 - Logicl Fndtns Artf Intl

(3) (Same as COMP 7750-8750) (Same as COMP 7750-8750)Logical foundations of artificial intelligence, predicate calculus, declarative knowledge, inference, resolution strategies, non-monotonic reasoning, induction, probabilistic logic, belief, state and change, and intelligent-agent architecture.

EECE 8262 - Logicl Fndtns Artf Intl

(3) (Same as COMP 7750-8750) (Same as COMP 7750-8750)Logical foundations of artificial intelligence, predicate calculus, declarative knowledge, inference, resolution strategies, non-monotonic reasoning, induction, probabilistic logic, belief, state and change, and intelligent-agent architecture.

EECE 7266 - Prolog Proc/Intel Syst

(3) The engineering of intelligent systems using the PROLOG language for implementation; advanced PROLOG processing, hardware, and software architecture for PROLOG-based machines.

EECE 8266 - Prolog Proc/Intel Syst

(3) The engineering of intelligent systems using the PROLOG language for implementation; advanced PROLOG processing, hardware, and software architecture for PROLOG-based machines.

EECE 7900 - Special Topics in Electrical Engineering

(1-3) Topics are varied and announced in online class listings.

EECE 8900 - Special Topics in Electrical Engineering

(1-3) Topics are varied and announced in online class listings. PREREQUISITE(S): EECE 6720.

COMP 6720 - Intro Artificial Intlg

(3) (Same as EECE 6720.) Fundamentals of programming in LISP; central ideas of artificial intelligence, including heuristic search, problem solving, slot-and-filler structures and knowledge representation. PREREQUISITE(S): COMP 2150 or permission of instructor.

COMP 6730 - Expert Systems

(3) (Same as EECE 6730.) (Same as EECE 6730.) Fundamentals of programming in PROLOG, central ideas of expert system development, including knowledge representation, control structures, tools, knowledge acquisition, and knowledge engineering. PREREQUISITE(S): COMP 6601 or permission of instructor.

COMP 7118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S): Permission of instructor.

COMP 8118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S) or COREQUISITE(S): COUN 7411.

COMP 7150 - Fundamentals of Data Science **

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

COMP 8150 - Fundamentals of Data Science

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

COMP 7282 - Evolutionry Computation

(3) Computational implementation of biological analogies, such as genetic algorithms, genetic programming, embryonics, evolutionary engineering; representation, fitness functions, fitness landscapes, automatically defined functions; applications to optimization, machine learning, software development. Grades of S, U, or IP will be given.

COMP 8282 - Evolutionry Computation

(3) Computational implementation of biological analogies, such as genetic algorithms, genetic programming, embryonics, evolutionary engineering; representation, fitness functions, fitness landscapes, automatically defined functions; applications to optimization, machine learning, software development.

COMP 7720 - Artificial Intelligence

(3) (Same as EECE 7720-EECE 8720) (Same as EECE 7720-8720). Central issues of artificial intelligence, including game playing, planning, machine learning, common-sense reasoning, perception and action; implementations in LISP.

COMP 8720 - Artificial Intelligence

(3) (Same as EECE 7720-EECE 8720) (Same as EECE 7720-8720). Central issues of artificial intelligence, including game playing, planning, machine learning, common-sense reasoning, perception and action; implementations in LISP.

COMP 7740 - Neural Networks

(3) (Same as EECE 7740-EECE 8740) (Same as EECE 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, backpropagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive, and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

COMP 8740 - Neural Networks

(3) (Same as EECE 7740-8740) (Same as EECE 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, backpropagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive, and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

COMP 7745 - Machine Learning

(3) An introduction to machine learning: hypothesis spaces, formation and evaluation; concept learning, decision trees, linear regression and perceptrons; graphical models (naÃ¯ve Bayes, Bayes Nets, Hidden Markov Models); computational learning theory; Support Vector Machines; instance-based learning. Grades of S, U, or IP will be given.

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COMP 7760 - Control Auto Agents

(3) Exploration and current applications of nontraditional control methods for design of autonomous agents, both in hardware and software, capable of operating in unusual and complex environments, such as subsumption architectures, adaptive fuzzy systems and software agents; novel learning and action selection paradigms. Grades of S, U, or IP will be given.

COMP 8760 - Control Auto Agents

(3) Exploration and current applications of nontraditional control methods for design of autonomous agents, both in hardware and software, capable of operating in unusual and complex environments, such as subsumption architectures, adaptive fuzzy systems and software agents; novel learning and action selection paradigms.

COMP 7770 - Knowledge Rep/Reason

(3) Focuses on long-standing issues of knowledge representation, including ontologies; knowledge structures; and representing events, actions, time, space, geometry, and common-sense knowledge. Student will complete a project using declarative language. Grades of S, U, or IP will be given.

COMP 8770 - Knowledge Rep/Reason

(3) Focuses on long-standing issues of knowledge representation, including ontologies; knowledge structures; and representing events, actions, time, space, geometry, and common-sense knowledge. Student will complete a project using declarative language.

COMP 7780 - Natural Lang Processng

(3) (Same as PSYC 7221-PSYC 8221) (Same as PSYC 7221-8221). Computational aspects, algorithms, and techniques for human language processing; topics include lexical analysis, syntactic parsing, semantics, word sense disambiguation, logic forms, dialog, and pragmatics; applications include question answering and information extraction among others. Grades of S, U, or IP will be given.

COMP 8780 - Natural Lang Processng

(3) (Same as PSYC 7221-PSYC 8221) (Same as PSYC 7221-8221). Computational aspects, algorithms, and techniques for human language processing; topics include lexical analysis, syntactic parsing, semantics, word sense disambiguation, logic forms, dialog, and pragmatics; applications include question answering and information extraction among others.

IDT 7070 - Instructional Design Process I **

(3) Applies the instructional design process to conduct a needs assessment that supports the creation of self-paced instructional units addressing performance and learning problems for PK-12 education, business, health care, and related learning environments.

IDT 8070 - Instructional Design Process I

(3) Applies the instructional design process to conduct a needs assessment that supports the creation of self-paced instructional units addressing performance and learning problems for PK-12 education, business, health care, and related learning environments.

IDT 7074 - Thry/Models Instructnal Design

(3) A critical examination of instructional design theories from the perspective of supporting research and application.

IDT 8074 - Thry/Models Instructnal Design

(3) A critical examination of instructional design theories from the perspective of supporting research and application.

IDT 7090 - Dev Interactve Lrng Envirnmt I **

(3) Students use instructional design principles and models to develop interactive learning environments. Students learn current development tools to create effective, efficient and appealing learning environments. Beginning and advanced students work together. Covers beginning content when taken first. May be repeated for a maximum of 6 credit hours for advanced content. PREREQUISITE(S): IDT 7070 -IDT 8070 and IDT 7080-IDT 8080 or Permission of instructor.

IDT 8090 - Dev Interactve Lrng Envirnmt I

(3) Students use instructional design principles and models to develop interactive learning environments. Students learn current development tools to create effective, efficient and appealing learning environments.Beginning and advanced students work together. Covers beginning content when taken first. May be repeated for a maximum of 6 credit hours for advanced content. PREREQUISITE(S): IDT 7060-IDT 8060 and IDT 7070-IDT 8070, and IDT 7080-IDT 8080 or permission of instructor.

PHIL 6421 - Philosophy Of Mind

(3) Survey of major issues and positions in recent philosophy of mind; behaviorism; reductive, non-reductive, and eliminative versions of materialism; functionalism; mental causation; phenomenal consciousness; psychoanalysis and the unconscious; computational and connectionist models of mind. PREREQUISITE(S): Permission of instructor.

PSYC 7207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 8207 - Developmental Psyc

(3) Focuses on theories, issues, and research related to biological, cognitive, and social development from infancy through adulthood. It promotes understanding of different perspectives on lifespan development by addressing three questions: (1) What changes?, (2) How does it change?, and (3) When does it change?

PSYC 7208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 8208 - Psyc Of Perception

(3) An examination of the historical development, research, and major theoretical positions in the area of perceptual psychology. Major emphasis is placed on theoretical and experimental treatment of the basic perceptual phenomena.

PSYC 7211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

PSYC 8211 - Cognitive Processes

(3) Overview of cognitive psychology and cognitive science, with emphasis on theoretical explanations and critical evaluation of empirical evidence; topics include perception and attention, short- and long-term memory, language, problem solving, reasoning, decision making, and artificial intelligence.

PSYC 7217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

PSYC 8217 - Social Psychology

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PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

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PSYC 7220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

PSYC 8220 - Social Cognition

(3) Review of major contemporary issues in social psychology from a social cognitive perspective; cognitive-information processing approach as it applies to social psychology; attributions, schemas, attention and perception, impression-formation and social memory, accessibility and priming, the self, and decision making.

PSYC 7222 - Psychology Human Memory

(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

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(3) Major theoretical and empirical issues in the study of human memory; major emphasis on nature of structures and processes involved in memory encoding and retrieval and nature of representations available to memory.

PSYC 7223 - Intelligent Tutoring

(3) Covers selected internet-based training systems and their links to cognition, education, and computing; focuses on learning environments, including basic theories in learning science, advanced learning technologies, software development, and applications in academic settings.

PSYC 8223 - Intelligent Tutoring

(3) Covers selected internet-based training systems and their links to cognition, education, and computing; focuses on learning environments, including basic theories in learning science, advanced learning technologies, software development, and applications in academic settings.

PSYC 7301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 8301 - Research Design & Meth

(3) Emphasis on mathematical and nonmathematical analyses of psychological data, theoretical and experimental implications of different analyses, various data collection techniques, and types of experimental and statistical control; ethical issues and ethical principles of research conduct. PREREQUISITE(S): Psychology graduate student or permission of instructor

PSYC 7302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 8302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 7313 - Computational Models Cog Sci

(3) A survey of popular techniques used to model mental processes and experimental data. Both computational and mathematical models will be considered. Examples include: artificial neural networks for psycholinguistics, Bayesian methods for learning and categorization, general processing tree models for reaction time studies, diffusion and random walk processes of memory, and knowledge representation. The seminar will focus on conceptual issues while providing a brief mathematical introduction to the models for a general behavioral science audience.

PSYC 8313 - Computational Models Cog Sci

(3) A survey of popular techniques used to model mental processes and experimental data. Both computational and mathematical models will be considered. Examples include: artificial neural networks for psycholinguistics, Bayesian methods for learning and categorization, general processing tree models for reaction time studies, diffusion and random walk processes of memory, and knowledge representation. The seminar will focus on conceptual issues while providing a brief mathematical introduction to the models for a general behavioral science audience.

PSYC 7407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 8407 - Cognition & Emotion

(3) Cognition and emotion affect behavior in a myriad of ways. The interactions of cognition and emotion are also quite complex. The primary purpose of this course is to provide an overview of research on the cognitive and affective bases of behavior. The course is also designed to foster critical thinking and presentation skills.

PSYC 7314 - Programming Computation in Psych

(3) (PSYC 7503) Restricted to Program or by Permit.

PSYC 8314 - Programming Computation in Psych

(3) (PSYC 8503) Restricted to Program or by Permit.

PSYC 7514 - Sem Cognitive Science

(3)

PSYC 8514 - Sem Cognitive Science

(3)

PSYC 7701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

PSYC 8701 - Behavioral Neuroscience

(3) A comprehensive study of the relationships between brain function and behavior; topics include neuroanatomy, neurophysiology, neuropharmacology, sensory systems, learning and memory, motor systems and disorders, and neuropsychiatric diseases.

Graduation Requirements:

1. The student must complete all five Courses (4 required, 1 elective) with an average grade of B (3.0) or higher, for a total of 15 credit hours.
2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Note:

An interdisciplinary governance structure will manage and oversee the graduate certificate with primary leadership and accountability based in the Institute for Intelligent Systems.

The Associate Director of the Institute for Intelligent Systems will be the graduate coordinator for the program and will advise students regarding courses. This advising process will include an introductory meeting with students entering the certificate that focuses on course options and course prerequisites for later electives. The program will also have a Governance Board appointed by the Director of the Institute for Intelligent Systems. The Board will consist of 6 members. Members will come from the Institute for Intelligent Systems or affiliated departments.

Cyber Security and Information Assurance Graduate Certificate

Graduate Certificate (GCIA)

This certificate program highlights important aspects of information security and assurance technologies. The University of Memphis is designated by DHS and NSA as a National Center of Academic Excellence in Information Assurance, and its IA courses are accredited by the Committee for National Security Systems for Computer Security standards 4011, 4012, and 4013. These security standards specify the minimum knowledge, skills, and abilities required to fulfill the duties, respectively, of an Information Systems Security Professional, Senior System Manager, and System Administrator. The IA certificate program is administered by the Computer Science Department, the courses are taught by different departments and colleges, and any graduate student meeting admission requirements will be eligible to join the certificate program. Click here to view corresponding gainful employment data.

The objectives of the certificate program are as follows:

- Provide knowledge of contemporary and historical trusted computing systems from an operational, theoretical, and design standpoint.
- Detailed discussion on security-specific hardware, software, and methodologies.
- A certificate program meeting national standards that will prepare students to serve the state and the country in a critical area of vulnerability in information infrastructure.
- Educate students on ethical, management, policies and legal issues, and requirements in the field of information assurance

Admission Requirements

The certificate program in Cyber Security and Information Assurance may be pursued concurrently with other graduate programs at the university. In particular, students currently admitted to a graduate program at the U of M may join this certificate program. To apply, students must submit the application form (http://www.memphis.edu/cs/pdfs/application_info_assurance.docx) and transcripts of prior graduate study.

Non-degree graduate students may also pursue this certificate program of study. For example, professionals who have a BS in computer science, computer engineering, or a closely related field, or who have a bachelor's degree in another field and have been working in the Information Technology (IT) field for at least three years, can apply to the program. These applicants are required to submit a brief (one- to two-page) statement of educational and work experience in the computing field, including their background in computer security, in addition to the requirements above. Students must apply both to the program and to the University.

GRE scores are not required for non-degree students' admission into the Cyber Security and Information Assurance certificate program. Acceptance to the certificate program is not an implied acceptance into the MS program in Computer Science.

Program Requirements

The certificate program requires completion of 12 semester credit hours: 6 from the list of major Cyber Security and Information Assurance courses and 6 from the list of electives.

Major Cyber Security and Information Assurance Courses

COMP 6410 - Computer Security

(3) Computer security; confidentiality, integrity, availability, methods and protocols in cryptography, digital signature, authentication, bit commitment; security in computing, programs, databases, operating systems; secure communication, secure channel, public key infrastructure, certificates; digital evidence, forensics tools; monitor and response; legal and ethical issues; risk management, security administration. PREREQUISITE(S): Permission of instructor.

- COMP 7120-COMP 8120 (Same as MIS 7670). Cryptography and Data Security
- COMP 7327-COMP 8327. Network and Internet Security

Note:

Non-computer science students must take the prerequisite COMP 3825 (Networking and Information Assurance) or equivalent before taking any of the above COMP courses.

Cyber Security and Information Assurance Electives

COMP 6272 - System Admin and Unix Prog

(3) Fundamental of UNIX and operating systems principles; scripting; principles and practices of systems administration and management; network file systems; account management; OS installation; startup and shutdown, booting, backup, restore; system administration tools; web administration; duties and responsibilities of a system administrator. PREREQUISITE(S): COMP 3825, or permission of instructor.

COMP 7900 - Cyber Ethics

(3) Issues, concepts, and frameworks for cyber ethics: privacy, intellectual property, professionalism, code of ethics and professional practices, software developers' obligations to different stakeholders, freedom of speech on Internet; case studies of ethical tradeoffs in technical decisions. (Offered alternate years)

COMP 7125 - Computer Forensics

(3) Societal and legal impact of computer activity: computer crime, intellectual property, privacy issues, legal codes; risks, vulnerabilities, and countermeasures; methods and standards for extraction, preservation, and deposition of legal evidence in a court of law.

- LAW 386. Cyber Law

CJUS 6180 - Corp/White Collar Crime **

(3) Organizational and occupational crime in comparison to other types of criminality; emphasis on causes, frequency, control, and social impact. Grades of S, U, or IP will be given.

Retention

In order to continue in the program, students must maintain a GPA of at least 3.0.

Graduation

To obtain the certificate, a student must complete four of the above-mentioned courses (2 core courses and 2 electives), with an average grade of 3.0 (B) or higher, for a total of 12 credits, at least six of which must be from the 7000 level or higher.

Note:

A maximum of 15 credits may be transferred from certificate programs to non-related graduate degrees, subject to approval by the graduate program. Moreover, all credits from a certificate program may be transferred to a relevant graduate degree where the entire content of the given certificate could satisfy some of the requirements of a graduate degree. See specific department requirements for additional information and the Graduate School policy.

Data Analytics for Management Graduate Certificate

Admission Requirements

Same as College and University requirements.

Program Requirements

MIS 7700 - Fundamentals of Data Analytics

(3) Descriptive States; correlation; regression; data pre-processing and visualization; probability including conditional probability and Bayesian theorems, Probability Distributions - PDF, CDF (both discrete and continuous), Hypothesis testing, Kernel Functions, Estimations - Lest Squares and Confidence Intervals

MIS 7620 - Business Machine Learning I

(3) Business Intelligence is the study of computerized support for management decision making. Topics include data mining, artificial neural networks, text and web mining, data warehousing, expert systems, and knowledge management.

MIS 7710 - Web Analytics

(3) Engagement metrics for Facebook, twitter, LinkedIn, blogs, etc. web analytics, SEO, online advertising and digital experimentation (A/B testing) effectiveness measurement; social media and email outreach measurement.

MIS 7720 - Bus. Artificial Intelligence

(3) Paradigms of artificial intelligence, machine learning, intelligent agents, using AI (statistics, uncertainty, and Bayes networks; machine learning, logic and planning), Intelligence: Learning and prediction, Applications: machine learning (ML), image processing, natural language processing (NLP), robotics, etc. will discuss AI business use cases, Personalization (targeted ads) and recommendations, fraud detection, smart cars, chat bots, future of AI, and how AI will impact jobs and companies.

Graduation Requirements

To obtain the certificate, a student must complete all four of the required courses with an average grade of 3.0 (B) or higher, for a total of 12 credits.

Retention Requirements

Students in the certificate program must comply with all retention standards of the Graduate School at the University of Memphis. All students are required to maintain a cumulative GPA of at least 3.0. Should the student's cumulative GPA fall below that mark, a period of one semester will be allowed to correct the deficiency. Students failing to improve their GPA to an acceptable level in that time will be dismissed from the program.

Data Analytics for Technology Graduate Certificate

Graduate Certificate

The business analytics discipline has become very important in information systems and industry, due to increased access to big data, unstructured and structured data, and strategic business decision making. These increasingly complex decision making capabilities lead directly to competitive advantage and increased profits. Thus, trained business analysts with skills in addressing data management and business intelligence and analytics are in high demand.

Admission Requirements:

Same as College and University requirements.

Program Requirements:

The following 4 courses must be satisfactorily completed for a total of 12 hours of credit.

Three hours (one course) from this group:

MIS 7190 - Programing For Business

(3) Fundamentals of programming for business projects, including Internet-based business applications and object-oriented programming languages. PREREQUISITE(S): permission of instructor.

Three hours (one course) from this group:

MIS 7660 - Advanced Data Management

(3) Advanced concepts in data management and in the strategic use of data. Topics will be selected from data strategy, business intelligence, data mining and the strategic use of data warehouses, data quality, the business value of data, unstructured data, modern data administration, master data management, data management in cloud computing, data issues in agile development, and other contemporary data topics.

COMP 7116 - Adv Database Systems

(3) Advanced data modeling; object-oriented and object-relational databases; indexing of complex data; advanced transaction processing; on-line analytical processing and data warehousing; distributed database processing. PREREQUISITE(S): COMP 6040 or COMP 6041 or permission of instructor.

Three hours (one course) from this group:

MIS 7620 - Business Machine Learning I

(3) Business Intelligence is the study of computerized support for management decision making. Topics include data mining, artificial neural networks, text and web mining, data warehousing, expert systems, and knowledge management.

COMP 7118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S): Permission of instructor.

Three hours

MIS 7621 - Business Machine Learning II

(3) This advanced course in business analytics goes into depth in techniques and methods applied to real world problems and data. Techniques covered include: artificial neural networks, decision trees, nearest neighbor approaches, predictive modeling, and genetic algorithms. The emphasis will be on application in business. The course will provide guidance on building the business case and the model including problem definition and data evaluation, and evaluation of the modal. Hands-on exercises will be required using analytics packages/languages as Tableau, Rapid Miner, IBM Modeler, Microsoft SQL, R. PREREQUISITE(S) or COREQUISITE(S): MIS 7620 or instructor permission.

Graduation Requirements:

- The student must complete all 4 required courses with an average grade of B (3.0) or higher, for a total of 12 credit hours.
- In the semester of graduation, the student must submit an Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Data Science Graduate Certificate

Graduate Certificate (GCDS)

This certificate program in Data Science aims to provide interdisciplinary training in the important aspects of the rapidly emerging area of Data Science. With large volumes of data being generated every day from multiple sources (including business data, biomedical data, educational data, science data, engineering data, and personal data), the importance of systematic and rigorous approaches to understanding and putting these large volumes of data to good use is now well recognized. Job growth in this area is in overdrive. The Data Science certificate is being proposed to help train a workforce of future data scientists able to tackle the challenges and reap the promising benefits of vast amounts of data available in all parts of the economy, society, and government. At the end of the program, students will exhibit a deep understanding of how to manage large volumes of data, discover patterns and make inferences from data, use models to make predictions about potential solutions, and quantify the reliability and effectiveness of the outcomes. Equipped with such knowledge and skills, the graduates will make significant contributions towards improving the products, processes, and services offered by commercial and non-commercial organizations as well as the government. The Data Science certificate program will be administered by the Computer Science Department, although some courses may be taught by different departments, and any graduate student meeting admission requirements to the certificate program will be eligible to join it from any other areas.

The specific objectives of the certificate program are to:

- Provide training on data collection, storage, manipulation, visualization, and privacy;
- Provide a strong background in programming, algorithms and methods for statistical analysis in data mining and machine learning;
- Train students in the use of software tools and systems for processing big data;
- Educate students on ethical, management, policies and legal requirements in the field of data science.

Admission Requirements

The certificate program in Data Science may be pursued concurrently with other graduate programs offered by the university. In particular, students currently admitted to any graduate program at the U of M may join this certificate program. To apply, students must submit the application form and transcripts of prior graduate study.

Non-degree graduate students may also pursue this certificate program of study. For example, professionals who have a BS in computer science, computer engineering, mathematics, or other fields and who are proficient with a programming language such as Java or a statistical package such as R, are eligible for admission into the program. Applicants satisfying these requirements are required to submit a brief (one- to two-page) statement of relevant educational and work experience in data analysis in addition to the requirements above. Prospective students must apply for admission both to the program and to the Graduate School.

GRE scores are not required for non-degree students' admission into the Data Science certificate program. Acceptance to the certificate program does not imply acceptance into any other graduate in Computer Science.

Program Requirements

The certificate program requires completion of 12 semester credit hours (6 from the list of core courses and 6 from the list of electives) after admission into the certificate program.

Data Science Core Courses

COMP 7150 - Fundamentals of Data Science **

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

COMP 8150 - Fundamentals of Data Science

(3) The data life cycle; data collection, cleansing, visualization and storage; methods and models for data analysis and management; analysis tools, including statistical packages, experimental design software tools and computer simulations; evaluation and deployment of results; ethical and societal factors.

COMP 7745 - Machine Learning

(3) An introduction to machine learning: hypothesis spaces, formation and evaluation; concept learning, decision trees, linear regression and perceptrons; graphical models (naÃ¯ve Bayes, Bayes Nets, Hidden Markov Models); computational learning theory; Support Vector Machines; instance-based learning. Grades of S, U, or IP will be given.

COMP 8745 - Machine Learning

(3) An introduction to machine learning: hypothesis spaces, formation and evaluation; concept learning, decision trees, linear regression and perceptrons; graphical models (naÃ¯ve Bayes, Bayes Nets, Hidden Markov Models); computational learning theory; Support Vector Machines; instance-based learning.

or

COMP 6745 - Intro to Machine Learning

(3) Overview of machine learning. Hypotheses spaces, concept learning, supervised, unsupervised and reinforcement learning; classification and clustering; Bayesian methods; active learning. PREREQUISITE(S): COMP 2150 or permission of instructor.

Note:

COMP 6001 - Intro to Python Programming or equivalent is required for taking any of the core courses.

Data Science Electives

COMP 6118 - Introduction to Data Mining

(3) an introductory exploration of data mining. Topics include data preparation and preprocessing; association rules; classification; clustering; dimension reduction; recommendation engines; mining social network graphs. PREREQUISITE(S): COMP 6601 or permission of instructor.

COMP 7115 - Database Systems

(3) Review of the relational model; query processing and optimization; physical database design and tuning; transaction processing; concurrency control; crash recovery; database buffer management; database security. PREREQUISITE(S): COMP 6730 or COMP 6720 or permission of instructor.

COMP 7116 - Adv Database Systems

(3) Advanced data modeling; object-oriented and object-relational databases; indexing of complex data; advanced transaction processing; on-line analytical processing and data warehousing; distributed database processing. PREREQUISITE(S): COMP 6040 or COMP 6041 or permission of instructor.

COMP 8116 - Adv Database Systems

(3) Advanced data modeling; object-oriented and object-relational databases; indexing of complex data; advanced transaction processing; on-line analytical processing and data warehousing; distributed database processing.

COMP 7118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S): Permission of instructor.

COMP 8118 - Data Mining

(3) Approaches to data mining and knowledge discovery (graphical, statistical, combinatorial, heuristic); classification and clustering; time series analysis; spatial data mining; data mining applications. PREREQUISITE(S) or COREQUISITE(S): COUN 7411.

COMP 7130 - Inform Retrieval/Web Search

(3) Computational aspects, algorithms, and techniques for information retrieval from large collections of documents; major topics include ad-hoc retrieval, text processing, classical models of retrieval, term-weighting schemes, query operations, web search, text categorization, and text classification.

COMP 8130 - Inform Retrieval/Web Search

(3) Computational aspects, algorithms, and techniques for information retrieval from large collections of documents; major topics include ad-hoc retrieval, text processing, classical models of retrieval, term-weighting schemes, query operations, web search, text categorization, and text classification. PREREQUISITE(S) or COREQUISITE(S): COUN 7551.

COMP 7740 - Neural Networks

(3) (Same as EECE 7740-EECE 8740) (Same as EECE 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, backpropagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive, and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

COMP 8740 - Neural Networks

(3) (Same as EECE 7740-8740) (Same as EECE 7740-8740). Learning algorithms for multilayer perceptrons, least-mean squares, backpropagation and its variants, cascade-correlation, other supervised learning algorithms; unsupervised methods, including Hebbian, competitive, and reinforcement learning; applications to associative memories, combinatorial optimization, component analysis, function approximation, pattern classification; theory of neurodynamics, including equilibrium, stability, and computational power.

COMP 7747 - Adv Topics in Machine Learning

(3) Advanced concepts in machine learning, including: inference and learning in graphical models, reinforcement learning, Markov decision processes, active learning, unsupervised learning, deep learning, autoencoders, Boltzmann machines.

COMP 8747 - Adv Topics in Machine Learning

(3) Advanced concepts in machine learning, including: inference and learning in graphical models, reinforcement learning, Markov decision processes, active learning, unsupervised learning, deep learning, autoencoders, Boltzmann machines.

COMP 7780 - Natural Lang Processng

(3) (Same as PSYC 7221-PSYC 8221) (Same as PSYC 7221-8221). Computational aspects, algorithms, and techniques for human language processing; topics include lexical analysis, syntactic parsing, semantics, word sense disambiguation, logic forms, dialog, and pragmatics; applications include question answering and information extraction among others. Grades of S, U, or IP will be given.

COMP 8780 - Natural Lang Processng

(3) (Same as PSYC 7221-PSYC 8221) (Same as PSYC 7221-8221). Computational aspects, algorithms, and techniques for human language processing; topics include lexical analysis, syntactic parsing, semantics, word sense disambiguation, logic forms, dialog, and pragmatics; applications include question answering and information extraction among others.

MATH 7670 - App Stochastic Models

(3) Markov chains with discrete time; classification of states, stationary distributions, absorption probabilities and absorption time; Markov chains with continuous time; birth-death processes, waiting time distributions, queuing models, population growth models, Kolmogorov forward and backward equations, diffusion processes, Fokker-Planck equation; applications to genetic problems, etc. May be repeated when topic changes.

MATH 8670 - App Stochastic Models

(3) Markov chains with discrete time; classification of states, stationary distributions, absorption probabilities and absorption time; Markov chains with continuous time; birth-death processes, waiting time distributions, queuing models, population growth models, Kolmogorov forward and backward equations, diffusion processes, Fokker-Planck equation; applications to genetic problems, etc.

MATH 7680 - Bayesian Inference

(3) Nature of Bayesian inference; formulation and choice of prior distributions; advantages and disadvantages of Bayesian approach; applications of Bayesian approach to Behren-Fisher problems, to regression analysis, and to the analysis of random effect models; applications of Bayesian approach to the assessment of statistical assumptions; Bayesian prediction procedures.

MATH 8680 - Bayesian Inference

(3) Nature of Bayesian inference; formulation and choice of prior distributions; advantages and disadvantages of Bayesian approach; applications of Bayesian approach to Behren-Fisher problems, to regression analysis, and to the analysis of random effect models; applications of Bayesian approach to the assessment of statistical assumptions; Bayesian prediction procedures.

PSYC 7302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

PSYC 8302 - Adv Statistics Psych I

(3) Introduction to general linear model; multiple regression analysis, and single- and multiple-factor analysis of variance; emphasis on using software programs to perform statistical analyses. PREREQUISITE(S): Psychology graduate student or permission of instructor.

Retention

In order to continue in the program, students must maintain a GPA of at least 3.0.

Graduation

To obtain the certificate, a student must complete four of the above-mentioned courses (2 core courses and 2 electives), with an average grade of 3.0 (B) or higher, for a total of 12 credits, at least three of which must be from the 7000 level or higher.

Note:

A maximum of 15 credits may be transferred from certificate programs to non-related graduate degrees, subject to approval by the graduate program. Moreover, all credits from a certificate program may be transferred to a relevant graduate degree where the entire content of the given certificate could satisfy some of the requirements of a graduate degree. See specific department requirements for additional information and the Graduate School policy.

Disabilities Studies Graduate Certificate

Interdisciplinary Graduate Certificate

Programs Admissions

Applicants will apply to the specific certificate program (i.e. Interdisciplinary Graduate Certificate in Disabilities Studies). They should submit:

1. transcript of undergraduate degree program and transcripts of prior and current graduate study;
2. three letters of recommendation; and
3. a letter describing reasons for wishing to take a graduate certificate in the area of disability studies and how the program corresponds with prior experience and anticipated career plans.

Program Requirements

Required Courses:

COUN 6913 - Med/Psyc Aspects/Rehab

(3) Orientation to medical profession and its relationship to rehabilitation counseling; basic medical terminology, bodily systems, and DSM diagnosis; theories, application, and research in psychological adjustment of individuals with disabilities; understanding impact of external/environmental conditions on lives of individuals with disabilities.

COUN 6901 - Prin/Tech/Rehab Counsel

(3) Overview of the broad field of rehabilitation, including the philosophical, social, psychological, and legal basis of rehabilitation, professional practice, and the counselor's role and function in the rehabilitation process.

- UNIV 7400 - Family Disability Law and Practice

Choose one 3-hour elective from the following list:

ANTH 6531 - Alcohol/Drugs/Culture

(3) Cross-cultural comparison of beliefs, meanings and behaviors regarding alcohol and other drug use; biological, social, economic, and political dimensions of alcohol and drugs; implications for prevention and treatment.

PLAN 7201 - Plan Comm Facilities

(3) Planning the location and design of community facilities in the light of changing concepts of public service and community organization. PREREQUISITE(S): CIVL 4151. Grades of S/U, or IP will be given.

CJUS 7510 - Law And Society

(3) Examination of law as a system of control and as a mechanism for the resolution of conflict; relationship of law to political, economic, and social systems critically analyzed; the development of the legal profession.

- POLS 7111 - Issues in Health Services Administration
- HADM 7114 - Long Term Care Administration

HADM 7115 - Public Health Organizatn/Mgmt

(3) This course synthesizes theories, strategies and systems of leading public health care organizations. This course is designed for graduate students in a variety of health disciplines. The course will cover leading theories of leadership and focus on application in public health organizations. Topics include but are not limited to systems thinking, leading change and innovation, community health leadership, and public health law and ethics.

PSYC 7217 - Social Psychology

(3) Review of theoretical and empirical literature examining behavior and experience of individuals in social settings; includes coverage of attributions and interpersonal perception, attitude formation and change, prejudice and stereotyping, interpersonal attraction, social influence, human aggression, and prosocial behavior.

- PADM 6208 - Mental Health Policy and Law

PADM 7604 - Social Science In Law

(3) (Same as POLS 7604). Applications of social science to such public policy questions as discrimination, obscenity, parole, trademarks, death penalty, child custody, and criminal offender profiles.

SOCI 7411 - Social Stratification

(3) (6430) Theoretical analysis of how social class status and power shape social relations, determine life chances, and affect attitudes, opinions, and political choices of individuals and groups; processes that perpetuate systems of class, gender, and race inequality, and degree of social mobility in societies. PREREQUISITE(S): Approval of MALS major advisor and MALS program coordinator.

- SOCI 7512 - Deviance and Diversity

COMM 7012 - Seminar Health Comm **

(3) (Same as ENGL 7012-ENGL 8012) (Same as ENGL 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

NUTR 7212 - Appl Nutr for Health

(3) (HMEC, CSED 7212). Basic principles of nutrition and their applications to health and fitness. Not applicable to nutrition concentration. PREREQUISITE(S): Psychology graduate student or permission of instructor.

HPRO 7182 - Health Promotion **

(3) (FITW 7182) Introduction to broad and challenging academic discipline and profession of health promotion; explores theories of behavior and change, ethical and professional considerations, as well as fundamentals of program planning, implementation, and evaluation.

HPRO 7702 - Contemporary Hlth Issue

(3) (HLTH 7702) (HLTH 7702). Extensive examination of timely and important issues in the health promotion area.

HPRO 7703 - Life Phys Act & Hlth

(3) Introduces classroom health promotion, including approaches to policy making, program development and implementation, practice of self-care, behavioral and attitudinal change, and health enhancement.

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

UNIV 7796 - Independent Study

(1-3) Research into interdisciplinary area of study supportive of individualized MALS program. May be repeated once.

Total Hours Required: 12

Distance Dietetics Internship Graduate Certificate

This program serves students in various areas of the country who have a desire to complete a dietetics internship but are limited to a certain demographic location. Our main objective is to provide dietetic students a meaningful opportunity to complete the required 1,200 experiential learning hours to be eligible for the Registered Dietitian/Nutritionist Exam and to gain employment. Consistent with the missions of our university, school, and unit, the mission of the Dietetic Internship program is to prepare graduates to be able to work as entry level dietitians by providing excellent education, research, and practice experiences.

Program Requirements

Consisting of 15 credit hours, students complete the following required courses:

NUTR 7481 - Clin Intern NUTR

(6) (CSED 7481) Directed clinical experience (100 hours per credit) in health care settings serving children, adolescent, and adults in clinical and community settings, as well as administration of nutrition services. Emphasis on nutrition in growth and development, maintenance of wellness, and prevention and treatment of disease and disability. May be repeated for up to 12 hours of credit. May be repeated a maximum of 6 hours. PREREQUISITE(S): Enrollment in Clinical Nutrition program.

NUTR 7415 - Prof Issues Nutr

(2) Survey of professional issues for clinical dietitians. Topics covered will include ethics, reimbursement, communicating nutrition information to the public, professional development and participation, entrepreneurship, marketing, and developing business plans.

NUTR 7482 - Clinical Residency NUTR

(1) Individualized clinical experience (120 hours) designed at an advanced level to enhance self-direction in learning and to develop advanced competence in area of individual interest. May be repeated for a maximum of 6 credit hours. PREREQUISITE(S): PSYC 7301, PSYC 7302, PSYC 7303, and permission of instructor.

Entrepreneurial Journalism Graduate Certificate

Graduate Certificate

The Entrepreneurial Journalism Certificate program prepares students to start their own media-related businesses or bring innovation to legacy media organizations. It will emphasize knowledge of business fundamentals, marketing, advertising and public relations strategies for new businesses, and creating digital, multimedia content for media products or promotions.

Objectives of this program include:

1. To prepare students for today's media landscape, which is undergoing unprecedented disruption as new digital technologies and changing economic realities have upended the practices and the business models of traditional media organizations. Students need to be able to understand this upheaval and be equipped to recognize opportunities for new businesses and ways traditional organizations can evolve to meet evolving demands.
2. To equip students with the skills they need not only to start their own media-related businesses but also to work as "intrapreneurs" within existing companies and to initiate and sustain change initiatives. They will learn startup fundamentals such as how to turn ideas into business plans, assess customer needs, pitch investors, and develop marketing, public relations and advertising strategies.
3. Students will hone their ability to use social media and a variety of cutting-edge digital tools necessary to market and create content for new media businesses.

Program Admission

To apply to the Entrepreneurial Journalism Certificate Program, students must submit the following:

1. Cover letter expressing interest in the program and qualifications
2. Resume/CV
3. BA or BS degree transcript

Program Requirements

Completion of 12 semester hours distributed as follows:

Required Courses: Total of 6 credit hours

JRSM 7100 - Entrepreneurial Media **

(3) Examines business models and new media tools that can encourage entrepreneurial thinking and planning in various fields of mass communication, as well as the theory and practices of traditional media management. Subjects will include assessment, organization and strategy, budgeting, decision-making, and other functions in advertising, news, and public relations.

JRSM 7330 - Soc.Media&Comm.Engagement **

(3) This course looks at how to create campaigns and relationships that build organizational voice, serial story telling, and working with a community to encourage strong organization-public relationships. Will also look at content creation on multiple technologies and platforms, including both social and traditional media. Students will be exposed to a variety of case studies and community examples for analysis.

Electives: 6 credit hours chosen from the following:

UNIV 7110 - Internship

(1-6) Experiential learning allowing students the opportunity to supplement academic instruction and demonstrate application as well as development of knowledge and skills in a practical setting related to student's educational objectives.

- UNIV 7110 - LaunchMemphis BarCamp, SocialCamp, MobileCamp
- UNIV 7110 - Business Plan Boot Camp
- UNIV 7110 - Launch Memphis ad hoc mentoring

JRSM 7650 - Journalism Startup Practicum

(3) Students will engage in a semester-long project that will involve building a business plan, developing prototypes or products, creating content, and/or making advertising or public relations materials and strategies for media-related startups. Project will be determined in consultation with instructor.

MGMT 7270 - Ventur/Bldg/Sust Succ Enterp

(3) The field of business venturing, which emphasizes the start-up phases of entrepreneurship, is a popular and growing area of the business curriculum. This course is designed to accomplish the fundamental objectives of learning how to design, implement, and sustain a business around a new business idea. This course provides a foundational introduction to the process of venturing for MBA students.

FIR 7648 - Entrepreneurial Finance

(3) The purpose of this course is to provide students with an understanding of how new business ventures are conceived, planned, financed and harvested. The course is taught primarily from the vantage point of the entrepreneur, but will also view things from the perspective of investors (Angel investors, Venture Capitalists, etc.). Grades of S, U, or IP will be given.

ACCT 7412 - Legal/Acctg Aspects Entrep

(3) Prepares students to understand the regulatory framework for establishing a firm, legal forms of a business such as sole proprietorship, partnership, S corporation, and LLC; study of federal securities regulations, accounting, auditing, taxes, financial reporting, and uses of accounting data. The course also covers contract law, cyber law, copyrights and patents, ethics and social entrepreneurship.

Graduation Requirements

In order to graduate with the certificate students must:

1. Complete Certificate Program course requirements within a period of six years with a B or above average.
2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Faith and Health Graduate Certificate

Graduate Certificate

Faith and health have a long history of integration, especially in relation to providing much needed care to underserved populations. There are instances of health needs influencing faith based practices, while theological frameworks have a long history of influencing health practices and providing care to those in need. Through collaboration with the Church Health Center, this graduate certificate focuses on the intersection of faith and health—providing students with knowledge and understanding of how these two key areas influence one another in providing patient care. This certificate is ideal for students interested in working within the medical field, within public health or faith-based healthcare organizations, as well as similar professions. Consisting of 12 credit hours, students will take part in two hybrid (in-class/on-line) courses and two practicum courses (utilizing the Experiential Learning Credit; see www.memphis.edu/innovation/elc/experiential_learning.php).

Admission Requirements

- All graduate students must comply with the general requirements of the Graduate School (see Admissions Regulations, Academic Regulations, and Minimum Degree Requirements), as well as the program requirements of the certificate.
- Prospective students must apply to the Graduate School and to the School of Health Studies (see School website for details). The applicant must submit an official transcript for undergraduate studies. The Graduate Record Examination (GRE) is not required.
- An applicant must have graduated with a minimum baccalaureate GPA of 2.5.

Program Requirements

1. A total of 12 credit hours (four, 3 credit hour courses) are required for the graduate certificate in Faith and Health. The following courses are required:

FTHT 7000 - Practicum in Faith Health 1

(3) Students will participate in practical and immersive work experiences at appropriate healthcare settings (e.g., hospitals, clinics) such as the Church Health Center and Methodist Lebonheur Healthcare, in order to fulfill the pre-assessed University of Memphis requirements for Experiential Learning Credits (ELC). Grade mode of S/U,I. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FTHT 7001 - Practicum in Faith Health 2

(3) Students will participate in practical and immersive work experiences at appropriate healthcare settings (e.g., hospitals, clinics) such as the Church Health Center and Methodist Lebonheur Healthcare, in order to fulfill the pre-assessed University of Memphis requirements for Experiential Learning Credits (ELC). Grade mode of S/U, I. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

FTHT 7002 - Comm & Whole Person Healthcare

(3) With a strong focus on the Church Health Center and educating students on the holistic method of care provided to patients through this organization, this class will explore issues in community-based health and healthcare systems as they relate to whole person healthcare.

FTHT 7003 - Intersection Faith and Health

(3) Faith and health are human cultural universals that have a long history of reciprocal interaction, especially in serving underserved populations. This course will study the history of their interaction through a historical and theological framework, and delve into contemporary issues and models of intersection through examining history, models of healthcare, and case studies. Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

Note:

* The two practicum courses utilize the Experiential Learning Credit; see www.memphis.edu/innovation/elc/experiential_learning.php.

Graduation Requirements

1. Students are required to complete all 12 credit hours as indicated above. A minimum GPA of 3.0 is required for successful completion of the graduate certificate program.

Freight Transportation Graduate Certificate

Graduate Certificate

The transportation profession is facing a significant decline in its workforce due to the increasing number of workers eligible for retirement. Studies indicate as much as 50% of the public sector transportation workforce is now eligible for retirement. According to US DOT "employers will need to hire 4.6 million new workers with 417,000 of these positions created as a direct result to increased demand on our transportation systems". In addition, the number of students pursuing degrees in the transportation engineering area (primarily through civil engineering) continues to decline, and the production of graduates is not keeping pace with the demand for skilled workers in this area. The Graduate Certificate in Freight Transportation will enable individuals with science or engineering bachelor's degrees to expand their analytical, practical, and problem-solving skills in the area of freight transportation (e.g., supply chain and logistics, maritime transportation, rail transportation). The certificate will also enable them to transition and pursue advanced degrees (Master's or Ph.D.).

Admissions

To apply for admission, students must fill out the University of Memphis online application. Applicants must have a bachelor's degree in science or engineering with a minimum GPA of 2.75. International students must have competitive TOEFL/IELTS scores. Students who are currently enrolled in a Master's or Doctoral program at the University of Memphis or other universities will be eligible for admission into the Freight Transportation Certificate Program based on the recommendation from their graduate advisor.

Program Requirements

Required courses:

CIVL 7265 - Intro to Intermodal Freight

(3) An introduction to the real-world environment in which freight transportation systems are planned and operated. Emphasis is placed on the policies, methods and practices utilized in managing freight movements and intermodal

transfers. Topics include the overall impact of freight transportation on the economy, individual modal operations, intermodal opportunities.

CIVL 7262 - Freight Demand Modeling

(3) Introduce the concepts, modeling and solution methods of freight demand modeling.

Electives:

CIVL 7166 - Design Hgwy Airpt Pvmt

(3) Design practices, materials, and testing of flexible and rigid pavements.

CIVL 7012 - Prob Meth In Engr

(3) Concepts and methods of probability and statistics that are essential for modeling engineering problems under conditions of uncertainty; application to practical problems. PREREQUISITE(S): PREREQUISITE: CIVL 3103 or equivalent.

CIVL 7267 - Maritime Economics

(3) Introduce the concepts and explain how the shipping marker is organized. Topics include: Price and freight rates, key players, bulk and liner shipping, ship financing, forecasting, market cycles. PREREQUISITE(S): permission of instructor.

CIVL 7268 - Transport Network Flows

(3) This course provides an analytical framework for network analysis. The course will discuss algorithms for finding transport network equilibrium flows and the applications that relate to these flows. Topics will include routing algorithms, transportation network design, and several solution algorithms. Mathematical rigor will be stressed and some basic programming will be expected.

CIVL 7263 - Intro. to Num. Opt. for Eng

(3) Introduce the concepts, modeling and solution methods of unconstrained optimization and linear and integer programs. Topics include: convex analysis and polyhedral sets, unconstrained optimization methods (line search, trust region), the simplex method, duality theory, and decomposition principles.

CIVL 7264 - Simulation Modeling

(3) Simulation modeling of complex, dynamic and stochastic transportation systems, model building, input and output statistical data analysis, use of simulation for design, evaluation, and improvement of these systems, introduction to simulation software, review of case studies. Three lecture hours a week.

CIVL 7362 - Port Planning Mgmt & Operation

(3) Overview of port planning, management and operations with strong reference to terminal processes and engineering aspects of port development, port functions and management models, port pricing and financing, port security and safety, environmental management and human resources management in ports.

CIVL 7993 - Project & Report

(3) Independent study for students in non-thesis option program. Students demonstrate ability to pursue, complete, and report on project related to Civil Engineering practice. Written and oral report prepared for acceptance by faculty committee. Nine laboratory hours per week. Grades of S/U, or IP will be given.

Retention Requirement

In order to continue in the program, students must maintain at least a 3.0 GPA.

Graduation Requirements

1. Student must complete the two (2) required courses and three of the eight (8) elective courses with an average grade of B (3.0) or higher, for a total of 15 credit hours.
2. In the semester of graduation, a student must Apply to Graduate in their MyMemphis portal under the MyDegree tab as well as submit a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Geographic Information Systems Graduate Certificate

Graduate Certificate Program

The Graduate Certificate Program in Geographic Information Systems is open to students from departments in all colleges at the University of Memphis and colleges in the Mid South. The program is intended for students currently admitted to a graduate program at the U of M or another university or students holding an undergraduate degree.

Program Admission

1. Students currently admitted to a graduate program at the U of M or other university or students already holding an undergraduate degree may apply for admission to the Graduate Certificate Program in Geographic Information Systems.
2. Students who have completed an undergraduate degree program but who have neither completed a graduate degree nor been admitted to a graduate program can apply to the Graduate School for admission as Non-Degree Seeking students.
3. Students must apply to both the certificate program and the graduate school. To apply, students submit:
    1. transcript of undergraduate degree program and transcripts of prior and current graduate study;
    2. two letters of recommendation;
    3. a letter describing reasons why the student is interested in pursuing a graduate certificate in the area of geographic information systems and how the program corresponds with prior experience and anticipated career plans.

Program Requirements

12 Semester Credit Hours

The proposed program requires completion of 12 semester credit hours.

Nine of the 12 hours must be met by satisfactory completion of three core courses:

ESCI 6515 - Geographic Info Science

(3) (GEOG 6515) (Same as PLAN 6515) (GEOG 6515; same as PLAN 6515). Introduction to theoretical and practical understanding of fundamental GIS concept, capabilities, and applications with emphasis on nature of geographic data and issues of data input, data models, database design,spatial analysis, and data output using ArcGIS software.Three lecture, two laboratory hours per week. PREREQUISITE(S): Permission of department chair.

ESCI 6525 - Adv Geographic Info Sci

(3) (GEOG 6525) (GEOG 6525). Introduction to design and implementation of spatial analysis approaches within context of GIS technology; further development of a sound understanding of operational basis of modern GIS technology. PREREQUISITE(S): SCMS 3711, or equivalent.

ESCI 7998 - Capstone GIS Project

(3) Preparation of a project that exhibits mastery skills of problem-solving process and advanced application of Geographic Information Systems. PREREQUISITE OR COREQUISITE: ESCI 6515, ESCI 6525 and an elective course approved by GIS Certificate Advisory Committee or permission of instructor. Grades of S, U, or I will be given.

Three credit hours of electives

Three credit hours of electives, selected per student's interest, with the approval of the GIS Certificate Director.

In order to continue in the program, students must maintain at least a 3.0 GPA.

Health Analytics Graduate Certificate

Graduate Certificate

The Certificate in Health Analytics is designed to provide students with core training in health analytics, including skills in biostatistics, predictive modeling, text mining, and advanced programming/data skills demanded by community and health care institutions today. Offered by the School of Public Health, this Certificate requires 5 courses (15 hours) of graduate coursework. Students completing this certificate program will be competitive for a wide number of positions in the health care field.

Admissions Requirements

Admission to the program will be based on competitive selection from the pool of applicants

- Complete admission to The University of Memphis and the School of Public Health
- A minimum of a BS/BA in a related field with a cumulative GPA of 3.0 on a 4.0 point scale.

Program Requirements

Participants complete 15 credits hours of graduate work obtained from completing these five required courses:

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7152 - Biostatistical Methods II **

(3) This course is the second course in Biometric statistics for public health research. It is intended for advanced students in public health who are interested in gaining expertise in advanced Biometric data analysis. You will be introduced to Biometric statistical modeling techniques commonly used in public health as well as analysis procedures using SPSS and SAS computer software.

PUBH 7308 - Appl Multivariate Stat

(3) (PSYC 7308-8308). Covers multivariate analysis of variance (MANOVA) with independent designs and extensions to repeated measures and ANOVA. Goals include review of conceptual bases, learning SPSS and SAS procedures, learning analysis of simple and complex designs, and learning special post-hoc procedures. PRE-REQUISITES: PUBH 7152/8152 OR EQUIVALENT.

PUBH 8308 - Appl Multivariate Stat

(3) (PSYC 7308-8308). Covers multivariate analysis of variance (MANOVA) with independent designs and extensions to repeated measures and ANOVA. Goals include review of conceptual bases, learning SPSS and SAS procedures, learning analysis of simple and complex designs, and learning special post-hoc procedures. PRE-REQUISITES: PUBH 7152/8152 OR EQUIVALENT. May be repeated for a maximum of 12 credit hours

- PUBH 7109 - SAS Programming for Public Health Professionals I (3)

PUBH 7104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

PUBH 8104 - Large Data Sets/PUBH Research

(3) This course addresses secondary data analysis of health quality and outcomes issues. Secondary data analysis using large, public data sets will be examined. Issues related to secondary analysis and drawing items from multiple data sets will be discussed. Analytical techniques such as adjustments for missing data, transformations of data, and risk adjusstment will be applied using public data sets.

Electives

For students who have already taken one or more of the above courses or equivalence prior to entering the Certificate program, following is a list of 6 elective classes from which students can choose to meet the 15 credit hours requirement: (For example, if a student has already taken SAS I, the student might wish to take SAS II to further develop their analytic skills.)

Electives that students may take if required courses have already been taken:

HADM 7109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems.

HADM 8109 - Health Information Systems

(3) This course introduces and applies concepts of informatics and information systems in healthcare. This course covers the basics of health information systems management, federal regulations pertinent to health information, and technology standards and security. It also covers the complexities associated with planning the acquisition, implementation, utilization, and support of health information systems. May be repeated for maximum of 6 credits

PUBH 7153 - Biostat. in Bioinformatics

(3) This course is offered every other year to Master (7000 level) and Doctoral (8000 level) students. This course focuses on statistical methods in application to bioinformatics data and other large data sets with similar features. Students will be introduced to R programming, a commonly used programming language implemented in bioinformatics data analyses. This will be an applied course with focus on learning the methods, applying the methods, and programming in R.

PUBH 8153 - Biostat. in Bioinformatics

(3) This course is offered every other year to Master (7000 level) and Doctoral (8000 level) students. This course focuses on statistical methods in application to bioinformatics data and other large data sets with similar features. Students will be introduced to R programming, a commonly used programming language implemented in bioinformatics data analyses. This will be an applied course with focus on learning the methods, applying the methods, and programming in R.

- PUBH 7210 - SAS Programming for Public Health Professionals II (3)

PUBH 7309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS. May be repeated with change of topic.

PUBH 8309 - Appl Surv Analys in Pub Hlth

(3) This course will cover the statistical concepts and techniques that are useful in the field of public health for the analysis of survival data or time to event data. The course will examine the features unique to survival data which distinguishes these data from other more familiar types of data. Topics include survival functions, hazard rates, types of censoring and truncation. Methods will include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models, and Inference for parametric regression models. Statistical software recommended for this course are SAS and SPSS.

PUBH 7310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310. may be repeated with different topics

PUBH 8310 - Mixed Model Regression Analys

(3) Instruction in the use of mixed-model regression with a focus on design and ananlysis of group-randomized trials; attention also given to analysis of data from surveys based on cluster sampling, longitudinal studies, and studies involving matching. Same as PSYC 7310-8310.

PUBH 7311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

PUBH 8311 - Appl Categorical Data Analys

(3) Instruction includes tabular, logistic, and Poisson and Cox regression, as well as interpretation of SAS output. For advanced students in psychology, education, and public health pusuing a career in research. Same as PSYC 7311-8311.

Progression/Retention Requirements

- All students in the certificate program must maintain a 3.0 graduate GPA.
- All coursework must be completed within 7 years.
- In the semester of graduation, the student must submit the Apply to Graduate Form to the Graduate School and a Graduate Certificate Candidacy form to the School's Program Coordinator and Director of Graduate Studies by the deadline specified by the Graduate School.

Health Systems Leadership Graduate Certificate

The Health Leadership graduate certificate provides students with training in areas critical to public health, healthcare, and community health leadership in the 21st century. The curriculum addresses topics such as population health, health policy, health services and systems organization, leadership, and change management. Students can complete the certificate part-time and online over the course of one calendar year.

Admission Requirements

Students must have completed a bachelor's degree with a cumulative grade point average of at least 2.75 and apply for admission to the Graduate School with the classification of "Graduate Certificate." To apply students must submit:

1. Transcripts of undergraduate degree program and any prior and/or current graduate study to Graduate Admissions.
2. An application and one-page letter describing their intent to pursue the certificate and its relevance to their career goals to the Academic Services Coordinator of the School of Public Health.
3. Two (2) letters of recommendation, including at least one from a current supervisor or leader.

Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score or the International English Language Testing System (IELTS). Acceptance into the certificate program is not an implied acceptance into any master's degree program.

Program Requirements

Completion of four (4) courses (12 semester credit hours), as follows:

HADM 7140 - Population Health Management **

(3) This graduate course focuses on critical concepts in population health and population health management. Attention is given to both health care and public health dimensions of identifying, managing, and improving population health outcomes in an era of health care reform. Population-level determinants of health are addressed in detail, as are the rationale and tools for monitoring and improving health problems at a population level. Emphasis is given to specific models for population health management, as well as systemic innovations in health care and public health.

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

HADM 7110 - Leadershp/Org Chg in Hlth Care

(3) This course synthesizes theories and strategies for leadership and navigating organizational change in healthcare and is applicable for graduate and professional students in a variety of health-related disciplines. The course covers current theories of leadership and organizational behavior, focusing on healthcare applications. Emphasis will be placed on applying theoretical concepts in organizational situations such as assessing and leading organizational change.Synthesis of theories, strategies, and systems of managing and leading health care organizations; emphasis on team leadership skills, utilization and outcome analysis, change strategies, and planning.

PUBH 7180 - Foundations of PUBH **

(3) Provides foundation for critical analysis of current public health issues, facilitating discussion of contemporary issues and challenges of public health policy and practice; key topics include balancing individual and societal rights; public health ethics; health disparities; cultural competence, socio-ecologic approaches to promote health; public health concerns in urban communities; and current public health practice. May be repeated for a maximum of 12 credit hours PREREQUISITE(S): Permission of instructor.

Graduation Requirements

1. The student must complete all four (4) required courses with a minimum 3.0 (B) average in all courses.
2. All courses towards certification must be completed within eight years.

In the semester of graduation, the student must submit the **Intent to Graduate Form** to the Graduate School and a **Graduate Certificate Candidacy** form to the School's Director of Graduate Studies by the deadline specified by the Graduate School.

Retention Requirements

Students in the graduate certificate must maintain at least a 3.0 (B) average in all courses.

Hospitality Management Specialist Graduate Certificate

Graduate Certificate

The Hospitality Management Specialist Graduate Certificate is designed to addresses the increasing complexity of operating in globalized hotel, food-service or travel industries. Student enrolled in this program will gain advanced knowledge and skills that will enhance their professional qualifications in the discipline. By providing advanced knowledge and skills in hospitality management to professional in the industry, practitioners will gain the expertise in the use of tools that have the potential to increase revenues and profits in the industry. Course material focuses on the core functional areas necessary to work in the hotel industry, including operations, marketing, finance, human resources, and strategic planning.

The proposed certification will allow professionals to:

- Establish credentials by completing an approved course of study at the graduate level meeting the appropriate knowledge and skills for a hospitality management specialist.
- Complete further professional certification with organizations such as The American Hotel & Lodging Association (AH&LA).
- Complete a graduate program leading to a Master of Science in Sport and Hospitality Management degree with a concentration in Hospitality Management; or
- Complete a graduate program leading to a Master of Business Administration (MBA) degree with a concentration in Hospitality Management.

This 12-credit program is comprised of four required courses. The program can be completed in less than one year when taken part-time. **Course options may vary from semester to semester and are subject to change.**

HPRM 7340 - Strategic Pricing & Revnue Max

(3) (7039) Strategies and tactics employed in pricing of hospitality goods and services. Principles and concepts of strategic pricing and strategic financial management for revenue maximization. PREREQUISITE(S): PSYC 7302 or equivalent.

HPRM 7421 - Legal and Sustainability Issues in Hospitality

(3) This course covers the basics of hospitality facility management and sustainable development and operations. The course will cover building systems equipment, engineering management functions, asset management views and capital project execution. Sustainability issues will cover a broad range of issues ranging from the legal environment, global certifications to tactical green activities that all hospitality y operations should consider while developing on a global scale. After completing the course, the students should be fully aware of the issues related to facility management as well as sustainable principles, practices'and policies pertaining lo me hospitality industry

HPRM 7442 - Adv Strtg Mgmt in Hosp

(3) Capstone experience with strategic decision-making principles in hospitality/tourism. Application of skills, knowledge and understanding of areas of concern for formulating and implementing operational strategies.

HPRM 7651 - Drv Sales & Rev in Hosp

(3) This class revolves around the verification and application of marketing concepts that were taught in prior marketing courses. If you have forgotten these basic concepts, reacquaint yourself with them. Marketing directly relates to revenues, sales, and profitability. The tools used can directly or indirectly affect these outcomes. Within marketing there are very few singularly "best" solutions. Far too many students feel marketing is just advertising: it is not. This course will help fine tune already existing skill sets. It is vital that you realize hospitality companies expect stellar writing and presentation skills as well as statistical and marketing related tools. They also want people who know what is happening in the hospitality marketplace today. To help in this expectation you will read many articles related to the business industry from various sectors including the hospitality industry.

Imaging and Signal Processing Graduate Certificate

Graduate Certificate

Admission Requirements

1. Same as College and University requirements.
2. The certificate can be pursued concurrently with other graduate programs at the University.
3. Non-degree seeking applicants must submit a brief (1-2 pages) statement that describes educational and work experience in engineering, including their background in imaging and signal processing. Acceptance into the certificate program is not an implied acceptance into any master's degree program.

Program Requirements

Completion of 12 semester hours chosen from four of the following five courses:

EECE 6243 - Linear Optical Systems

(3) Review of Fourier techniques for analysis and design of linear systems, extension to 2-d methods; 2-d transforms applied to linear optical systems and data processing.

EECE 7214 - Image Processing

(3) Theory and applications of digital image processing, sampling, quantization, enhancement and restoration of images; use of segmentation, descriptors, and pattern recognition; architectures for image processing. PREREQUISITE(S): Written proposal and permission of instructor

EECE 7215 - Digital Signal Proc

(3) Application of discrete transform theory to spectral analysis, digital filters, random signal analysis. PREREQUISITE(S): Written proposal and permission of instructor

EECE 7217 - Multimedia Info Process

(3) Multimedia information retrieval models, advanced processing techniques, multimedia content analysis, pattern mining for information retrieval, query formation, intelligent query processing, and high dimensional data visualization.

EECE 7251 - Random Signals & Noise

(3) Statistical methods for describing and analyzing random signals and noise; auto-correlation, cross-correlation, and spectral density functions; optimal linear filter theory. PREREQUISITE(S): ENGL 6618, or permission of instructor.

Graduate Requirements

1. The student must complete required courses with an average grade of B (3.0) or higher, for a total of 12 credit hours
2. In the semester of graduation, the student must submit an "Apply to Graduate" form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Note:

More information can be found on the department website (http://www.memphis.edu/eece).

Instructional Design and Technology - Design and Development Track, Graduate Certificate

Online Certificate

Admission

Students interested in receiving a Certificate in Instructional Design and Technology must be admitted to this graduate certificate program. The courses may be completed as part of a degree program with the advisor's approval.

This certificate program has two tracks: (1) K-12 Educational Technology and (2) Design and Development. Each requires 12 credit hours of online coursework as described below.

Design and Development Requirements

This track is designed for instructional designers and developers who work in non-education related settings such as business, government, military, and health care.

The following four courses are required for the Design and Development Track:

IDT 7060 - Applying the ID Process **

(3) Focuses on design and development of media, paper-based and electronic, to support learning; students will create products to solve instructional problems through a survey of various technologies.

IDT 8060 - Applying the ID Process

(3) Focuses on design and development of media, paper-based and electronic, to support learning; students will create products to solve instructional problems using various technologies.

IDT 7070 - Instructional Design Process I **

(3) Applies the instructional design process to conduct a needs assessment that supports the creation of self-paced instructional units addressing performance and learning problems for PK-12 education, business, health care, and related learning environments.

IDT 8070 - Instructional Design Process I

(3) Applies the instructional design process to conduct a needs assessment that supports the creation of self-paced instructional units addressing performance and learning problems for PK-12 education, business, health care, and related learning environments.

IDT 7080 - Instructnal Design Process II **

(3) Prepares students to understand and apply instructional design principles to evaluate instructional materials that are designed to solve performance and learning problems. Applies the instructional design process to implement and evaluate an instructional unit based on documentation produced. PREREQUISITE(S): IDT 7070 -IDT 8070

IDT 8080 - Instructnal Design Process II

(3) Prepares students to understand and apply instructional design principles to evaluate instructional materials that are designed to solve performance and learning problems. Applies the instructional design process to create a self-paced an instructional unit based on documentation produced in IDT 7070-8070. PREREQUISITE(S): IDT 7070-IDT 8070.

IDT 7090 - Dev Interactve Lrng Envirnmt I **

(3) Students use instructional design principles and models to develop interactive learning environments. Students learn current development tools to create effective, efficient and appealing learning environments. Beginning and advanced students work together. Covers beginning content when taken first. May be repeated for a maximum of 6 credit hours for advanced content. PREREQUISITE(S): IDT 7070 -IDT 8070 and IDT 7080-IDT 8080 or Permission of instructor.

IDT 8090 - Dev Interactve Lrng Envirnmt I

(3) Students use instructional design principles and models to develop interactive learning environments. Students learn current development tools to create effective, efficient and appealing learning environments.Beginning and advanced students work together. Covers beginning content when taken first. May be repeated for a maximum of 6 credit hours for advanced content. PREREQUISITE(S): IDT 7060-IDT 8060 and IDT 7070-IDT 8070, and IDT 7080-IDT 8080 or permission of instructor.

Note:

More information about the Certificate is located at this web site: www.memphis.edu/idt

Graduation Requirements

1. The student must complete all four required courses with a grade of an A or B for each course, for a total of 12 credit hours.

2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to Graduate Analyst in Ball Hall 215 (3798 Walker Ave., Memphis, TN 38152) by the deadline specified by the Graduate School.

Instructional Design and Technology - K-12 Educational Technology Track, Graduate Certificate

Online Certificate

Admission

Students interested in receiving a Certificate in Instructional Design and Technology must be admitted to this graduate certificate program. The courses may be completed as part of a degree program with the advisor's approval.

This certificate program has two tracks: (1) K-12 Educational Technology and (2) Design and Development. Each requires 12 credit hours of online coursework as described below.

K-12 Educational Technology Requirements

This track is designed for educators who want to integrate the use of computers in the classroom. The focus of these courses is to develop the technology competencies needed for the development, utilization, and integration of instructional computing technology in the classroom.

Students may choose four of the following courses for the Educational Technology Track:

IDT 7060 - Applying the ID Process **

(3) Focuses on design and development of media, paper-based and electronic, to support learning; students will create products to solve instructional problems through a survey of various technologies.

IDT 8060 - Applying the ID Process

(3) Focuses on design and development of media, paper-based and electronic, to support learning; students will create products to solve instructional problems using various technologies.

IDT 7061 - Instructional Design & EdTech **

(3) Computers and technology in the instructional process, including problem solving using computer tools; technological applications for the classroom; uses for technology in different content areas.

IDT 8061 - Instructional Design & EdTech

(3) Computers and technology in the instructional process, including problem solving using computer tools; technological applications for the classroom; uses for technology in different content areas.

IDT 7062 - Teaching, Learning, & Tech **

(3) Application of instructional design principles to creation of computer-based instruction; emphasis on use of authoring and scripting systems to create instructional software.

IDT 8062 - Teaching, Learning, & Tech

(3) Application of instructional design principles to creation of computer-based instruction; emphasis on use of authoring and scripting systems to create instructional software.

IDT 7063 - Models & Innovations of EdTech **

(3) Analysis of issues and trends related to instructional computing and instructional technology in K-12 classroom.

IDT 8063 - Models & Innovations of EdTech

(3) Analysis of issues and trends related to instructional computing and instructional technology in K-23 classroom.

IDT 7064 - EdTech & Instructl Development **

(3) Issues, processes, and strategies relative to changes occurring with design, implementation, and evaluation of Internet technologies in instructional environments. PREREQUISITE(S): IDT 7060-IDT 8060,IDT 7061-IDT 8061, or permission of instructor.

IDT 8064 - EdTech & Instructil Development

(3) Issues, processes, and strategies relative to changes occurring with design, implementation, and evaluation of Internet technologies in instructional environments. PREREQUISITE(S): IDT 7060-IDT 8060,IDT 7061, or permission of instruction.

Graduation Requirements

1. The student must complete all four required courses with a grade of an A or B for each course, for a total of 12 credit hours.
2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to Graduate Analyst in Ball Hall 215 (3798 Walker Ave., Memphis, TN 38152) by the deadline specified by the Graduate School.

Liberal Studies Graduate Certificate

Graduate Certificate

The Graduate Certificate in Liberal Studies is intended to present graduate background material for those seeking personal enrichment provided by liberal learning and the development of those intellectual skills necessary to lifelong learning; critical reading, scholarly writing, and the art of interpersonal communication. The program consists of four courses: (1) UNIV 7000 - Fndtns Liberal Studies **; (2) UNIV 7100 - Rsrch/Intrdiscipl Study **; (3) UNIV 7200 - Liberal Studies Sem **; and (4) one elective course.

Foundations, Research, and Seminar are core courses in the Master of Arts in Liberal Studies degree program and thus, those who successfully complete the certificate program will be offered entry to the MALS degree program as well as the opportunity to apply those courses towards graduate degree programs in other departments in consultation with that department's graduate advisor.

Program Admission and Prerequisites

1. Completion of an undergraduate degree with a cumulative grade point average of 2.75 on a 4.0 scale from an accredited college or university is expected. It should be noted that as applicants are selected on a competitive basis, admission is not granted to all applicants who meet only the minimum requirements.
2. Application for admission to the Graduate School. The Graduate School at the University of Memphis accepts applications via electronic submission at www.memphis.edu/admissions/apply.php.
3. The Application Essay and Letter of Recommendation as noted at: http://www.memphis.edu/univcoll/graduate/cls.php.

Program Requirements

Successful completion of the Graduate Certificate in Liberal Studies requires twelve (12) credit hours:

UNIV 7000 - Fndtns Liberal Studies **

(3) Analytical introduction to graduate liberal studies and its theoretical framework; readings in and concerning the humanities, social sciences, and natural sciences.

UNIV 7100 - Rsrch/Intrdiscipl Study **

(3) Methods of inquiry and research appropriate to interdisciplinary studies.

UNIV 7200 - Liberal Studies Sem **

(3) Interdisciplinary examination of major issue, historical period, theme. Subject matter will change from semester to semester.

- Elective (3 hours): one elective at the 6000 or 7000 level.

Literacy Leadership and Coaching Graduate Certificate

Graduate Certificate

The Certificate in Literacy Leadership and Coaching will provide teachers the knowledge and experiences to become outstanding literacy leaders in schools and districts. This certificate program recognizes students' ability to design curriculum, supervise teachers, and act as overall literacy leaders. The program will be taught completely online by reading faculty within the Department of ICL at the University of Memphis.

The goal of the certificate program is to 1) offer literacy teachers education beyond the state certified reading endorsement to prepare them to address the leadership needs across the region and beyond, 2) provide an accelerated program of study that will enable students to receive a Certificate in Literacy Leadership and Coaching in a timely and meaningful fashion, and 3) give official recognition of an expertise in literacy leadership to help students qualify for jobs both within and outside the United States.

Admission

Students interested in receiving a Certificate in Literacy Leadership and Coaching must be admitted to this graduate certificate program and either be admitted to the MS degree program in Reading or have an advanced degree in a related field. The courses may be completed as part of a degree program with the advisor's approval.

Program Requirements:

Completion of 15 semester hours distributed as follows:

Required courses:

LITL 7000 - Literacy/English Lang Learners **

(3) Research based literacy teaching and assessment strategies/methods for the English language learner, including theories.

LITL 7540 - Lit Inst in the Elem Schl

(3) Foundations, issues, processes, and strategies relative to changes occurring with teaching of literacy; focus on linking theory to practice. Restricted to MS and EdD students.

LITL 7541 - Lit Assess and Intervtn **

(3) (RDNG 7541) Principles of assessment, evaluation, and prognosis in literacy; formal and informal procedures and instruments used in assessing literacy and related cognitive abilities; multiple causation approach to literacy difficulties. PREREQUISITE(S): LITL 7540, or permission of the instructor.

LITL 7544 - Adolscnt Lit Instruc

(3) Research based theories and steps necessary for academic disciplines: techniques for improving vocabulary, cognition, study skills, and reading rate.

LITL 7560 - Literacy Leader and Coach **

(3) Develops knowledge, skills and dispositions necessary for successful literacy coaching.

Graduation Requirements:

1. Must earn state reading endorsement (pass praxis and have three years teaching experience)
2. The student must complete all five required courses with an average grade of B (3.0) or higher, for a total of 15 credit hours.
3. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave, Memphis, TN 38152) by the deadline specified by the Graduate School.

Local Government Management Graduate Certificate

Graduate Certificate

The objectives of the certificate program are: (1) Help working professionals upgrade their knowledge of local government and theory. (2) Empower graduates of the program to succeed as effective and ethical leaders in local government administration. (3) Enhance the analytical and management capabilities of local government professionals.

Admissions Requirements

The certificate program in Local Government Management can be pursued concurrently with other graduate programs at the university. Applicants must satisfy admission requirements of the Graduate School and receive a favorable endorsement from the public administration faculty. Admission will be based on:

1. Applicable test scores: Graduate Record Examination (GRE), Graduate Management Aptitude Test (GMAT), or Miller Analogy Test (MAT); Applicants for the MPA degree or certificate programs may be eligible for a waiver of the standardized entrance exam (GRE, GMAT or MAT).To learn more about the waiver policy please go to: www.memphis.edu/padm/mpa/standardized-waiver.
2. Undergraduate grade point average;
3. Previous education and/or experience demonstrated via a resumé and two letters of reference;
4. Ability to articulate career goals and education objectives via a personal statement.

Inquiries can be directed to mpa_admissions@memphis.edu.

Program Requirements

Successful completion of 15 hours of graduate credit. Students must maintain a GPA of 3.0.

Core Local Government Management Courses, 9 hours:

PADM 6221 - Issues/Urban Admin

(3) Examination of politics, administration, and public policy in an urban context; focus on the administrative aspects of selected governmental policy-making processes; interrelationships of governments at various levels, urban challenges facing modern public administration.

PADM 7602 - Public Bdgt Adm/Fin **

(3) Detailed study of administrative, technical and political arenas of of financial policy, the budgetary process, and fiscal controls for public and nonprofit organizations.

PADM 7224 - Sem Urban Problems

(3) Problems inherent in the growing urban developments in the United States; the governmental organization of metropolitan areas and the difficulties of coordination of government functions; proposed remedies and the reception of new approaches in selected metropolitan areas.

Electives, 6 hours chosen from the following:

PADM 7605 - Human Resources Admin **

(3) Policies, methods, and techniques utilized in public and health organizations; special attention is given to problems reflecting contemporary demands upon human resource systems, capacity to diagnose problems, select the most effective means of addressing them, and plan appropriate courses of action developed through case studies.

PADM 7612 - Program/Policy Evaltn

(3) Models, theories, and techniques of program and policy evaluation in public administration; evaluation research design, data collection and analysis, dissemination of results, and possible applications of evaluations to policy-making and administration; organizational and political contexts of evaluation.

PADM 7603 - Pblc/Nonprofit Contr

(3) Theoretical and practical examination of projects and contracts as tools of policymaking in the public and nonprofit sectors; management projects and third party vendors; alternative mechanisms for public service delivery and an appreciation for the difficulties involved.

PLAN 7000 - Planning the American City

(3) Introduces the origins, evolution, and current state of American city planning. Examines the role planners play in promoting more sustainable, vibrant, and just towns, cities, and regions. Reviews critical issues confronting professionals engaged in such areas of specialization as: land use, site planning, urban transportation, affordable housing, community development, capital budgeting, and urban design.

PLAN 7202 - Land Use Planning

(3) Theory and practice of land use planning, with emphasis on methods of land use analysis and economic and social basis for land use decisions.

POLS 6222 - Urban Politics

(3) Roles and processes of politics and governance in urban America in context of global, social, and economic influences on cities and suburbs.

or

- Other elective courses chosen in consultation with an advisor

Note:

No more than twelve credit hours of this certificate program may be applied toward the completion of the MPA degree.

Mathematics Education Graduate Certificate

Graduate certificate

Admission Requirements:

Students must meet the requirements for Admission to the Graduate School

Program Requirements

The graduate certificate program in Mathematics Education (K-8) will include five courses:

ICL 7500 - Adv Math Elem Sch

(3) Models of elementary school mathematics instruction; history, philosophy, and research supporting those models. PREREQUISITE(S): Teacher Licensure

ICL 7501 - Elem Sch Math Curr

(3) Issues and trends in elementary school mathematics curriculum. Appropriate current reports of professional groups will be considered.

ICL 7508 - Sem Mathematics Educ **

(3) Study and discussion of selected mathematics education topics of concern or special interest. May be repeated with a change in topics.

Graduation Requirements:

Students must successfully pass all courses (15 credits) in the program in accordance with all Graduate School requirements.

Retention Requirements:

Students will be required to meet all Graduate School retention requirements in order to remain in the program.

Multi-Tier Systems of Support Graduate Certificate

Program Requirements

SPED 7201 - Edu Prog for Stud Learn Disab

(3) Examination of etiological, psychological, social, and physical conditions related to the educational performance of individuals with disabilities in developmental life periods.

SPED 7203 - Ed Prog for Stud Emot BehavDis

(3) Characteristics of persons with emotional and behavioral disorders; emphasis on social, psychological, and biological theories of causality, assessment, and education with a variety of emotional and/or behavioral problems. PREREQUISITE(S): Permission of instructor.

SPED 7206 - Special Education Law **

(3) The essential elements of applicable laws will be presented. Emphasis will be placed on the influence of case law on the practice of teaching inclusive environments. Implementation of best practices in inclusive settings and evaluation as it relates to the incorporation of research in past and present special education law is the focus of this course.

SPED 7522 - Tiered Interventions

(3) (SLC 7332, 7420) An advanced study of the science of implementing and assessing Multi-Tiered Level of Supports, Response to Intervention (RtI), and Positive Behavioral Intervention Supports (PBIS) for early intervention, and examining the needs of a wide range of diverse learners with the goal of matching instruction to improve student outcomes. PREREQUISITE(S): Permission of instructor.

Multimedia Storytelling Graduate Certificate

The Graduate Certificate in Multimedia Storytelling offers students both practical and theorectical instruction in storytelling using multimedia technology: words, pictures, graphics, video, audio and social media. The certificate program emphasizes the technical expertise needed to create multimedia projects and the reporting and storytelling skills needed to create compelling content in today's media market.

Objectives of the program include:

- Teach students the technical skills needed to produce multimedia projects in today's media environment. Technical skills taught: writing, photography, video, design, audio and social media.
- Teach students how to create compelling content from a variety of sources, topics and fields.

Program Admission

Prospective students must submit the following in order to be considered for admission:

- Application
- Resume
- Undergraduate transcript
- Goal statement

Program Requirements (12 hours)

Students are required to take JRSM 7350 - Advanced Multimedia Reporting and JRSM 7510 - Information Design and then choose two of the following:

JOUR 6150 - Sports Writing and Reporting

(3) Development of advanced writing, reporting and professional skills specific to sports media; emphasis on practice of game reporting, feature stories, column and opinion writing and multimedia. PREREQUISITE(S): JOUR 3120, JOUR 3526.

JOUR 6155 - Multimedia Sports Reporting

(3) Furthers student's reporting, writing, shooting and other professional skills specific to sports media from breaking news to features and in-depth stories across a range of digital platforms. PREREQUISITE(S): JOUR 4150

JOUR 6160 - Food Writing/Reporting

(3) Addresses specialized niche of food writing by producing stories, both long and short form, and developing new media content for a class food blog. PREREQUISITE(S): JOUR 3120, JOUR 3526.

JOUR 6170 - Business Reporting and Writing

(3) Introduction to business writing and reporting and to the opportunities and issues in this growing field. Focuses on covering companies, the people who work for them, and the consumers of their goods and services along with issues of the economy, finance and the stock market. PREREQUISITE(S): JOUR 3120, JOUR 3526.

JOUR 6180 - Public Issues Writing/Reporting

(3) Emphasis placed on deadline writing and critiquing of political and public policy news. Encourages familiarity with the methods and insights of political and social science and develops confidence to use those methods and insights in reporting. Encourages use of social media to cover and explain campaigns and policy. PREREQUISITE(S): JOUR 3120, JOUR 3526.

JOUR 6190 - Opinion Writing and Reporting

(3) Principles and practices for well-researched and well-written editorials, columns, op-ed submissions, broadcast commentaries and long form analysis perspective pieces; thorough examination of the purpose and impact of opinion journalism on readers, political leaders, policy makers and society at large. PREREQUISITE(S): JOUR 3120, JOUR 3526.

Graduation Requirements

Students must complete four courses with at least a B in each course.

Retention Requirements

Each student will meet with the JRSM graduate director for advising each semester. The graduate director will review the students' progress in the program and offer advice on how to proceed. Students are required to maintain a B average to remain in good academic standing at the university. No student will get credit for a course unless the students gets at least a B. Any course where less than a B in received will have to be taken again.

Museum Studies Graduate Certificate

Interdisciplinary Graduate Certificate Program

(Administered jointly by the Departments of Anthropology and Art)

Program Admission

1. Students currently admitted to a graduate program at the U of M or another university or students holding a graduate degree may apply for admission. For students enrolled in a graduate program, a minimum GPA of 3.0 is required for admission. In rare instances, a student who has completed an undergraduate degree

program but who has not completed a graduate degree nor been admitted to a graduate program may apply and will be considered on an individual basis. All students not currently admitted to a graduate degree program at the U of M must also apply to the Graduate School for admission as a non-degree student. In order to continue in the program, students must maintain at least a 3.0 GPA.

2. To apply, students submit:
    1. transcript of undergraduate degree program and transcripts of prior and current graduate study;
    2. three letters of recommendation; and
    3. a letter describing reasons for wishing to take a graduate certificate in the area of museum studies and how the program corresponds with prior experience and anticipated career plans.

Inquiries can be directed to Dr. Leslie Luebbers, Director of the Art Museum (lluebbrs@memphis.edu).

Program Requirements

Six of the 18 hours will be met by completion of two core courses:

ANTH 7661 - Museum Practices

(3) (Same as ARTH 7661) Museum administration, finance, collection management, conservation, education, exhibition design, marketing, and visitor services. PREREQUISITE(S): Permission of instructor.

ARTH 7661 - Museum Practices

(3) (Same as ANTH 7661) Museum administration, finance, collection management, conservation, education, exhibition design, marketing, and visitor services. PREREQUISITE(S): Permission of instructor.

ANTH 7662 - Museums & Communities

(3) (Same as ARTH 7662) History and theory of museums, governance, audiences, and current topics in the profession. PREREQUISITE(S): Permission of instructor.

ARTH 7662 - Museums & Communities

(3) (Same as ANTH 7662) History and theory of museums, governance, audiences, and current topics in the profession. PREREQUISITE(S): Permission of instructor.

Six elective hours will be selected in consultation with the Admissions and Advisory Committee

Six elective hours will be selected in consultation with the Admissions and Advisory Committee. Except for unique circumstances, students in the Anthropology and Art History graduate programs must take at least three elective hours outside their major department.

Two three-hour internships are required

Two three-hour internships (ANTH 7669 - Museum Internship/ ARTH 7669 - Museum Internship) are required. Each internship site will be chosen in consultation with the Admissions and Advisory Committee. For those students working in a museum or other appropriate community site, three of the internship hours may be replaced by a third elective course.

Music - Artist Diploma Certificate

Artist Diploma Program

The Artist Diploma certificate provides concentrated post-baccalaureate training for prospective professional musicians in the instrumental, voice, keyboard, and conducting areas.

Program Admission

Admission for the program is highly competitive and limited to individuals who have demonstrated exceptional skills in performance or conducting through audition. Admission requirements can be found on this catalog's page for the School of Music. Additional information can be found in the School of Music Graduate Student Handbook. For course approval, contact the Associate Director of Graduate Studies in the School of Music, Dr. Kevin Sanders."

Students may pursue a graduate degree at the University of Memphis after acquiring the Artist Diploma. In such cases, they must fulfill all entrance requirements for a graduate degree. Credits from the Artist Diploma may be transferred to a relevant graduate degree and are subject to the usual Graduate School time limit. Students should consult the degree program department in advance to determine which of the Artist Diploma credits are appropriate for transfer.

Students in a graduate degree program may not transfer into the Artist Diploma program. After successful completion of a graduate program, a student may apply to and audition for the Artist Diploma program. No hours from any degree will apply to the Artist Diploma.

Program Requirements (18 hours)

The individual program of study is determined as a cooperative effort between the student and his or her advisor.

Applied Lessons (6 hours)

Taken over a minimum of two semesters.

Ensemble (2 hours)

Approved Studies (9 hours)

Approved Studies satisfy courses decided in consultation with the student's advisor.

Recital (1 hour)

MUAP 7999 - Recital

(1-3) Student must be concurrently enrolled in an appropriate applied music course. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

Organic Chemistry Graduate Certificate

Admission Requirements

Students will have a U.S. equivalent bachelor's degree with a satisfactory record of undergraduate coursework in chemistry or related areas. GRE is not required.

Program Requirements

CHEM 6311 - Physical Organic Chemistry

(3) Theory of electronic structure organic compounds, relation between structure and reactivity of organic compounds, mechanisms of common organic reactions. Three lecture hours per week. PREREQUISITE(S): CHEM 3310 and 3511 with at least a C-. Repeat no more than two times.

CHEM 6416 - Molecular Spectroscopy

(3) Theory, instrumentation and applications of NMR, FT-IR, mass spectrometry, and UV-visible spectroscopy. Application and theory of other spectroscopic methods will be discussed briefly. Three lecture hours per week. PREREQUISITE(S): CHEM 3310 and 3411.

CHEM 7311 - Adv Organic Chemistry

(3) Physical approach to organic reaction mechanisms; reactive intermediates, aromaticity, and pericyclic reactions; introduction to advanced spectroscopic techniques and synthetic philosophy. PREREQUISITE(S): CHEM 6311 or permission of instructor.

CHEM 7312 - Synthetic Organic Chem

(3) Principles of synthesis of complex organic molecules. PREREQUISITE(S): CHEM 6311 or permission of instructor.

Graduation Requirements

12 credit hours with a cumulative GPA of at least 3.00.

Retention Requirements

The graduate certificate program will follow the program retention plans outlined in the Chemistry Graduate Handbook.

Packaging Engineering Graduate Certificate

Graduate Certificate

The objectives of the certificate program are: (1). For local practitioners in the packaging and distribution industry to refine their knowledge in packaging engineering, (2). For other professionals with no prior packaging knowledge to look for a career change, (3). For current full time graduate students to expand their engineering knowledge or specialize their skills in packaging, and (4). For students with an undergraduate degree for a transition into graduate school.

Admissions Requirements

The certificate program in packaging engineering can be pursued concurrently with other graduate programs at the university. Applicants must have completed a bachelor's degree with a cumulative grade point average of at least 2.5 and satisfy admission requirements of the Graduate School with the classification of "Graduate Certificate." To apply for admission, the applicant must submit:

1. Transcripts of undergraduate degree program and any prior graduate study to Graduate Admissions;
2. A letter describing intent to pursue the certificate and its relevance to career goals to the Graduate Coordinator, Department of Mechanical Engineering;
3. Two letters of recommendation describing pertinent professional work experience when seeking to waive a course prerequisite to the Graduate Coordinator, Department of Mechanical Engineering.

Program Requirements

Successful completion of 9 hours of graduate credits distributed as follows, maintaining a GPA of at least 3.0 and completing the program within three academic years,

Required courses, 6 hours:

MECH 6342 - Intro/Packaging Engineering

(3) Fundamental study of functions of packaging, packaging material, container type, processes, technology and equipment employed to protect goods during handling, shipping and storage.

MECH 7391 - Packaging Dyn/Distr Pack

(3) Introduction of package development process, packaging test and evaluation methods, stands, and equipments. Review of governmental regulations affecting packaging. PREREQUISITE(S): Admission to Executive Leadership MSN program or permission of instructor. Grades of S, U, or IP will be given.

Research Project

3 hours, registered under one of the listed courses and with approval of the program director:

MECH 7990 - Engineering Practicum

(1-3) Studies of related practical mechanical engineering problems as an integral part of the established curriculum under the instruction and supervision of a faculty member. Written and oral reports are mandatory. Grades of S, U, or I will be given. Grades of S, U, or IP will be given.

MECH 7391 - Packaging Dyn/Distr Pack

(3) Introduction of package development process, packaging test and evaluation methods, stands, and equipments. Review of governmental regulations affecting packaging. PREREQUISITE(S): Admission to Executive Leadership MSN program or permission of instructor. Grades of S, U, or IP will be given.

MECH 7992 - Research Project

(1-6) Independent research investigation of engineering problem under supervision of instructor for students in non-thesis option; both written and oral reports required. Grades of S, U, or IP will be given. Grades of S, U, or IP will be given.

MECH 7994 - Independent Study

(1-3) Independent study in Mechanical Engineering on topic selected in conjunction with instructor. Oral and written reports required. May be used for curricular training as a part of an internship program. Only 3 credit hours can be applied to a degree program. Grades of S, U, or IP will be given.

Note:

All 9 credit hours may be shared with a Master's program in the Department of Mechanical Engineering upon the approval of the Advisory Committee.

Graduation Requirements:

1. Student must file "Apply to Graduate" with Graduate School at beginning of the semester in which he/she will complete the 9-semester hour requirement;
2. A minimum grade of "B" or "S" in each course applicable to the certificate is required;

Student must also submit a Candidacy Form to the Mechanical Engineering Graduate Coordinator in order to verify information and collect approvals and signatures required for the Graduate School.

Philanthropy and Nonprofit Leadership Graduate Certificate

Graduate Certificate

The Certificate in Philanthropy and Nonprofit Leadership is designed to meet the needs of graduate students, employees and volunteers looking for advanced study in the theory and practice of nonprofit administration. Ideal for nonprofit professionals, community volunteer leaders and active philanthropists, the Certificate provides knowledge and skills to help strengthen the leadership capacity of nonprofit organizations and promote ethical and effective nonprofit administrative practice. The Certificate requires 15 hours of graduate coursework, available in both on-campus and online formats.

Admission Requirements:

The Certificate in Philanthropy and Nonprofit Leadership can be pursued concurrently with other graduate programs at the university. In particular, students currently admitted and in good standing in a graduate program at the University of Memphis can enroll in this certificate program.

Applicants must satisfy admission requirements of the Graduate School and receive favorable endorsement from the public administration faculty. Admission will be based on:

1. Applicable test scores (Graduate Record Examination [GRE], Graduate Management Aptitude Test [GMAT], or Miller Analogy Test [MAT]);
2. Undergraduate grade point average;
3. Previous education and/or experience demonstrated via a resumé and two letters of reference;
4. Ability to articulate career goals and education objectives via a personal statement.

Inquiries can be directed to mpa_admissions@memphis.edu.

Program Requirements:

Successful completion of 15 hours of graduate credit. Students must maintain a GPA of 3.0.

Twelve of the 15 hours must be met by satisfactory completion of four core courses

PADM 7641 - Thry/Prac Nonprofit Adm **

(3) Introduction to theoretical foundations, structures, and processes of nonprofit organizations; historical development and impact, social, political, legal, and economic environment in which nonprofit organizations exist; complexities of organizational governance shared by volunteer and professional staff decision-makers.

PADM 7605 - Human Resources Admin **

(3) Policies, methods, and techniques utilized in public and health organizations; special attention is given to problems reflecting contemporary demands upon human resource systems, capacity to diagnose problems, select the most effective means of addressing them, and plan appropriate courses of action developed through case studies.

PADM 7642 - Res Dev Nonprofit Org **

(3) (same as PSYC 7305-PSYC 8305) Introduction to various resources important to nonprofit organizations including financial support, volunteers, and community awareness, and to wide range of organization activities utilized for acquisition and maintenance of these resources. PREREQUISITE(S): Permission of Coordinator of Graduate Studies

PADM 7643 - Semn Nonprofit Adm&Philanth **

(3) (PSYC 7306-8306) Introduction to principles and practices of managerial and financial accounting in nonprofit organizations, including examining performance and financial condition; emphasis on making program choices and decisions using financial management concepts to further effective and accountable nonprofit administration. PREREQUISITE(S): Permission of instructor.

Other Requirements

1. Elective courses will be selected with the student and their advisor.
2. In order to continue in the program, students must maintain at least a 3.0 Graduate GPA.

Graduation Requirements:

To obtain the certificate a student must complete five of the above-mentioned courses (four major courses and one elective course), with an average grade of 3.0 (B) or higher, for a total of fifteen credits.

Population Health Graduate Certificate

Graduate Certificate

Admissions Requirements:

Students must have completed a bachelor's degree with a cumulative grade point average of at least 2.5 and apply for admission to the Graduate School with the classification of "Graduate Certificate." To apply students must submit:

1. Transcripts of undergraduate degree program and any prior graduate study to Graduate Admissions.
2. An application and one-page letter describing their intent to pursue the certificate and its relevance to their career goals to the Academic Services Coordinator of the School of Public Health.
3. Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score or the International English Language Testing System (IELTS) score.
4. Acceptance into the certificate program is not an implied acceptance into any master's degree program.

Program Requirements:

Completion of five courses (15 semester credit hours), as follows:

PUBH 7150 - Biostatistical Methods I **

(3) Introduces elementary methods for presenting public health data in summary form and analyzing data; not a mathematics course and will not stress derivations of formulae; instead, emphasizes the application of statistical ideas and methods to the design and interpretation of public health studies.

PUBH 7170 - Epidemiology in PUBH **

(3) Provides foundation needed to interpret, use, and research epidemiological data; focuses on methodological aspects of epidemiology as it applies to investigation of public health problems and guidance of public health planning and policies. May be repeated for up to 6 hours

HADM 7105 - Hlth Policy & Org Hlth Svs **

(3) This course explores the history and development of health policy and organization in the U.S., the forces affecting health policy, the impact of policy on health services delivery, and the most recent health care reform efforts. The course also covers the most basic knowledge, skills and attitudes required to manage health care organizations effectively.

PUBH 7160 - Soc/Behav Science Principles **

(3) This graduate level course will focus on the contribution of social and behavioral sciences to the understanding of the distribution, etiology, and solution of public health problems. The theoretical underpinnings of the most relevant explanation, planning, change, and evaluation theories will be reviewd in depth and illustrated with examples of the application of these models to helath promotion and disease prevention with individuals, groups and communities. PREREQUISITE(S): Permission of instructor.

PUBH 7120 - Environmental Health I **

(3) Introduces complex and interlinked environmental issues facing public health professionals; presents concepts, principles, and applications of natural and social science disciplines forming the basis of environmental health; introduces environmental issues relevant to health problems; develops communication skills by discussing public health issues and environmental policies.

Graduation Requirements:

The student must complete all five required courses with a cumulative GPA of 3.0 or better. Only grades of B or better will be accepted for transfer into the MPH Program.

All courses towards certification must be completed within eight years.

In the semester of graduation, the student must submit the Apply to Graduate Form to the Graduate School and a Graduate Certificate Candidacy form to the School's Program Coordinator and Director of Graduate Studies by the deadline specified by the Graduate School.

Qualitative Studies in Education Graduate Certificate

Graduate Certificate

Program Objectives:

1. The certificate will provide students with an understanding of the epistemological and theoretical groundings associated with qualitative research.
2. The certificate is intended to provide students with knowledge and experience in various qualitative methodologies and methods.
3. The certificate will assist students in constructing their own qualitative research projects following from epistemology -> theory -> methodology -> method -> analysis/interpretation -> representations -> conclusions.
4. The certificate will increase critical thinking skills in relation to general qualitative scholarship, including prevailing theories, ethical considerations, and emerging perspectives.
5. The certificate will provide space for students to practice different methodologies, methods, and types of representation, including both traditional and creative analytic practices.
6. The certificate program will prepare students to be effective reviewers and critical consumers of qualitative presentations, papers, and journals.
7. The certificate program will provide students with opportunities to practice graduate level instruction so that they will enter the job market with concrete teaching experience.

Program Admissions

Students who are currently enrolled in a Doctoral program at the University of Memphis or other universities will be eligible for rolling admission application.

To apply to the Graduate Certificate Program in Qualitative Studies in Educational Research, students must fill out the University of Memphis online application. They must also submit the following documents to the qualitative certificate coordinator:

1. a 2-3 page personal essay about their research interests, prior preparation and experience related to the objectives of the program, and their long--range career/professional plans
2. a letter of recommendation from their major professor/committee member supporting the certificate's requirements of a fully qualitative dissertation

Doctoral* students in good standing will be admitted to the Qualitative Studies in Educational Research Certificate Program on the recommendation of the student's major professor/committee member and subject to a successful review of application materials by the qualitative methodologists in the Educational Research program in the School of Education, Health and Human Sciences. The qualitative methodologists, with consideration of all materials, will make final decisions regarding student acceptance to the program.

*Qualified Master's students are eligible based on advisor's recommendation.

Program Requirements

The certificate requires 12 semester hours of credit. All students must complete 9 hours of core courses and 3 hours of an elective. For students with substantial proof of scheduling issues, there is the option to make up credits through a 1--3 hour directed readings with the qualitative methodologists or approved qualitative faculty.

Required core courses (9 credits):

EDPR 7561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

EDPR 8561 - Qualitative Mthds Educ **

(3) This introductory course provides and overview of qualitative research processes, beginning with epistemology, theoretical perspectives, methodologies, methods, analysis, and representation, as well as current qualitative research trends in education.

EDPR 7562 - Designing Qualitative Research

(3) In this course, graduate students who are completing a thesis, residency project, or dissertation will design a qualitative research project with extensive peer and instructor feedback. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 8562 - Designing Qualitative Research

(3) In this course, graduate students who are completing a thesis, residency project, or dissertation will design a qualitative research project with extensive peer and instructor feedback. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 7565 - Qual Methods and Analysis

(3) This advanced level course provides extensive qualitative fieldwork experience. Student will also become familiar with various forms of qualitative data analysis. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 8565 - Qual Methods and Analysis

(3) This advanced level course provides extensive qualitative fieldwork experience. Student will also become familiar with various forms of qualitative data analysis. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

Example Electives (3 credits unless otherwise noted):

We recognize that there are many courses across campus that can enrich our elective selection. However, due to extensive possibilities we cannot list all current and future "potential" electives. Therefore, if a student feels that a course outside of EDPR is appropriate as an elective, we ask that the student fill out the petition for elective form to be reviewed and approved by the qualitative coordinator.

EDPR 7563 - Theoretical Frameworks in Qual

(3) Students in this seminar will explore and immerse themselves in various macro-level social theories used in qualitative research. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 8563 - Theoretical Frameworks in Qual

(3) Students in this seminar will explore and immerse themselves in various macro-level social theories used in qualitative research. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 7566 - Writing Qualitative Research

(3) This intensive, advanced writing course provides support for graduate students who are writing qualitative research manuscripts, theses, and dissertations. Students will receive frequent feedback from the instructor and peers in a structured writing retreat setting. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 8566 - Writing Qualitative Research

(3) This intensive, advanced writing course provides support for graduate students who are writing qualitative research manuscripts, theses, and dissertations. Students will receive frequent feedback from the instructor and peers in a structured writing retreat setting. PREREQUISITE(S): Students must have completed EDPR 7561/EDPR 8561 with a B or above within the past two years and gain permission of the instructor.

EDPR 8008 - Directed Readings

(1-3) (EDFD 7008) 6 Individually directed reading; written report required. May be repeated for a maximum of 9 credits Grades of A-F, or IP will be given.

EDPR 8081 - Supervised Research

(1-6) (EDFD 7081) Collaborative research with faculty within the major to include planning, design, management, analysis, and reporting of research. May be repeated for a maximum of 12 hours PREREQUISITE(S): Minimum of 12 hours in major and permission of instructor. Grades of A-F, or IP will be given.

ANTH 7075 - Methods In Anthropology

(3) Critical examination of relationship between anthropological theory and methods; training in research ethics, ethnographic field research, and research design, including mixed-methods; engages major trends in contemporary anthropological research as a preparation for applying anthropology. PREREQUISITE(S): Non-majors must have permission of instructor.

ANTH 8075 - Methods In Anthropology

(4) Critical examination of field methods and research designs in selected areas of anthropology; major trends in contemporary anthropological research as a preparation for applied research. PREREQUISITE(S): Non-majors must have permission of instructor.

ANTH 7076 - Anth Analysis/Writing

(3) This course addresses analysis of data and sharing of results from mixed-methods ethnographic research. Topics will include data management, collaboration, analysis and synthesis of qualitative and survey data and ethnographic and report writing. Focus will be placed on collaboration between students and faculty to make meaning out of anthropological data, and to contribute to knowledge building in anthropology and the public sphere. PREREQUISITE(S): ANTH 7075 or permission of instructor.

ANTH 8076 - Anth Data Analysis

(4) Construction and analysis of data bases developed from ongoing anthropological projects; review of frequently used statistical techniques in anthropological literature, hypothesis testing, and methods of presentation. PREREQUISITE(S): ANTH 7075 or permission of instructor.

SOCI 7320 - Sem Meth Soc Res

(3) Issues and techniques in data collection for the design and implementation of independent research projects; logic of conducting social scientific research, ethical considerations, logic of sampling, various methods of collecting data for social research (e.g. experimental design, participant observation, survey research/questionnaire construction, and content analysis), and writing research proposals.

SOCI 8320 - Sem Meth Soc Res

(3) Issues and techniques in data collection for the design and implementation of independent research projects; logic of conducting social scientific research, ethical considerations, logic of sampling, various methods of collecting data for social research (e.g. experimental design, participant observation, survey research/questionnaire construction, and content analysis), and writing research proposals. May be repeated for a maximum of 3 credits

SOCI 7325 - Sem Qualitative Resrch

(3) (6420) Examination of qualitative social science research methods, particularly the rationale behind these methods, how and when they are employed, and processes of analyzing qualitative data.

SOCI 8325 - Sem Qualitative Resrch

(3) Examination of qualitative social science research methods, particularly the rationale behind these methods, how and when they are employed, and processes of analyzing qualitative data.

COMM 7332 - Seminar Comm Research

(3) Examination of particular methodologies in communication research. Content will vary in response to current issues in the field. May be repeated for a maximum of 9 hours.

COMM 8332 - Seminar Comm Rsearch

(3) Examination of particular methodologies in communication research. Content will vary in response to current issues in the field. May be repeated for a maximum of 9 hours.

COMM 7434 - Qual Research Methods

(3) Survey of qualitative research in communication. Practical experience in collecting and analyzing qualitative information.

COMM 8434 - Qual Research Methods

(3) Survey of qualitative research in communication. Practical experience in collecting and analyzing qualitative information.

PSYC 7312 - Qualitative Resrch/Psyc

(3) Examines history and current practice of research stemming from a human science philosophy, introducing a variety of qualitative research methodologies; examines differences and similarities in human and natural sciences in order to appreciate the significance of epistemology on research practice. PREREQUISITE/COREQUISITE: PSYC 7301 or permission of instructor. PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

PSYC 8312 - Qualitative Resrch/Psyc

(3) Examines history and current practice of research stemming from a human science philosophy, introducing a variety of qualitative research methodologies; examines differences and similarities in human and natural sciences in order to appreciate the significance of epistemology on research practice. PREREQUISITE/COREQUISITE: PSYC 7301 or permission of instructor. PREREQUISITE(S) or COREQUISITE(S): PSYC 7301 or permission of instructor.

Graduate Requirements

In order to graduate with the certificate, students must:

1. complete all Certificate Program course requirements with a B or above average
2. complete a fully qualitative dissertation
3. have a qualitative methodologist sit on their dissertation committee
4. submit the Certificate in Qualitative Studies in Educational Research Completion Form online
5. submit appropriate certificate completion form from the University of Memphis graduate school for program coordinator's signature

Quantitative Studies in Educational Research Graduate Certificate

Graduate Certificate

Admission

Admission to the program will be based on competitive selection from the pool of applicants

- Complete admission to The University of Memphis and the College of Education, Health and Human Sciences
- Have a minimum score of (250 computer based or 100 Internet based) on the TOEFL (for students for whom English is a second language).
- A minimum of a BS/BA in a related field with a cumulative GPA of 3.0 on a 4.0 point scale.

Program Requirements

Prerequisites:

EDPR 7541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 8541 - Stat Meth App Ed I **

(3) (EDRS 7541-8541) Utilization and interpretation of statistical methods applied to education; topics include frequency distributions, central tendency, variability correlation, linear regression, introduction to probability, normal distribution, interval estimation, hypothesis testing via t-test and chi-square and computer utilization in statistical analysis. PREREQUISITE(S): EDPR 7521 or permission of instructor.

EDPR 7521 - Intro to Educ Research **

(3) (EDRS 7521) Introduction to major concepts and processes underlying educational research; focus on knowledge necessary for critically appraising published research and preparing students as research consumers.

Participants complete 15 credits hours of graduate work. Six (6) credits are obtained from completing:

EDPR 7542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8542 or permission of instructor. Grades of S, U, or IP will be given.

EDPR 8542 - Stat Meth App Ed II **

(3) (EDRS 7542-8542) Includes one-way and two-way analysis of variance, a priori and post hoc tests of significance and an introduction to multiple linear regression and analysis of covariance; emphasis on student acquisition of

practical intermediate univariate analytic and interpretative skills. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of instructor.

EDPR 7511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor.

EDPR 8511 - Measurmt & Evaluatn

(3) (EDRS 7511) Test construction; item and test statistics; interpretations and applications of standardized test results; reliability and validity estimation methods; and classical and modern measurement theories. PREREQUISITE(S): EDPR 7541-EDPR 8541 or permission of instructor.

And nine (9) credits are selected from:

EDPR 8549 - Multivariate Meth Educ

(3) (EDRS 8549) Systematic investigation of current multivariate methods in the field of educational statistics. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instructor.

EDPR 8544 - SEM in EDU/Behav Research

(3) Includes path models; path analysis, confirmatory factor analysis, and latent-variable structural equation modeling (SEM); applications of path analytic and SEM techniques in educational research. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instructor.

EDPR 7531 - Computer As Res Tool

(3) (EDRS 7531-8531) Computer applications to research processes in education and the behavioral sciences; capabilities and limitations of computers in analysis of educational data; experience in the utilization of various (statistical) library programs. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor. Grades of A-F, or IP will be given.

EDPR 8531 - Computer As Res Tool

(3) (EDRS 7531-8531) Computer applications to research processes in education and the behavioral sciences; capabilities and limitations of computers in analysis of educational data; experience in the utilization of various (statistical) library programs. PREREQUISITE(S): EDPR 7541/EDPR 8541 or permission of the instructor.

EDPR 7543 - Res Design Analysis

(3) (EDRS 8543) Includes validity of research designs, complex analysis of variance, and analysis of covariance; emphasis is on practical advanced univariate and analytic and interpretative skills. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instrctor.

EDPR 8543 - Res Design Analysis

(3) (EDRS 8543) Includes validity of research designs, complex analysis of variance, and analysis of covariance; emphasis is on practical advanced univariate and analytic and interpretative skills. PREREQUISITE(S): EDPR 7542/EDPR 8542 or permission of instructor.

EDPR 7512 - Psychomet Thry/Ed Appl

(3) (EDRS 7512-8512) Psychometric principles and applications to tests, rating scales, questionnaires, and other standardized instruments used in educational research; problems associated with evaluation of items and instruments in terms of reliability and validity. PREREQUISITE(S): EDPR 7511/EDPR 8511 and EDPR 7541/EDPR 8541 or permission of instructor.

EDPR 8512 - Psychomet Thry/Ed Appl

(3) (EDRS 7512-8512) Psychometric principles and applications to tests, rating scales, questionnaires, and other standardized instruments used in educational research; problems associated with evaluation of items and instruments in terms of reliability and validity. PREREQUISITE(S): EDPR 7511/EDPR 8511 and EDPR 7541/EDPR 8541 or permission of instructor.

Progression/Retention

- All students in the certification program must maintain a 3.0 graduate GPA.
- A cumulative graduate GPA of 3.0 or better is required for certification.
- All courses towards certification must be completed within 3 years.

School Counseling Graduate Certificate

The University of Memphis's certificate in school counseling is intended for those individuals who are currently pursuing or have obtained a Graduate degree in clinical mental health counseling, rehabilitation counseling, clinical rehabilitation counseling, or college counseling to obtain Tennessee Licensure as a School Counselor.

Admission Requirements

1. Hold a graduate degree in counseling
2. Currently enrolled in Clinical Mental Health, clinical rehabilitation, rehabilitation program at The University of Memphis
3. Minimum Masters GPA of 3.0

Program Requirements

COUN 7640 - Principles Schl Couns

(3) Organization and administration of components of counseling services in schools, role and function of the school counselor in K-12 system.

COUN 7542 - Child Counseling, Consultation and Intervention in Schools

(3) (7582-8582) This online course provides an introduction to counseling children and adolescents as a means of facilitating healthy development and promoting academic achievement. Through didactic and experiential learning, students in school-based helping professions will develop skills to utilize child centered communication, creative therapies, consultation, and identify and implement theoretically and developmentally informed interventions.

COUN 7826 - Schl Coun to Close Achvmnt Gap

(3) The education system is considered the premier vehicle for social mobility, yet student achievement data, graduation and matriculation rates continue to reflect broad societal inequalities. The purpose of this course is to train school counselors to assist marginalized students overcome the societal, familial, and educational barriers that impede positive educational and career outcomes. This course focuses on developing school counselor?s leadership and advocacy skills to design strategic guidance programs grounded in evidence based practices that target the achievement gap and facilitate educational equity for all students.

COUN 7790 - Spc Prblms In Coun

(1-3) (7993) (7993). Individual investigation and report in the area of counseling under the direction of a faculty member. May be repeated for a maximum of 9 hours. May be repeated for a maximum of 9 hours

COUN 7642 - Intern Elem Sch Coun

(3-6) (7697) (7697). Supervised counseling experience in working with pre K-6 elementary school-aged children in multicultural settings. The student will be involved in services for a minimum of 300 (or half-time for 4 hours) or 600 (or full-time for 6 hours). May be repeated by half-time students for a maximum of 6 semester hours. May be repeated by half-time students for a maximum of 6 semester hours

COUN 7646 - Intern Sec Sch Coun

(3-6) (7696-8696) (7696-8696). Supervised counseling experience in working with adolescents middle and/or high school multicultural settings. The student will be involved in services for a minimum of 300 (or half-time for 4 hours) or 600 (or full-time for 6 hours). May be repeated by half-time students for a maximum of 6 semester hours. May be repeated by half-time students for a maximum of 6 semester hours

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

School Library Information Specialist Graduate Certificate

Graduate Certificate

The purpose of the Graduate Certificate for School Library Information Specialists is to provide practical training to individuals who are presently teaching or are interested in obtaining teacher licensure with a specialization as a School Library Information Specialist (TN DOE endorsement for Library Information Specialist PreK-12 - 473).

Program Admission

Students wanting to earn the Graduate Certificate for School Library Information Specialists must have an earned Master's degree and apply to be accepted in this graduate certificate program. Applicants must also hold a current teaching license or be in the process of obtaining teacher licensure. The courses may be completed as part of a degree program with the SLIS program coordinator and graduate advisor's approval.

Program Requirements

A total of twenty-one (21) credit hours are required to complete this program.

ICL 7132 - Catalog/Classification **

(3) Introduction to principles and techniques of cataloging and classification of books and other library materials.

ICL 7133 - School Library Admin **

(3) Organization and administration of elementary and secondary school libraries, including standards, evaluation, facilities, equipment, support, student assistants, and relationship to instructional and guidance programs of school.

ICL 7134 - Internet in the School Library **

(3) Professional applications of instructional and communications technologies in the school library environment; the focus is on enhancing prospective school library information specialists' technological knowledge and skills in using the Internet.

ICL 7301 - Literature in PreK-12 School **

(3) Methods of teaching children's and adolescents' literature in the PreK-12 school environment, including storytelling, dramatization, choral speech work, fiction, nonfiction, drama, and poetry.

ICL 7730 - Found Librarianship **

(3) Introduction to librarianship as a profession and library as institution in cultural and political setting; influences of social issues, societal needs, professional organizations, and federal legislation on goals, ethics, organization, programs, and problems of libraries and librarians.

ICL 7731 - Intro To Bibliography **

(3) Theory and purpose of bibliography as form of access to information; emphasis on general reference sources; introduction to principles, practices, and methods of reference service.

ICL 7800 - Adv Clinical Practicum **

(3-9) Includes student teaching, supervised practicum, and other similarly organized professional experiences; designed to complement on-campus course study with actual on-site professional experience. COREQUISITE: ICL 7993. Grades of A-F will be given.

Graduation Requirements

1. The student must complete all seven required courses with a Grade Point Average (GPA) of 3.0 or higher, for a total of 21 credit hours.
2. In the semester of the advanced clinical practicum, the student must submit a Graduate Certificate Candidacy form to the COE Graduate Analyst in Ball Hall 215 (3798 Walker Ave., Memphis, TN 38152) by the deadline specified by the Graduate School.

School Social Work Graduate Certificate

The Graduate Certificate in School Social Work may be used by current MSW students or MSW graduates to obtain licensure as a School Social Worker. Students seeking licensure in the State of Tennessee should contact the Department about specific state requirements including test scores. Students seeking licensure in other states should contact that state for specific requirements before selecting courses.

Admission Requirements

The certificate program in School Social Work can be pursued concurrently with the Master of Social Work program or after completion of the Master of Social Work. Concurrent or prior enrollment in an accredited Master of Social Work program is required. Students may fulfill admissions requirements in one of the following two ways.

1. Admission into the Master of Social Work at the University of Memphis.
2. Completion of the Master of Social Work at any university accredited by the Council on Social Work Education (CSWE).

Program Requirements

Completion of 12 semester hours distributed as follows:

SWRK 6937 - School of Social Work

(3) This course develops the knowledge and skills necessary for successful and competent social work in public schools; covering the varied roles and functions of school social workers in their practice with diverse groups of students, families, school personnel, and communities. Best practices in assessing, intervening, and evaluating social work practice across all system levels are emphasized.

Completion of one of the following two courses:

SPED 7000 - Intro Excptional Learnr **

(3) Study of the relevant research dealing with the physical, mental, emotional, and social traits of all types of individuals who are exceptional; consideration of major current problems and practices in the development of various programs. Field Experience: Required. NOTE: Not required if equivalent course taken at the undergraduate level. Substitutions must be approved by advisor.

SPED 7517 - Func Anlys/Treat Prob Behv

(3) Examines principles, issues, approaches, and strategies for conducting Functional Behavior Assessment and Functional analysis. PREREQUISITE(S): SPED 7514/SPED 8514

Completion of 6 semester hours in an approved school social work setting:

SWRK 7051 - Field Placement I

(3) This course provides opportunities for students to integrate what they are learning in the classroom with practical experience in an agency that provides social work services. The first course prepares students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and increase their self-understanding.

and

SWRK 7052 - Field Placement II

(3) The first year of field placement is intended to prepare students for work as generalist social workers, to help them learn to apply critical thinking skills, to increase their range of social work skills and techniques, to understand the importance of the value base and ethical framework of the profession of social work, and to increase their self-understanding. Field Placement II builds on the learning foundation that was established in Field Placement I.

OR

SWRK 7053 - Field Placement III

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement III builds on the learning foundation that was established in Field Placement I and II.

and

SWRK 7054 - Field Placement IV

(3) The second year is directed toward an area of social work specialization and the development of advanced skills and practice, building on the first year of placement and providing opportunities for more complex application of social work theories, models, values, and ethics. Field Placement IV builds on the learning foundation that was established in Field Placement I, II, and III.

OR

ELC 7115 - Experiential Learning Credit

(1) A systematic process for evaluating and credentialing graduate-level learning gained in a variety of contexts. Students will provide documentation of graduate-level knowledge and skills garnered in non-traditional settings to expert faculty reviewers.

NOTE: The Council on Social Work Education (CSWE) stipulates that students in the Master of Social Work program may not receive credit for work or life experience. Due to this policy, ELC 7115 may not be completed by students currently enrolled in the MSW program. Under no circumstances may students attempt to substitute ELC 7115 for SWRK 7051, SWRK 7052, SWRK 7053 , or SWRK 7054 or any other course in the MSW degree program. ELC 7115 may only be used by certificate students who have completed the MSW degree.

Retention Requirements

Retention requirements are the same as those in the Master of Social Work Program.

Graduation Requirements

1. Students must complete all four required courses with an average grade of B (3.0) or higher for a total of 12 credit hours.
2. Students may earn no more than 3 credit hours of C+, C, or C- grades.

Social Media Analysis and Strategy Graduate Certificate

The Graduate Certificate in Social Media Analysis and Strategy offers students skills and knowledge to broaden their use of social media in a professional setting, including using it to attract readers, clients and customers. The certificiate emphasizes knowledge of how to use social media, how to engage, the public, and how to analyze the information social media provides in order to improve performance and understanding.

Objectives of the program include:

- To prepare students as professionals in advertising, public relations and journalism with the knowledge and current theories of how social media can be used to engage the public.
- To equip students with the skills needed to use social media to do tasks such as enhance public perception of a product, increase marketability of a business and heighten brand awareness.
- To certify students in multiple areas of social media analytics, such a HootSuite, Meltwater, Google AdWords, Google Digital Garage, and others.

Program Admission

Prospective students must submit the following in order to be considered for admission:

- Application
- Resume
- Undergraduate Transcript
- Goal Statement

Program Requirements (12 hours)

Students are required to take JRSM 7330 - Soc.Media&Comm.Engagement **. Then students would choose three (3) of the following courses:

JRSM 7100 - Entrepreneurial Media **

(3) Examines business models and new media tools that can encourage entrepreneurial thinking and planning in various fields of mass communication, as well as the theory and practices of traditional media management. Subjects will include assessment, organization and strategy, budgeting, decision-making, and other functions in advertising, news, and public relations.

JRSM 7410 - Advanced Crisis Communication

(3) Discussing all aspects of a crisis, including preparation, response, recovery, and mitigation. Focuses on communication from an organization and government to all potential publics. Will also discuss the impact of social media and potential from one-to-one communication. Course will include a multi-day crisis simulation.

JRSM 7412 - Analytics and Evaluation

(3) Research for strategic communicators, including focus groups and surveys. Basic qualitative and quantitative research skills will be discussed, including how to conduct and analyze focus groups, write survey questions, and perform basic statistical analyses. Gathering, understanding, and utilizing social media analytics for a variety of platforms will also be discussed. Students will become HootSuite-certified.

JRSM 7414 - Audience Analysis&Segmentation

(3) Understanding the variety of audiences and publics faced in strategic communication, including how to segment them properly, the importance of understanding a variety of audience characteristics, and how to use research to reach and comprehend the impact those audiences can have on strategic communication work.

JRSM 7416 - Global Strategic Communication **

(3) This class looks at a wide variety of concepts from other courses, including writing, social media usage, research, management, and audience analysis, to understand them in a global context. There is also a critical discussion of strategic communication work, encouraging students to think about a broader variety of responses and reactions. This include both how to develop an integrated, holistic global communication program, and how to manage such a program.

JRSM 7422 - Writing for Strategic Media

(3) Writing for all aspects of public relations and advertising, with a specific focus on writing for audio/visual and social media platforms, including translating one message across multiple technologies and platforms. Focus will be on writing in an active, engaging voice that aligns with the organization's mission and profile.

Graduation Requirements

Student must complete four courses with at least a B in each course.

Retention Requirements

Each student will meet with the JRSM graduate director for advising each semester. The graduate director will review the students' progress in the program and offer advice on how to proceed. Students are required to maintain a B average to remain in good academic standing at the university. No student will get credit for a course unless the students gets at least a B. Any course where less than a B in received will have to be taken again.

Software Testing Graduate Certificate

Graduate Certificate

Software testing is a critical discipline as organizations increasingly rely on information systems that are becoming increasingly more complex. This certificate prepares students to both manage and participate in testing at all stages of the software development process. The topics and techniques are applicable to testing all types of software.

Admissions Requirements

1. Same as College and University requirements.
2. The certificate can be pursued concurrently with other graduate programs at the University.
3. Non-degree seeking applicants must submit a brief (1-2 pages) statement that describes educational and work experiences in business, including their background in software testing. GMAT scores are not required. However, acceptance into the certificate program is not an implied acceptance into any master's degree program.

Program Requirements:

The following 4 courses must be satisfactorily completed for a total of 12 hours of credit.

MIS 7610 - Sys Analysis & Design **

(3) Comprehensive structured approach to application system development process; emphasis on requirements analysis, logical specifications, structured design, and implementation of information systems.

MIS 7655 - Adv Systems Analysis

(3) Advanced concepts in information systems planning and development with focus on current information technologies and systems development practices that lead to timely delivery of effective information systems solutions; special attention on communication and interpersonal skills required for today's systems development activities. PREREQUISITE(S): MIS 7610.

MIS 6681 - Fundamental/Software Testing

(3) Software testing objectives, planning, techniques, and organizational options. Manual and automated software testing techniques and test case generation methodologies.

MIS 6682 - Advanced Software Testing

(3) Topics include advanced software testing methods, the roles of software testers and users at all stages of software development, walkthroughs, inspections, and reviews, testing in standard versus agile developments environments. PREREQUISITE(S): MIS 6681.

Graduation Requirements

1. The student must complete all 4 required courses with an average grade of B (3.0) or higher, for a total of 12 credit hours.
2. In the semester of graduation, the student must submit an Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the College Director of Graduate Studies by the deadline specified by the Graduate School.

Sport Nutrition and Dietary Supplementation Graduate Certificate

The topics of sport nutrition and dietary supplementation continue to gain momentum in the research world, as well as in clinical practice. Multiple peer-reviewed scientific journals are now dedicated to presenting literature specific to the area of sport nutrition. The same is true for the study of dietary supplementation.

The graduate certificate in Sport Nutrition and Dietary Supplementation is particularly useful for registered dietitians/nutritionists, strength and conditioning coaches, personal trainers, and healthcare providers (e.g., nurses, pharmacists) who may receive questions from athletes and/or patients specific to the topics of sport nutrition and dietary supplementation.

Program Requirements

Consisting of 12 credit hours, students complete three required courses (each consisting of 3 credit hours), with a choice for the final three credit hours. All courses are delivered online and can be completed in any sequence.

Required Courses

NUTR 7000 - Sport Nutrition **

(3) Overview of sport nutrition for graduate students. Course content is delivered entirely online and will cover major macro-nutrients and micro-nutrients important to sports performance as well as strategies for optimal nutrition before, during, and after training and competition.

NUTR 7001 - Nutraceuticals and Dietary Sup **

(3) Overview of nutritional supplementation for graduate students. Course content is delivered entirely online through eCourseware and will cover major classes of nutritional supplements as well as nutritional supplementation strategies for sports performance and general health.

NUTR 7002 - Exer & Nutrition Immunology **

(3) Overview of the effects of exercise and nutrition on the immune system. Course content is delivered entirely online through eCourseware and will cover basic concepts in immunology, the effects of exercise on the immune system and how nutrients alter immune responses.

Three additional credit hours will be completed by choosing from the following options:

NUTR 7003 - Practicum in Sport Nutrition

(3) Students should have delivered a minimum of 250 hours of approved sport nutrition counseling to satisfy this Experiential Learning Credit requirement. This may have included one-on-one or group counseling. Students may have performed this work independently with clients or under the supervision of a mentor/employer. Two verification statements from employers or other individuals who can confirm that the 250 hours of counseling was performed satisfactorily are required. In addition, students must complete a written summary of the work that was performed, documenting the work in detail. The summary should be detailed and complete but should not exceed two written pages.

ESMS 7202 - Phys Ex Mtbolc/Cardresp

(3) (EXSS 7202) An analysis of the acute and chronic metabolic/cardiorespiratory bases of human performance and fitness under various internal and external environmental conditions; discussion of selected techniques for assessing metabolic/cardiorespiratory function and structure.

HPRO 7780 - Health Counseling **

(3) Introduces clinical counseling techniques focusing on the development and application of basic health counseling and lifestyle coaching skills. Self-evaluation, giving and receiving feedback and reflection upon the development of clinical skills and ethical tendencies is an essential part of this course.

NOTE: NUTR 7003 consists of credit provided through the Experiential Learning Credit (ELC) program. See www.memphis.edu/innovation/elc/experiential_learning.php

Students should complete a minimum of 250 hours of sport nutrition counseling experience to satisfy this ELC requirement. This may include one-on-one or group counseling. Students may perform this work independently with clients or under the supervision of a mentor/employer. Two verification statements from employers or other individuals who can confirm that the 250 hours of counseling was performed satisfactorily are required. In addition, students must complete a written summary of the work that was performed, documenting the work in detail. The summary should be detailed and complete but should not exceed two written pages.

STEM (Science, Technology, Engineering, and Mathematics) Teacher Leadership Graduate Certificate

Graduate Certificate

The goal of the certificate program in STEM (Science, Technology, Engineering, and Mathematics) Teacher Leadership is to develop the knowledge and skills of secondary mathematics, science, and engineering teachers who are currently teaching in local area schools. The coursework is designed to promote in-depth understanding of current standards and instructional practices with a particular focus on building teacher leaders in STEM education.

Program Admission:

Students interested in receiving a Certificate in STEM Teacher Leadership must be apply to and be accepted to this graduate certificate program. Applicants must hold a current teaching license. The courses may be completed as part of a degree program with the advisor's approval.

Program Requirements:

A total of twelve (12) credit hours are required to complete this program.

ICL 7720 - STEM Curriculum Leadership

(3) Focus on curriculum standards and trends in mathematics, science, and engineering education. Topics include: introduction to the standards; the relationship between curriculum and equity; implications of the standards for instructional practice; the integration of technology and engineering; and the alignment between standards and curriculum materials.

ICL 8720 - STEM Curriculum Leadership

(3) Focus on curriculum standards and trends in mathematics, science, and engineering education. Topics include: introduction to the standards; the relationship between curriculum and equity; implications of the standards for instructional practice; the integration of technology and engineering; and the alignment between standards and curriculum materials. PREREQUISITE(S): Admission to IMBA concentration. Grades of S, U, or IP will be given.

ICL 7721 - STEM Teacher Development

(3) Focus on theory and practice around STEM teacher learning and professional development. The course will explore research-based practices and models of STEM professional development.

ICL 8721 - STEM Teacher Development

(3) Focus on theory and practice around STEM teacher learning and professional development. The course will explore research-based practices and models of STEM professional development.

ICL 7722 - Teaching and Learning in STEM

(3) Focus on student-centered instructional models with particular attention to approaches that integrate science, engineering, technology, and mathematics.

ICL 8722 - Teaching and Learning in STEM

(3) Focus on student-centered instructional models with particular attention to approaches that integrate science, engineering, technology, and mathematics.

ICL 7723 - Equity in STEM Education

(3) Focus on the history of mathematics and science education as it relates to equity and opportunity to learn. Additional topics include: culturally relevant pedagogy in mathematics and science; STEM education in urban schools; strategies for teaching mathematics and science to linguistically diverse students; teaching for social justice; and technology and opportunity to learn.

ICL 8723 - Equity in STEM Education

(3) Focus on the history of mathematics and science education as it relates to equity and opportunity to learn. Additional topics include: culturally relevant pedagogy in mathematics and science; STEM education in urban schools; strategies for teaching mathematics and science to linguistically diverse students; teaching for social justice; and technology and opportunity to learn.

Graduation Requirements

1. The student must complete all four required courses with an average grade of B (3.0) or higher, for a total of 12 credit hours.
2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to Graduate Analyst in Ball Hall 215 (3798 Walker Ave., Memphis, TN 38152) by the deadline specified by the Graduate School.

Strategic Leadership Graduate Certificate

The Graduate Certificate in Strategic Leadership is a 12-hour program (four courses) designed to provide theoretical and practical knowledge to enhance leadership skills. The program is specifically designed for the working professional.

The hours earned in the certificate program may be applied toward the Master's degree in Professional Studies with a concentration in Strategic Leadership.

Core Requirements (9 hours):

PRST 7100 - Prof Envron/Issue/Ethic **

(3) Classical approaches to ethics presented with their application to decision points confronted in various professions, as well as analysis of issues of diversity and moral responsibility in professional practice.

PRST 7200 - Globalization/Profsns **

(3) Analysis of globalization and its effects on the workplace, including the interactions of advancing communications technology, multi-national corporations, and global societies.

PRST 7500 - Foundation/Leadership **

(3) Students will study leadership from a historical and contemporary perspective. They will identify, apply, and reflect on aspects of leadership development, including concepts of personal change toward effective leadership in a changing environment. Topics cover historical development of leadership theories, personal assessment and development, values and ethics, motivation, power, followership, group dynamics, diversity in leadership, controversy with civility, change process, and citizenship.

One elective from the following (3 hours):

PRST 7310 - Leadership/Organization **

(3) Organizational leadership is a course designed to inform the individual about the structure and behavior of actors at all levels of the organization.

UNIV 7111 - Data-Based Decision-making

(3) This course will examine how you interpret research data and turn it into useful or meaningful information. Students will study the use of business intelligence to prepare and present useful information in supporting conclusions and decision-making.

PRST 7700 - Conflict Mgmt/Negotiatn **

(3) Negotiation and Conflict Management presents negotiation theory â€" strategies and styles â€" within an employment context. May be repeated for maximum of 20 credits with change in topic

Teacher Leader Certificate

Teacher Leader Certificate

The Teacher Leader Certificate Program at the University of Memphis is designed to prepare practitioners in the field of education to develop leadership skills to support instruction at the school level. This four course certificate can be

completed in three semesters. Specific focus will be placed upon developing leadership styles, using data to improve student learning and developing instructional skills to support colleagues. *Please note that this certificate program does not lead to Tennessee licensure or certification.*

Admission Requirements

1. Meet all Graduate School admission requirements
2. Have Undergraduate/Graduate GPA of 3.0
3. Submit a letter of recommendation from local school district
4. Hold a Professional Teacher License

Program Requirements

Completion of 12 semester hours distributed as follows:

ICL 7309 - Dev Instructional Ldrs

(3) Application of development of instructional leaders, mentors and coaches within in a school environment; emphasis on developing leadership styles to ensure implementation of multiple initiatives and support colleagues for personal growth

ICL 8309 - Dev Instructional Ldrs

(3) Application of development of instructional leaders, mentors and coaches within in a school environment; emphasis on developing leadership styles to ensure implementation of multiple initiatives and support colleagues for personal growth

ICL 7310 - Supptng Cont Spec Inst

(3) Application of development of instructional leaders, mentors and coaches within a school environment; emphasis on developing instructional skills to support various coaches within a district

ICL 8310 - Supptng Cont Spec Inst

(3) Application of development of instructional leaders, mentors and coaches within a school environment; emphasis on developing instructional skills to support various coaches within a district Restricted to students enrolled in HIAD, LDPS, and CCTL programs or by permission of instructor.

ICL 7707 - Using Data to Inform Teaching

(3) This course helps teachers gain knowledge and skill in using various forms of data to improve student learning and achievement. It includes data-driven teaching and decision making, data sources and measures, differentiating instruction, and action planning to guide instruction, curriculum and assessment.

ICL 8707 - Using Data to Inform Teaching

(3) This course helps teachers gain knowledge and skill in using various forms of data to improve student learning and achievement. It includes data-driven teaching and decision making, data sources and measures, differentiating instruction, and action planning to guide instruction, curriculum and assessment.

ICL 7810 - Teacher Leader Practicum

(3) The teacher leader practicum will focus on creating a school climate to strengthen student achievement by developing instructional supports. These supports may include the creation of instructional plans for struggling teachers, implementing professional learning communities and developing a year long professional development plan for a school

ICL 8810 - Teacher Leader Practicum

(3) The teacher leader practicum will focus on creating a school climate to strengthen student achievement by developing instructional supports. These supports may include the creation of instructional plans for struggling teachers, implementing professional learning communities and developing a year long professional development plan for a school

Retention Requirements

Same as retention policies applicable to Department of Instruction and Curriculum Leadership graduate degree programs.

Graduation Requirements

1. The student must complete all four required courses with an average grade of B (3.0) or higher for a total of 12 credit hours.
2. In the semester of graduation, the student must apply to graduate from the University Graduate School and a graduate Certification form to the ICL Graduate Office in Ball Hall 215 by the deadline specified by the University Graduate School.

For more information, please contact:

Dr. Annette Cornelius
acornels@memphis.edu
901.678.5093 or 731.425.7993

Teaching English as a Second/Foreign Language Graduate Certificate

Certificate Program (TESL/TEFL)

The TESL/TEFL Graduate Certificate provides training to those interested in teaching English as a Second/ Foreign Language. The certificate is given for to those who complete the practical preparation needed to teach English both within and outside the United States to post-secondary students and adults. The specific courses for the certificate include the specific knowledge and skills specified for ESL teachers and identified by TESOL, Teachers of English to Speakers of Other Languages, Inc. Students have the option of completing the program on-line. Click here to view corresponding gainful employment data.

Note: The Certificate in Teaching of English as a Second/Foreign Language is not a program to prepare K-12 ESL teachers. Pre-service and in-service teachers seeking an ESL certificate and an add-on endorsement in ESL for K-12 should contact the College of Education, Health and Human Sciences for details.

Admission Requirements

Applicants should hold a BA degree in any field with a GPA of at least 2.75.

International students must have a TOEFL score of 80, or an overall Band IELTS score of 6.5.

Applicants must submit a one-page personal statement and two letters of recommendation to the English Department.

Since 15 credit hours in the certificate program may also count toward the MA degree, it is expected that many fully-admitted students will earn the certificate on their way to the MA degree. Certificate students wishing to earn the MA must make formal application for the master's program following all guidelines specified by the English Department and the University.

Program Requirements

Fifteen (15) semester credit hours

The certificate program requires completion of fifteen (15) semester credit hours including:

Twelve (12) credit hours

Twelve (12) credit hours must be met by satisfactory completion of the following core courses:

ENGL 7531 - Theory and History of ESL **

(3) Survey of relation of linguistic principles to second language acquisition.

ENGL 7532 - Principles of Skills Assessment **

(3) Application of theories of teaching second language skills with emphasis on testing in a second language.

ENGL 7535 - ESL Grammar

(3) Grammatical systems and strategies of Modern English; analysis of English structures that tend to cause difficulty for ESL/SESD speakers.

ENGL 7530 - Field Experience and Practicum in ESL **

(3-6) Experience in observing and teaching, peer teaching, and work with an English as a Second Language (ESL) specialist. Grades of S, U, or IP will be given. May be repeated for a maximum of 6 credit hours when topic changes.

Three (3) elective hours may be selected from:

ENGL 7533 - Methods/Techniques of ESL in K-12 **

(3) Techniques and resources for working with children and adolescents for whom English is a second language. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7536 - Issues in Second Language Writing

(3) Emphasis on research in second language writing, especially the role of psychological, social, and cultural influences on learning to write in a second language. May be repeated for a maximum of 6 credit hours when topic changes. Grades of S, U, or IP will be given.

ENGL 7537 - Issues in Second Language Reading

(3) Emphasis on how non-native speakers of English learn to read in English, the effect of context and culture on L2 reading, and culturally related responses to reading and literacy traditions. May be repeated for a maximum of 9 credit hours when topic changes.

ENGL 7538 - Cultural Issues in ESL

(3) Impact of culture on non-English language background speakers as well as the particular aspects of U.S. culture and traditions needed for successful acculturation.

ENGL 6533 - ESL/EFL in Multicultural Settings

(3) Approaches to working with ESL or EFL students in multicultural settings. May be repeated for a maximum of 6 credit hours

Note:

Those also seeking ESL add-on endorsement must complete ENGL 7533 and ENGL 7538. Praxis II for ESL is also required for the add-on endorsement.

Retention Requirements

Same as retention policies applicable to Department of English graduate degree programs.

Graduation Requirements

Relatively early in the semester in which they intend to graduate, certificate candidates must file an Apply to Graduate Card with the Graduate School and a Candidacy form with the Graduate Coordinator for English.

Teaching of Mathematics Graduate Certificate

Program objective is to provide content knowledge training required for teaching lower division college mathematics courses. This training will help high school teachers meet the content knowledge requirements for the teaching of dual enrollment courses, and help satisfy the demand created by the Tennessee Promise program, for individuals qualified to teach mathematics in community colleges.

Requirements

Admission Requirements:

1. An undergraduate degree with a major in mathematics, statistics, or mathematics secondary education is required. The minimum GPA is 2.5 on a 4.0 scale. Students whose major was not in mathematics, statistics, or mathematics secondary education will be considered on a case-by-case basis.

2. GRE General Test scores are required and are an important factor in admission. This requirement may be waived for those applicants who have a graduate degree (master's degree or higher) already, who have a graduate GPA of 3.0 or above, and who have work experience in an education related field for 3 or more years. If GRE scores are waived, applicants will have to provide contact details of two referees who are able to address their suitability for this graduate program.
3. TOEFL scores are required for students whose native language is not English.

Program and Graduation Requirements:

The program consists of 18 Graduate Credit Hours in Mathematics, approved by the department and includes an in-depth study of the teaching of Pre-Calculus and Calculus. For information about the program requirements and Graduation requirements contact the Department of Mathematical Sciences at msci-dept@memphis.edu.

Urban Education Graduate Certificate

Graduate Certificate

This certificate program offers an advanced program of study in the expansive and distinct historical and contemporary knowledge, scholarship, and practical issues related to instruction and curriculum leadership in an urban educational context that has a diverse population, is geographically bounded, and is unique in its political, economic and cultural history, relationships, and interactions. It complements existing College of Education programs by offering a structured, focused course of study, consisting of 12 credit hours of core courses. These courses may be completed as part of a degree program with the advisor's approval, or as additional course work.

Program Admission

Students interested in receiving a Certificate in Urban Education must apply and be admitted to this graduate certificate program and preferably to a College of Education graduate degree program, such as the master's or doctoral major in the Department of Instruction and Curriculum Leadership. Application is through the office of Graduate Admissions. Applicants must also complete an interview with the certificate coordinator. The courses may be completed as part of a degree program with the advisor's approval.

Program Requirements

The following four core courses are required for the Certificate in Urban Education:

ICL 7701 - Adv Wksp ICL:Urban Educ

(3) This course requires investigations of Urban Education issues in schools and topic of inquiry will change if course is repeated.

ICL 8701 - Adv Wksp ICL:Urban Educ

(3) This course requires investigations of Urban Education issues in schools and topic of inquiry will change if course is repeated.

ICL 7702 - Adv Topics in ICL:Urban Educ

(3) Current topics in areas of instruction and curriculum at advanced levels in Urban Education. This course addresses current research and issues in Urban Education school environments.

ICL 8702 - Adv Topics in ICL:Urban Educ

(3) Current topics in areas of instruction and curriculum at advanced levels in Urban Education. This course addresses current research and issues in Urban Education school environments.

ICL 7706 - Family/Comm Relations

(3) Analysis of family, cultural, and community patterns in relation to the teacher's roles and responsibilities for building educational partnerships.

ICL 8082 - Seminar in Urban Education

(3) This course uses various forms of seminar discussion, graduate inquiry, and creative engagement to provide a focused deliberative environment to study urban education issues and trends.

Retention Requirements

Same as retention policies applicable to Department of Instruction and Curriculum Leadership graduate degree programs.

Graduation Requirements

1. The student must complete all four required courses with an average grade of B (3.0) or higher, for a total of 12 credit hours.
2. In the semester of graduation, the student must submit the Apply to Graduate form to the Graduate School and a Graduate Certificate Candidacy form to the Graduate Analyst in Ball Hall 215 (3798 Walker Ave., Memphis, TN 38152) by the deadline specified by the Graduate School.

Women's and Gender Studies Graduate Certificate

Graduate Certificate

The Graduate Certificate in Women's and Gender Studies is an interdisciplinary program open to students currently admitted to any graduate program at the University of Memphis. It is also available to graduate students enrolled at another institution, as well as to individuals holding a graduate degree who wish to pursue further professional credentials. The program draws on the expertise of faculty from different departments and colleges, including the Colleges of Arts and Sciences, Education, and Business; therefore, the academic program for each student will be individually crafted in consultation with the Women's and Gender Studies advisors.

The certificate provides recipients with a specific and documented knowledge of Women's and Gender Studies. Not only an advantage to those pursuing advanced degrees in related fields, the certificate program satisfies the demands of a labor market increasingly oriented toward those trained in managing diversity and services for women.

Admission to the Program

1. Students currently admitted to a graduate program at the University of Memphis or other university, as well as students already holding a graduate degree, may apply for admission to the Graduate Certificate Program in Women's and Gender Studies.

2. For students enrolled in a graduate program, a minimum undergraduate GPA of 2.8 is required for admission.
3. Students must apply to both the certificate program and the Graduate School. To apply, students submit:
    1. Transcript of undergraduate degree program and transcripts of prior and current graduate study
    2. A letter describing reasons why the student is interested in pursuing a graduate certificate in the area of Women's and Gender Studies and how the program corresponds with prior experience and anticipated career plans
    3. GRE scores are required and are an important factor in admission
    4. A minimum score of 550 on the TOEFL and a minimum score of 50 on the Test of Spoken English (for students whose native language is not English)

Program Requirements

1. The certificate program requires completion of twelve (12) semester credit hours.
2. Three (3) credit hours must be met by satisfactory completion of either SOCI 7421 - Racial & Social Inequal or SOCI 7422 Race/Class/Gender.
3. Nine (9) remaining hours will be selected in consultation with the Women's and Gender Studies advisors and prior to enrolling in the class to assure the courses include or treat centrally material relevant to the Certificate students. Course content may vary depending on the instructor and will not always be pertinent to the study of women and gender.
4. Select at least one course from the humanities group and one course from the social science group (courses from graduate programs that incorporate women's and gender issues, such as in the courses below, will be considered for inclusion as an approved elective):

Humanities Courses:

COMM 6364 - Gender and Public Discourse

(3) History of gender topics in U.S. public discourse. The course covers gender and rhetorical theory analyzing the social and cultural significance gendered voices and topics have played and continue to play in US history. Focus is given to various Is 19th, 20th and 21st century issues. Grades of A-F will be given.

COMM 6856 - Gender and Film

(3) Examines how gender, and consequently race and sexuality, are represented in film. Specific attention is given to feminist approaches in film studies.

ENGL 7451 - Women And Literature

(3) Literature and criticism by and about women. May be repeated for a maximum of 9 credit hours when topics change.

ENGL 7469 - African American Women Writers

(3) Examines the variety of ways black women writers have reclaimed the creative power of agency, emphasizing areas of difference as well as continuity within the African American literary tradition; combines considerations of context, both historical and political, with rigorous textual and theoretical analyses. May be repeated for a maximum of 9 credit hours when topic changes.

HIST 6056 - Special Topics in History

(1-3) Intensive study of selected topics in History. Topics are announced in online class listings. History COREQUISITE(S): University of Memphis - Graduate Catalog HIST

HIST 6213 - Women/Gender/Latin Amer

(3) Historical examination of the roles of women and gender in Latin America from colonial times to the beginning of the twentieth century.

HIST 6289 - African Women's History

(3) Experiences of women throughout entire history of African continent, from human origins to present; covers major epochs in African history, diversity of continent, and theoretical issues related to gender through study of primary documents, fiction, and film.

HIST 6831 - History American Family

(3) Analysis of changes in family size and structure and relationships between family and society from colonial times to present.

HIST 6851 - Hist Women In America **

(3) Economic, political, social, and intellectual history of women in the English American colonies and the United States. COREQUISITE(S): ICL 7993

HIST 6853 - African American Women

(3) The social, political, economic, and cultural history of African American women from the sixteenth century to the present.

HIST 6863 - Hist Childhood/America **

(3) Historical consideration of children and childhood in American society from early 17th century to present.

HIST 7060 - Women/Gender Historiography

(3) Theory and historiography of the field using major theoretical writings, from American and non-American perspectives, and from racially different viewpoints.

HIST 8060 - Women/Gender Historiography

(3) Theory and historiography of the field using major theoretical writings, from American and non-American perspectives, and from racially different viewpoints.

HIST 7061 - Studies Women/Gender Hist

(3) May be repeated when the content varies.

HIST 8061 - Studies Women/Gender Hist

(3) May be repeated when the content varies.

MUHL 6013 - Women And Music

(3) An investigation of the roles women have played throughout the history of Western art music, and the music they have composed, performed, and inspired. The additional fee for this instruction is $250.00 per semester. PREREQUISITE(S): Background in ordinary differential equations and linear algebra.

PHIL 6441 - Recent Continentl Phil

(3) Major figures in 20th century European thought; movements such as phenomenology, existentialism, structuralism, critical theory, and hermeneutics. PREREQUISITE(S): Permission of Instructor.

PHIL 7020 - Seminar Major Figures

(3) Information will be in *Schedule of Classes*. PREREQUISITE(S): Permission of Instructor.

WMST 7320 - Women&Multi-Cultrl Exp

(3) Interdisciplinary study of women's creativity and representation, including aspects of race, gender, and sexuality; focusing on theoretical approaches to and artistic practices in women's lives.

Social Science Courses:

ANTH 6551 - Culture/Sex/Childbirth

(3) Review of biological, environmental, social, and cultural factors influencing human reproduction; comparison of cultural and clinical perspectives on sexual orientation and behavior, sexually transmitted diseases, fertility, birth control, pregnancy, birth, and postpartum care; evaluation of alternative delivery systems in Western and non-Western societies.

COUN 7723 - Hum Sexulty Coun/Psyc

(3) Attitudes, values, beliefs, and theoretical concerns related to human sexuality; counseling strategies for individuals and couples regarding sex-related issues. PREREQUISITE(S): Permission of Coordinator of Graduate Studies.

COUN 7751 - Gender Issues In Coun

(3) (8783) (8783). Current issues related to counseling women and men including developmental theory, awareness of sex role socialization and biases, and appropriate approaches to counseling women and men. Grades of S/U or IP will be given.

COUN 7752 - Coun Gay/Lesbian/Bisexl

(3) Gay, lesbian, and bisexual issues in counseling and psychotherapy; affirmative psychotherapy techniques and gay, lesbian, bisexual, and transgender issues, including identity formation, homophobia and heterosexism, relationships, parent and family dynamics, ethnic minorities, religion and morality, gender roles, AIDS/HIV, and suicidal ideation. Grades of S, U, or IP will be given.

PSYC 7219 - Soc/Persnlty Devel

(3) A general survey of social and personality development from infancy through adolescence. The course consists of three sections: (1) general theoretical perspectives, including intrapsychic, cognitive, and social learning approaches; (2) intra-individual phenomena such as sex role, traits, moral development, etc.; (3) inter-individual phenomena such as family interactions, peer interactions, and societal influences.

SOCI 7212 - Mult Racial Femnst Thry

(3) (6304) Intensive analysis of major figures and issues in contemporary multi-racial feminist theory, emphasis on theory that grapples with conceptual and methodological requirements for multi-racial feminist politics of diversity that draws on both United States and international scholarship.

SOCI 7410 - Sociology Of Gender

(3) Social definitions of gender and impact of these definitions on women's and men's lives; women's and men's responses to these conditions.

SOCI 7421 - Racial & Social Inequal

(3) (7810). A comparative study of racial, ethnic, and social minorities focusing on inequality as global and historical phenomena. Includes theoretical and empirical research on multiple interactions of race, class and gender. PREREQUISITE(S): Approval of Internship Contract

- SOCI 7422 - Race/Class/Gender

SOCI 7853 - Gender And Health

(3) Advanced course on sociological understandings of gender, health, and illness in the US; topics include health status, health behaviors, reproductive health, health professions, care-giving, aging and mortality with special attention to women and men of different class, racial, and ethnic groups.

Other Requirements

1. Students are encouraged to take most of their courses at the 7000 level but up to two courses (6 hours) at the 6000 level are permissible.
2. Because the program is interdisciplinary, at least three (3) hours of coursework must be taken outside of the major department and from the list of courses provided.
3. In order to continue in the program, students must maintain at least a 3.0 GPA.

Writing Studies Graduate Certificate

The purpose of this graduate certificate is to prepare students interested in rhetoric/composition, the teaching of writing, and/or technical communication the opportunity to earn a credential that will give them certification in a growing area of English studies that has been increasingly in demand, especially in the areas of post-secondary first-year writing programs, engineering writing programs, and professional writing programs.

Admission Requirements:

1. The certificate program in Writing Studies can be pursued concurrently with any of the MA or PhD programs in the English Department, or with enrollment in any other MA or higher program offered at the UofM.
2. Along with the online application, applicants must submit a one-page personal statement and two letters of recommendation.

Program Requirements:

The certificate in writing studies requires completion of 15 semester credit hours (5 courses), including:

2 Required Courses:

ENGL 7003 - Thry/Prac Tchng Comp

(3) Designed for graduate assistants teaching English 1010. Emphasis on the ways and techniques of teaching rudiments of English composition on college level. Each graduate teaching assistant in the Department of English must enroll in English 7003-8003 before or concurrent with first teaching assignment.

ENGL 7805 - Foundations of Writing Studies

(3) A multidisciplinary exploration of the purposes, technologies, and contexts for written communication.

3 Courses From:

In consultation with their advisors, students choose three additional courses from the composition studies and professional writing offerings:

ENGL 6618 - Document Design

(3) Theories of visual and written communication, focusing on the interrelationship between visual and verbal elements; practice in effective design using layout and graphics software; working on client projects in a collaborative setting.

ENGL 6619 - Web Design/Online Writing **

(3) Principles and techniques of creating online user help for software and usable web sites; emphasis on needs of technical writers in professional development environment; task analysis, information architecture, content management, single sourcing, visual rhetoric, navigation, usability testing; technology tools intensive. Students who have received credit for ENGL 4617 cannot take this course for credit. Grades of A-F, or IP will be given.

ENGL 7001 - Acad Genre and Sch Pub

(3) Study and application of interpretive strategies to texts pertinent to professional writing and composition studies.

ENGL 7008 - Thry/Prac Tchng Online

(3) Studying the pedagogy of online teaching and preparing for teaching online. Students are required to complete the course to qualify for teaching online for the Department of English.

ENGL 7012 - Seminar Health Comm

(3) (Same as COMM 7012-COMM 8012) (Same as COMM 7012-8012). Examines current issues in health communication research, including patient-provider relationships, new technologies and health promotion, and health organizations. May be repeated for a maximum of 9 credit hours.

ENGL 7013 - Wkshp Hlth Care Writing

(3) Textual and contextual analysis of the kinds of writing produced for expert audiences in the healthcare industry and the academic research community; practice in writing documents such as technical proposals, clinical research reports, FDA documentation, and papers for publication.

ENGL 7014 - Wkshp Public Hlth Care Writing

(3) Theoretical understanding and skill-based practice in communicating healthcare information (patient education materials, public health care information, patient instructions) to a generally non-expert audience; rhetorical and analytical tools for shaping the information; practical skills for managing group projects and processes; and the opportunity to develop them in a workshop setting.

ENGL 7350 - Rhetorical Theory

(3) (Same as COMM 7350-COMM 8350) (Same as COMM 7350-8350). History of rhetoric from the sophists through the present; includes readings from Isocrates, Plato, Aristotle, Cicero, Augustine, Erasmus, Ramus, Campbell, Blair, John Q. Adams, and others.

ENGL 7801 - History Composition

(3) Focuses on history of composition as a discipline of its own; examines rise of teaching of composition from 18th century Scottish universities to the present and/or history of development of theoretical approaches toward teaching composition. May be repeated for a maximum of 6 credit hours with change in course content.

ENGL 7806 - Resch Meth In Writing

(3) Bibliographic techniques and an introduction to empirical methodologies for the study of the writing process and the testing of written documents. May be repeated for a maximum of 6 credit hours when topic changes.

ENGL 7807 - Wksp/Govmt & Corp Wrtg

(3) Textual and contextual analysis of the kinds of writing produced most often in government, law, and business; practice in writing correspondence reports, briefs, manuals, and proposals. PREREQUISITE(S): FIR 7070 or equivalent. Grades of S, U, or IP will be given.

ENGL 7809 - Technical Editing

(3) Current practices in editing and publication in the field of technical communication; topics include copy-editing, substantive editing, author-editor relations, and the production practice. May be repeated for a maximum of 6 credit hours when topic changes. PREREQUISITE(S): FIR 3710.

ENGL 7815 - Sem History Rhetoric

(3) Examines different periods and issues of rhetorical history each semester. One semester will consider Greek rhetoric (beginnings throught the New Testament); another will consider Latin rhetoric (Cicero through the Renaissance); a third will cover Scottish, British, and American rhetoric. May be repeated for a maximum of 9 credit hours when topic changes. May be repeated for a maximum of 9 credit hours when topic changes.

ENGL 7818 - Collaborative Writing

(3) Theoretical and research-based focus on managing and developing collaborative writing projects and processes. May be repeated up to 6 hours with change of topic/course content and approval of Program Coordinator.

ENGL 7819 - Rhetoric Of Science

(3) (Same as COMM 7819-COMM 8819) (Same as COMM 7819-8819). This course examines scientific and technical communication from phetorical perspective, showing how scientific knowledge is shaped not only by data and method, but also by persuasive purposes and sociocultural forces. May be repeated up to 6 hours with change of topic.

ENGL 7820 - Topics In Rhetoric

(3) (Same as COMM 7820-COMM 8820) (Same as COMM 7820-8820). Topical seminar devoted to an important aspect of the history, theory, or criticism of rhetoric. May be repeated for a maximum of 9 credit hours when topics change. May be repeated for a maximum of 6 credit hours with change in course content

ENGL 7822 - Cont Comp Theory

(3) Examines relationship between rhetorical and composition theory and contemporary philosophy, especially poststructuralism, neo-pragmatism, and hermeneutics. May be repeated for a maximum of 6 credit hours.

ENGL 7890 - Topic/Technical Writing

(3) Intensive study of specialized areas in technical writing. May be repeated for a maximum of 9 credit hours when topics change.

Retention Requirements:

Same as retention policies applicable to Department of English graduate degree programs.

Graduation Requirements:

Relatively early in the semester in which they intend to graduate, certificate candidates must file an Apply to Graduate Card with the Graduate School and a Candidacy form with the Graduate Coordinator for English.

Family Nurse Practitioner Post-Master's Certificate

Post-Master's Certificate

The Family Nurse Practitioner (FNP) Certificate program provides a formal program of study for master's-prepared nurses interested in taking the national certification exam to practice as a Family Nurse Practitioner. To be eligible to take the national certification exam students must "successfully complete graduate didactic and clinical requirements of

a master's nurse practitioner program through a formal graduate-level certificate or Master's level NP program in the desired area of practice." The FNP Certificate program offers a formal program of study to meet this need for students who already have the Master of Science in Nursing degree without requiring a second master's degree.

Admission

Because the University seeks to provide in as much as possible a reasonably safe environment for its health career students and their patients, students may be required during the course of the program to demonstrate their physical and/or emotional fitness to meet the essential requirements of the program. Such essential requirements include freedom from communicable diseases, the ability to perform certain physical tasks, and suitable emotional fitness. Any appraisal measures used to determine such physical and/or emotional fitness will be in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990, so as not to discriminate against any individual on the basis of disability.

Core performance standards for admission and progression:

1. Critical thinking ability sufficient for clinical judgment.
2. Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.
3. Communication abilities sufficient for interaction with others in verbal and written form.
4. Physical abilities sufficient to move from room to room and maneuver in small spaces.
5. Gross and fine motor abilities sufficient to provide safe and effective nursing care.
6. Auditory ability sufficient to monitor and assess health needs.
7. Visual ability sufficient for observation and assessment necessary in nursing care.
8. Tactile ability sufficient for physical assessment.

Admission Requirements

Admission to the program will be based on competitive selection from the pool of applicants. Multiple criteria will be used when considering applicant admission including, but not limited to, letter of interest, undergraduate and graduate grade point averages, professional experience, applicant interview, and letters of recommendation.

Additional admissions requirements for the Family Nurse Practitioner Certificate Program include:

1. A Master's degree in nursing from an accredited program (NLNAC or CCNE).
2. Satisfactory completion (B or better) of the following courses at the Master's level:
    - NURS 7101 - Adv Health Assessment ** - 3 semester hours
    - NURS 7102 - Adv Health Assmt/Clinic ** - 1 semester hour
    - NURS 7103 - Adv Pathophysiology ** - 3 semester hours
    - NURS 7104 - Adv Pharmacology ** - 3 semester hours

3. Eligibility to practice as a Registered Nurse in Tennessee or in an approved state in which clinical assignments are completed. Appropriate licensure/authorization must be obtained prior to the start of the program.

4. Overall G.P.A. of 3.0 on a 4.0 scale

5. Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score.

6. A written document prepared by the applicant that includes a resume, a discussion of prior professional experience, future career goals, and reasons for pursuing graduate study.

7. Letters of recommendation from at least three persons familiar with the applicant's academic and professional background and experience in nursing practice, specifying in detail the applicant's capabilities for graduate study and for future practice as an advanced practice nurse.

8. Students admitted to MSN program or post master's certificate programs must have and maintain while in the program:

    - An unrestricted license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.

    - Current CPR certification.

    - Evidence of hepatitis B (Heptavax); measles, mumps, rubella (MMR); polio; tetanus, diptheria, pertussis (Tdap), and varicella vaccinations and/or titers if available.

    - Freedom from tuberculosis as evidenced by a negative PPD or health provider examination.

    - Annual flu shot vaccination, unless medically contraindicated.

    - Evidence of current professional malpractice insurance in the amount of $1,000,000 per occurrence and $6,000,000 in the aggregate.

Post-Master's Certificate Program Progression and Retention Requirements

1. Students in the Loewenberg College of Nursing graduate program must comply with all retention standards of the University of Memphis Graduate School.

2. Students must earn a grade of "B" or better in all clinical and lab courses:

    - NURS 7102

    - NURS 7602

    - NURS 7604

    - NURS 7606

    - NURS 7609

    - NURS 7207

- NURS 7209
- NURS 7307
- NURS 7309
- NURS 7908
- NURS 7909

3. Academic disqualification from the graduate nursing major will occur when the student:
    - fails to maintain a 3.0 GPA in graduate school.
    - fails to earn a grade of "B" (3.0) or better when repeating a course.
    - willfully misrepresents patient data or clinical practice.
    - willfully places any patient in physical or emotional jeopardy.
    - fails to maintain an active, unencumbered license to practice as a registered nurse in Tennessee or license to practice in an approved state in which clinical assignments are to be completed.
    - fails to disclose a felony conviction.
    - fails to disclose disciplinary action or diversion by any board of nursing (or equivalent).
    - fails to complete all degree requirements within five years of entering graduate nursing coursework.
    - All requirements for the Post-Master's Certificate must be completed within 5 calendar years.

Family Nurse Practitioner Post-Master's Certificate (21 credit hours)

The Post-Master's Certificate with a concentration in Advanced Practice Nursing (Family Nurse Practitioner) prepares advanced practice nurses to deliver primary health care to all ages; individuals and families throughout the lifespan and across the health continuum. Among their course of study, students will be provided with knowledge and clinical skills necessary for health promotion, disease prevention, assessment, and management of common acute and chronic illnesses.

Family Nurse Practitioner Post-Master's Certificate Required Courses

NURS 7601 - Family Nurse Practnr I **

(3) Focuses on advanced practice nursing and health-care management of women in diverse populations; includes biopsychosocial interactions affecting women throughout the lifespan. PREREQUISITE(S): Admission to graduate studies in psychology or permission of the instructor.NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7602

NURS 7602 - Family Nurs Prac I/Clin **

(2) Focuses on delivery of advanced nursing care to women; employs various clinical settings with diverse populations for clinical practice. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7601

NURS 7603 - Family Nurs Practnr II **

(3) Focuses on advanced practice nursing and health-care management of adults and older adults in diverse populations; includes developmental, physiological, pathological, and psychosocial changes relative to health maintenance, acute and chronic illnesses, and life transitions. PREREQUISITE(S): Admission to Family Nurse Practitioner program; NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7604

NURS 7604 - Family Nurs Pract II/CLN **

(4) Provides opportunities to deliver advanced nursing care to adults and older adults; student completes health assessments of adults and older adults and develops comprehensive plans of care. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7603

NURS 7605 - Family Nurs Pract III **

(3) Focuses on advanced practice nursing and health-care management of children and adolescents; includes developmental, physiological, pathological, and psychosocial changes relative to health maintenance, acute and chronic illnesses, and developmental transitions within the family context. PREREQUISITE(S): Admission to Family Nurse Practitioner program; NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7606

NURS 7606 - Family Nurs Prac III Cln **

(2) Provides opportunities to deliver advanced nursing care to children and adolescents in families and communities; employs various primary care settings for clinical practice in collaboration with nursing faculty and clinical preceptors. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 COREQUISITE(S): NURS 7605

NURS 7609 - FNP Practicum **

(4) Supervised full-time advanced clinical practice in a primary care setting with immersion into the role of Family Nurse Practitioner; allows for role synthesis and application of concepts in the practice setting. Student must achieve a B" or better to progress. PREREQUISITE(S): NURS 7000 NURS 7001 NURS 7002 NURS 7003 NURS 7101 NURS 7102 NURS 7103 NURS 7104 NURS 7601 NURS 7602 NURS 7603 NURS 7604 NURS 7605 NURS 7606 PREREQUISITE(S) or COREQUISITE(S): NURS 7990

Family Nurse Practitioner Concentration Progression and Retention Requirements

1. Family Nurse Practitioner students must complete a minimum of 500 clock hours to meet the academic and practicum requirements for national certification (NTF Criteria, 2016).
2. In accordance with the policy set forth by the University of Memphis Graduate School, before being recommended for graduation, every candidate for the master's degree and post-masters certificate, who does not write a these is required to pass a final comprehensive/competency examination.

Family Nurse Practitioner Concentration Re-Entry after Disqualification:

Following academic disqualification, students are eligible to reapply to the FNP program after 3 years or to the FNP Post Master's Certificate after 1 year. Minimum course requirements following readmission include the completion of FNP I, II, III, Residency and corequisite courses. All MSN progression, retention, and graduation policies apply.

Nursing Education Post-Master's Certificate

Post-Master's Certificate

The Nursing Education Certificate program provides a formal program of study for masters prepared nurses interested in obtaining a credential allowing them to teach in the College of Nursing. The program provides them with content necessary to teach nursing students in a specific area of nursing. Once students complete the certificate, they would be eligible to sit for the national certification exam in this area.

Prerequisites

The following prerequisite courses must be completed at the master's level with a grade of "B" or better prior to admission.

1. Advanced Health Assessment, (3 credit hours)
2. Advanced Health Assessment, Clinical or Lab (4 credit hours)
3. Advanced Pathophysiology, (3 credit hours)
4. Advanced Pharmacology, (3 credit hours)

Program Admission

Admission to the program is based on competitive selection from the pool of applicants who meet the College of Graduate Studies admission requirements.

Additional admission requirements for the Nursing Education Post Masters Certificate Program include:

1. A Master's degree in nursing from an accredited program (NLNAC or CCNE).
2. Satisfactory completion (B or better) of the following courses at the Master's level:
    1. Advanced Health Assessment : 3 semester hours
    2. Advanced Health Assessment - Clinical or lab : 1 semester hour
    3. Advanced Pathophysiology : 3 semester hours
    4. Advanced Pharmacology : 3 semester hours
3. Eligibility to practice as a Registered Nurse in Tennessee or in an approved state in which clinical assignments are completed. Appropriate licensure/authorization must be obtained during the first semester following admission to the program.
4. Overall G.P.A. of 3.0 on a 4.0 scale
5. Applicants for whom English is not their primary language are required to meet the University's minimum required TOEFL score.
6. A written document prepared by the applicant that includes a resume, a discussion of prior professional experience, future career goals, and reasons for pursuing graduate study.

7. Letters of recommendation from at least three persons familiar with the applicant's academic and/or professional background and experience in nursing practice, specifying in detail the applicant's capabilities for graduate study and for future practice as an advanced practice nurse.

Program Requirements (15 credit hours total)

NURS 7204 - Curriculum Design & Ed Theory **

(3) The course introduces the student to traditional and contemporary considerations for curriculum planning and design as applied to nursing education. An emphasis is placed on curriculum designs and explores major research based theories of adult and nursing education. These concepts will be applied to a variety of settings and/or levels of education.

NURS 7205 - Evaluation Mthds in NursingEdu **

(3) Analysis of testing, benchmarking, and evaluation methods in the clinical practice of nursing across classroom, seminar, and electronic formats; includes evaluation methods to insure competency in the clinical area.

NURS 7207 - Clinical Focus Practicum **

(2) Use of theory, clinical concepts, and nursing research in delivery of care to specific patient populations from a social, cultural, psychological, physical, spiritual, and economic perspective for the advanced practice nurse. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): Completion of all non-practicum MSN education courses.

NURS 7209 - Nursing Education Practicum **

(4) Integrates theory in a reality context; provides opportunities to participate in all phases of teaching and to experiment with different teaching methods. Students must achieve a grade of B" or better to progress. PREREQUISITE(S): Completion of all non-practicum MSN education courses.

One course from the following:

NURS 7505 - Advanced Adult Health Nursing **

(3) Pre- or Co-Requisites: NURS 7101, 7102, 7103, 7104

NURS 7525 - Ecg/Crit Care Nurses **

(3)

NURS 7635 - Advanced Pediatric Nursing **

(3) This course focuses on health maintenance and health promotion for children and their families experiencing both acute and chronic illness/disabilities are addressed. May be repeated for a maximum of 6 credit hours with permission of the chair or graduate coordinator.

NURS 7515 - Adv Psych/Mentl Health Nursing

(3) Pre-Requisites: NURS 7101, 7102, 7103, 7104

NURS 7545 - Adv Womens Hlth/Perinatal Nurs **

(3) Pre- or Co-Requisites: NURS 7101, 7102, 7103, 7104 PREREQUISITE(S): r.

Retention

Retention requirements are the same as for the MSN degree. All requirements for the post master certificate must be completed in 5 calendar years

Courses

Courses offered only online or both online and on-ground are indicated with (**)asterisks.

ACCT 6130 - Intermediate ACCT III

ACCT 6211 - Adv Financial Reporting **

ACCT 6250 - Accounting Ethics/Regulation

ACCT 6320 - Mgr Decision Making/ACCT

ACCT 7000 - Fundamentals Of Acct

ACCT 7040 - Legal Concepts Business

ACCT 7050 - Corp Governance/Bus Ethics **

ACCT 7080 - Financial/Managerial Acct Mgrs **

ACCT 7110 - Acct for Decision Making

ACCT 7120 - Current Topics in Fin. Acct.

ACCT 7140 - Financial Statement Analysis **

ACCT 7172 - Global Acct Policies

ACCT 7211 - Advanced Financial Reporting

ACCT 7241 - Internal Auditing **

ACCT 7242 - Advanced Auditing

ACCT 7310 - Adv Cost Accounting

ACCT 7320 - Controllership

ACCT 7412 - Legal/Acctg Aspects Entrep

ACCT 7420 - Acct Databases/Systems

ACCT 7510 - Tax Research & Theory

ACCT 7511 - Tax- Partnships/Prtnrs

ACCT 7512 - Tax-Corp/Shrhldrs

ACCT 7514 - Estate And Gift Tax

ACCT 7518 - Selected Topics/Taxatn

ACCT 7521 - Taxation/Bus Entities

ACCT 7610 - Acct Issues/Servc Econ

ACCT 7626 - Financial Report/Audit Stand

ACCT 7627 - Regulatory/Business Envrnmnt

ACCT 7910 - Problems In Acct

ACCT 7911 - Intrnshp Accounting

ACCT 7920 - Special Topics in Accountancy

ACCT 7921 - Special Topics in Accountancy

ACCT 7922 - Special Topics in Accountancy

ACCT 7923 - Special Topics in Accountancy

ACCT 7924 - Special Topics in Accountancy

ACCT 7925 - Special Topics in Accountancy

ACCT 7926 - Special Topics in Accountancy

ACCT 7927 - Special Topics in Accountancy

ACCT 7928 - Special Topics in Accountancy

ACCT 7929 - Special Topics in Accountancy

ACCT 7996 - Thesis

ACCT 8000 - Indep Accounting Research

ACCT 8610 - Seminar/Audit Research

ACCT 8621 - Agency and Fin Econ Theory Sem

ACCT 8710 - Acct Research Sem/Adv Cap Mkts

ACCT 8720 - Acct Research Judgmt/Decision

ACCT 8731 - Seminar/Mgmt Accounting

ACCT 8740 - Introductory Research Seminar

ACCT 8910 - Problems in Accounting

ASTL 7700 - Portfolio Development **

ASTL 7701 - Teacher As Learner

ASTL 7703 - Knowledge Of Learner **

ASTL 7705 - Assessment Of Learning **

ASTL 7706 - Learning Instruction Strategy

ASTL 7709 - Action Research **

ASTL 7721 - Thry/Foundtn Dev Litrcy **

ASTL 7723 - Teaching Begin Literacy **

ASTL 7725 - Literacy Growth/Mid Grd **

ASTL 7726 - Literacy Problems/K-8 **

ASTL 7729 - Rem/Literacy Problem K-8 **

ANTH 6111 - Evolution and Human Health

ANTH 6220 - Cultural Perspec/Environment

ANTH 6221 - Gender and Culture

ANTH 6223 - Refugees and Humanitarianism

ANTH 6270 - Ancient Human Soc/Envir Chng

ANTH 6302 - Native People of North America

ANTH 6325 - Archaeol Fld/Lab Techn

ANTH 6335 - Analysis of Stone Artifacts

ANTH 6350 - Archaeology of Collapse

ANTH 6411 - Urban Anthropology

ANTH 6413 - Anth of Tourism/Environment

ANTH 6414 - Anthropology of Work

ANTH 6415 - Anthropology Human Rights

ANTH 6416 - Culture/Identity/Power

ANTH 6417 - Food/Culture/Power

ANTH 6418 - Anthropology of Organizations

ANTH 6431 - Shopping as a Social Science

ANTH 6510 - Health/Culture/Environ Justice

ANTH 6511 - Medical Anthropology

ANTH 6521 - Culture, Soc & Mental Health

ANTH 6531 - Alcohol/Drugs/Culture

ANTH 6551 - Culture/Sex/Childbirth

ANTH 6571 - Race and Health Disparities

ANTH 6660 - Museum Collections

ANTH 6661 - Collections Research

ANTH 6662 - Museum Exhibitions

ANTH 6680 - Applied Archaeology/Museums

ANTH 6990 - Special Topics in Anthropology

ANTH 6990 - Toys to Cartoons: Material Cul

ANTH 6991 - Special Topics in Anthropology

ANTH 6992 - Design Anthropology

ANTH 6992 - Special Topics in Anthropology

ANTH 6993 - Special Topics in Anthropology

ANTH 6994 - Special Topics in Anthropology

ANTH 6995 - Special Topics in Anthropology

ANTH 6996 - Special Topics in Anthropology

ANTH 6997 - Special Topics in Anthropology

ANTH 6998 - Special Topics in Anthropology

ANTH 6999 - Special Topics in Anthropology

ANTH 7050 - Ethnography & Global Problems

ANTH 7075 - Methods In Anthropology

ANTH 7076 - Anth Analysis/Writing

ANTH 7200 - Roots of Anth Theory

ANTH 7201 - ANTH Perspectives/Development

ANTH 7250 - Comm Culture Evaluation

ANTH 7255 - Applying Anthropology

ANTH 7411 - Urban Anth In Mid-South

ANTH 7510 - Studio in Applied Anthropology

ANTH 7511 - Critically-Applied Med Anth

ANTH 7521 - Biocultural Epidemiology

ANTH 7590 - Special Topics in Medical Anthropology

ANTH 7591 - Special Topics in Medical Anthropology

ANTH 7592 - Special Topics in Medical Anthropology

ANTH 7593 - Special Topics in Medical Anthropology

ANTH 7594 - Special Topics in Medical Anthropology

ANTH 7595 - Special Topics in Medical Anthropology

ANTH 7596 - Special Topics in Medical Anthropology

ANTH 7597 - Special Topics in Medical Anthropology

ANTH 7598 - Special Topics in Medical Anthropology

ANTH 7599 - Special Topics in Medical Anthropology

ANTH 7661 - Museum Practices

ANTH 7662 - Museums & Communities

ANTH 7669 - Museum Internship

ANTH 7690 - Special Topics in Applied Anthropology

ANTH 7691 - Special Topics in Applied Anthropology

ANTH 7692 - Special Topics in Applied Anthropology

ANTH 7693 - Special Topics in Applied Anthropology

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ANTH 7697 - Special Topics in Applied Anthropology

ANTH 7698 - Special Topics in Applied Anthropology

ANTH 7699 - Special Topics in Applied Anthropology

ANTH 7970 - Directed Indiv Writing

ANTH 7975 - Directed Indiv Reading

ANTH 7980 - Directed Indiv Research

ANTH 7985 - Practicum

ANTH 8075 - Methods In Anthropology

ANTH 8076 - Anth Data Analysis

ANTH 8200 - Roots of Anth Theory

ANTH 8250 - Comm Culture Evaluation

ANTH 8521 - Biocultural Epidemiolgy

ANTH 8975 - Directed Indiv Reading

ANTH 8980 - Directed Indiv Research

MUAP 6004 - Orchestral Excerpts

MUAP 6260 - Special Topics in Applied Music

MUAP 6261 - Special Topics in Applied Music

MUAP 6262 - Special Topics in Applied Music

MUAP 6263 - Reed Making

MUAP 6263 - Special Topics in Applied Music

MUAP 6264 - Special Topics in Applied Music

MUAP 6265 - Special Topics in Applied Music

MUAP 6266 - Special Topics in Applied Music

MUAP 6267 - Special Topics in Applied Music

MUAP 6268 - Special Topics in Applied Music

MUAP 6269 - Special Topics in Applied Music

MUAP 6301 - Acting for Opera I

MUAP 6302 - Acting for Opera II

MUAP 6512 - Baroque Violin

MUAP 6571 - Viola da Gamba

MUAP 7002 - Chamber Music (1)

MUAP 7099 - Chamber Music Recital

MUAP 7101 - Wind Ensemble

MUAP 7102 - Orchestra

MUAP 7103 - University Singers

MUAP 7104 - Opera Chorus

MUAP 7106 - Symphonic Band

MUAP 7107 - Jazz Ensemble

MUAP 7108 - Opera Workshop

MUAP 7201 - Brass Ensemble

MUAP 7202 - Jazz Combo

MUAP 7203 - Chamber Music/Piano

MUAP 7204 - Percussion Ensemble

MUAP 7205 - Contmp Chamber Players

MUAP 7207 - String Ensemble

MUAP 7209 - Chamber Choir

MUAP 7210 - Opera Soloists

MUAP 7211 - Woodwind Ensemble

MUAP 7212 - Collegium Musicum

MUAP 7213 - Jazz Vocal Ensemble

MUAP 7260 - Special Topics in Applied Music

MUAP 7261 - Special Topics in Applied Music

MUAP 7262 - Special Topics in Applied Music

MUAP 7263 - Special Topics in Applied Music

MUAP 7264 - Special Topics in Applied Music

MUAP 7265 - Special Topics in Applied Music

MUAP 7266 - Special Topics in Applied Music

MUAP 7267 - Special Topics in Applied Music

MUAP 7268 - Special Topics in Applied Music

MUAP 7269 - Special Topics in Applied Music

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MUAP 7280 - Special Topics in Applied Music

MUAP 7281 - Special Topics in Applied Music

MUAP 7282 - Special Topics in Applied Music

MUAP 7283 - Special Topics in Applied Music

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MUAP 7285 - Special Topics in Applied Music

MUAP 7286 - Special Topics in Applied Music

MUAP 7287 - Special Topics in Applied Music

MUAP 7288 - Special Topics in Applied Music

MUAP 7289 - Special Topics in Applied Music

MUAP 7600 - Experiential Learning Credit

MUAP 7620 - Ind Study Sym/Op Cond

MUAP 7622 - Opera Direction Project

MUAP 7623 - Opera Coaching Project

MUAP 7701 - Conducting

MUAP 7702 - Conducting Practicum

MUAP 7703 - Score Study/Aural Train

MUAP 7704 - Opera Stage Direction

MUAP 7705 - Opera Coaching

MUAP 7800 - Internship/Music Perform

MUAP 7801 - Independent Study

MUAP 7802 - Career Resources for Musicians

MUAP 7899 - Lecture Recital

MUAP 7999 - Recital

MUAP 8002 - Sem Performance Prob

MUAP 8260 - Special Topics in Applied Music

MUAP 8261 - Special Topics in Applied Music

MUAP 8262 - Special Topics in Applied Music

MUAP 8263 - Special Topics in Applied Music

MUAP 8264 - Special Topics in Applied Music

MUAP 8265 - Special Topics in Applied Music

MUAP 8266 - Special Topics in Applied Music

MUAP 8267 - Special Topics in Applied Music

MUAP 8268 - Special Topics in Applied Music

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MUAP 8286 - Special Topics in Applied Music

MUAP 8287 - Special Topics in Applied Music

MUAP 8288 - Special Topics in Applied Music

MUAP 8289 - Special Topics in Applied Music

MUAP 8600 - Experiential Learning Credit

MUAP 8620 - Ind Study Sym/Op Cond

MUAP 8622 - Ind Proj Opera Direct

MUAP 8701 - Conducting

MUAP 8702 - Conducting Practicum

MUAP 8703 - Score Study/Aural Train

MUAP 8800 - Internship/Music Perform

MUAP 8801 - Independent Study

MUAP 8802 - Career Resources for Musicians

MUAP 8999 - Recital

MUAP 9000 - Doctoral Research Project

ARCH 6021 - Architecture Independent Study

ARCH 6022 - Architecture+Urbanism Seminar

ARCH 6023 - Urban Design Seminar

ARCH 6221 - Determinants of Modern Design

ARCH 6231 - Issues in City Building

ARCH 6421 - Sustainable Design

ARCH 6430 - Internship in Architecture

ARCH 6451 - Site+Environmental Planning

ARCH 6613 - Graphic Design for Architects

ARCH 6811 - Parameters+Architecture Studio

ARCH 6812 - Furniture Design Studio

ARCH 6821 - Urban Design Studio

ARCH 6822 - Architecture+Urbanism Studio

ARCH 6823 - Design Collaborative Studio 1

ARCH 6824 - Design Collaborative Studio 2

ARCH 6825 - Design+Build Studio

ARCH 6833 - Architectural Illustration

ARCH 6841 - Studio Study Abroad

ARCH 7011 - Advanced Design Seminar 1

ARCH 7012 - Advanced Design Seminar 2

ARCH 7013 - Advanced Design Seminar 3

ARCH 7021 - Arch Independent Study

ARCH 7031 - Research and Training

ARCH 7211 - Contemporary Arch Theory

ARCH 7222 - Contemporary Architecture 2

ARCH 7232 - Advanced Issues City Building

ARCH 7421 - Advanced Environmental Systems

ARCH 7430 - Internship in Architecture

ARCH 7431 - Advanced Professional Practice

ARCH 7511 - Urban Design Strategies Semn

ARCH 7512 - Urbanism/Suburban Rev Studio

ARCH 7711 - Advanced Design Studio 1

ARCH 7712 - Advanced Design Studio 2

ARCH 7713 - Advanced Design Studio 3

ARCH 7833 - Experiential Drawing Studio

ARCH 7930 - Architecture Research

ARCH 7995 - Professional Project Studio

ARCH 7996 - Architecture Thesis Studio

ART 6010 - Screenprinting/Adobe Photoshop

ART 6010 - Special Topics in Studio Art

ART 6011 - Mural Painting as Public Art

ART 6011 - Special Topics in Studio Art

ART 6012 - Special Topics in Studio Art

ART 6013 - Special Topics in Studio Art

ART 6014 - Special Topics in Studio Art

ART 6015 - Special Topics in Studio Art

ART 6016 - Special Topics in Studio Art

ART 6017 - Special Topics in Studio Art

ART 6018 - Special Topics in Studio Art

ART 6019 - Special Topics in Studio Art

ART 6020 - Special Topics in Art Education

ART 6021 - Special Topics in Art Education

ART 6022 - Special Topics in Art Education

ART 6023 - Special Topics in Art Education

ART 6024 - Special Topics in Art Education

ART 6025 - Special Topics in Art Education

ART 6026 - Special Topics in Art Education

ART 6027 - Special Topics in Art Education

ART 6028 - Special Topics in Art Education

ART 6029 - Special Topics in Art Education

ART 6169 - Mural Painting as Public Art

ART 6211 - Writing/Design Process

ART 6221 - Graphic Dsgn/Print Comm

ART 6222 - Intrctv Mltimd/Grph Des

ART 6224 - History Graphic Design

ART 6314 - Art of The Book

ART 6321 - Drawing & Painting I

ART 6322 - Drawng & Paintng II

ART 6331 - Painting III

ART 6332 - Painting IV

ART 6333 - Painting V

ART 6351 - Adv Printmaking I

ART 6352 - Adv Printmaking II

ART 6353 - Com Image Prnt/Photo I

ART 6354 - Com Imag Prnt/Photo II

ART 6410 - Art Educ Independ Study

ART 6440 - Analysis of Teaching

ART 6511 - Sculpture IV

ART 6512 - Sculpture V

ART 6521 - Ceramics III

ART 6621 - Workshop In Art I

ART 6622 - Workshop In Art II

ART 6641 - Study & Travel Art

ART 6650 - Profess Art Practices

ART 6701 - Color Photography

ART 6702 - Photogrphc Mat/Process

ART 6703 - Altn Photogrphc Process

ART 6704 - Photographic Lighting

ART 6912 - Art Education Residency II

ART 6914 - Art Education Residency I

ART 7010 - Special Topics in Studio Art

ART 7011 - Special Topics in Studio Art

ART 7012 - Special Topics in Studio Art

ART 7013 - Special Topics in Studio Art

ART 7014 - Special Topics in Studio Art

ART 7015 - Special Topics in Studio Art

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ART 7019 - Special Topics in Studio Art

ART 7020 - Special Topics in Art Education

ART 7021 - Special Topics in Art Education

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ART 7025 - Special Topics in Art Education

ART 7026 - Special Topics in Art Education

ART 7027 - Special Topics in Art Education

ART 7028 - Special Topics in Art Education

ART 7029 - Special Topics in Art Education

ART 7040 - Problems Graphic Design

ART 7200 - Photography Seminar

ART 7201 - Adv Research Phtgrphy

ART 7240 - Visual Communctn Resrch

ART 7330 - Studies/Two Dimen Media

ART 7411 - Methods for Elem Art

ART 7420 - Meth K-12 Art Instruct

ART 7421 - Positive Yth Devlp thru Arts

ART 7423 - Methods Art Second Schools

ART 7441 - Art Educ Prof Seminar

ART 7550 - Studies/Three Dim Media

ART 7640 - Studies Computr Animtn

ART 7651 - Graduate Studio Sem

ART 7660 - Direct Ind Study

ART 7710 - Indep Studies B/W Photo

ART 7711 - Adv Photography Semnr

ART 7712 - Photo Portfolio Sem

ART 7770 - Studies Mixed Media

ART 7996 - Thesis

ART 8010 - Special Topics in Studio Art

ART 8011 - Special Topics in Studio Art

ART 8012 - Special Topics in Studio Art

ART 8013 - Special Topics in Studio Art

ART 8014 - Special Topics in Studio Art

ART 8015 - Special Topics in Studio Art

ART 8016 - Special Topics in Studio Art

ART 8017 - Special Topics in Studio Art

ART 8018 - Special Topics in Studio Art

ART 8019 - Special Topics in Studio Art

ART 8020 - Special Topics in Art Education

ART 8021 - Special Topics in Art Education

ART 8022 - Special Topics in Art Education

ART 8023 - Special Topics in Art Education

ART 8024 - Special Topics in Art Education

ART 8025 - Special Topics in Art Education

ART 8026 - Special Topics in Art Education

ART 8027 - Special Topics in Art Education

ART 8028 - Special Topics in Art Education

ART 8029 - Special Topics in Art Education

ART 8201 - Adv Research Phtgrphy

ART 8330 - Studies/Two Dimen Media

ART 8550 - Studies/Three Dim Media

ART 8660 - Direct Ind Study

ARTH 6030 - Special Topics in Art History

ARTH 6031 - Special Topics in Art History

ARTH 6032 - Special Topics in Art History

ARTH 6033 - Special Topics in Art History

ARTH 6034 - Special Topics in Art History

ARTH 6035 - Special Topics in Art History

ARTH 6036 - Special Topics in Art History

ARTH 6037 - Special Topics in Art History

ARTH 6038 - Special Topics in Art History

ARTH 6039 - Special Topics in Art History

ARTH 6111 - Art/Arch Egypt

ARTH 6112 - Egypt Art-Old Kingdom

ARTH 6113 - Egypt Art-New Kingdom

ARTH 6119 - Late Antique/Islamic Art/Egypt

ARTH 6121 - Ancient Art Near East

ARTH 6123 - Greek Art

ARTH 6124 - Roman Art

ARTH 6125 - Art/Archaeology Pompeii

ARTH 6129 - Ancient/Medieval Arch

ARTH 6130 - Art/Medieval World

ARTH 6131 - Art/Early Middle Ages

ARTH 6134 - Art/High Middle Ages

ARTH 6141 - Early Renaissance Italy

ARTH 6142 - North Renaissance Art

ARTH 6143 - High Renaissance Italy

ARTH 6146 - Baroque Art

ARTH 6148 - Neo-Class/Romanticism

ARTH 6149 - Realism & Impressionism

ARTH 6152 - Early Modern Art

ARTH 6153 - Cubism Thru Surrealism

ARTH 6155 - High Modern Art

ARTH 6157 - Contemp Art/Theory/Crit

ARTH 6158 - Modern Architecture

ARTH 6160 - Architecture & Nature

ARTH 6162 - Latin American Art

ARTH 6163 - Pre-Columbian Art

ARTH 6166 - American Art: 1500s-1940s

ARTH 6167 - American Art, 1860-1945

ARTH 6168 - Art and Social Conflict 1920-P

ARTH 6181 - Arts Africa/Oceania/Na

ARTH 6183 - Visual Arts Of Africa

ARTH 6184 - Arts of Colonialism/Empire

ARTH 6185 - African American Art

ARTH 6186 - Afr American Diaspora Cinema

ARTH 6187 - Af Am Diaspora Photo Culture

ARTH 6381 - Art Curatorial Tech

ARTH 6660 - Museum Collections

ARTH 6661 - Collections Research

ARTH 6662 - Museum Exhibitions

ARTH 6721 - History Photography I

ARTH 6722 - History Photography II

ARTH 7000 - Semn Art/Vis Cult Afr/Afr Dias

ARTH 7030 - Special Topics in Art History

ARTH 7031 - Special Topics in Art History

ARTH 7032 - Special Topics in Art History

ARTH 7033 - Special Topics in Art History

ARTH 7034 - Special Topics in Art History

ARTH 7035 - Special Topics in Art History

ARTH 7036 - Special Topics in Art History

ARTH 7037 - Special Topics in Art History

ARTH 7038 - Special Topics in Art History

ARTH 7039 - Special Topics in Art History

ARTH 7110 - Adv Indv Stdy Art Hist

ARTH 7114 - Intro Coptic Language/Culture

ARTH 7115 - Middle Egyptian I

ARTH 7116 - Middle Egyptian II

ARTH 7117 - Middle Egyptian Lit

ARTH 7118 - Egyptian Texts

ARTH 7119 - Late Egyptian

ARTH 7120 - Grad Prob Medieval Art

ARTH 7121 - Grad Prob Ancient Art

ARTH 7122 - Ancient Egyptian Cursive Scrip

ARTH 7125 - Egyptian Art & Arch

ARTH 7130 - Art Hist Methods & Prac

ARTH 7140 - Grad Prob Renaissance

ARTH 7150 - Grad Prob 19th Century

ARTH 7152 - Grad Prob 20th Century

ARTH 7165 - Gr Prob Am Art Anc/Mod

ARTH 7660 - Dir Indiv Study

ARTH 7661 - Museum Practices

ARTH 7662 - Museums & Communities

ARTH 7669 - Museum Internship

ARTH 7900 - Art Historical Fieldwork

ARTH 7996 - Thesis

ARTH 8000 - Semn Art/Vis Cult Afr/Afr Dias

ARTH 8010 - Arts of Colonialism and Empire

ARTH 8011 - AfricanAmericanCinema: Theory

ARTH 8012 - AfricanAmerican Photog.Culture

ARTH 8030 - Special Topics in Art History

ARTH 8031 - Special Topics in Art History

ARTH 8032 - Special Topics in Art History

ARTH 8033 - Special Topics in Art History

ARTH 8034 - Special Topics in Art History

ARTH 8035 - Special Topics in Art History

ARTH 8036 - Special Topics in Art History

ARTH 8037 - Special Topics in Art History

ARTH 8038 - Special Topics in Art History

ARTH 8039 - Special Topics in Art History

ARTH 8120 - Grad Prob Medieval Art

ARTH 8121 - Grad Prob Ancient Art

ARTH 8125 - Egyptian Art & Arch

ARTH 8130 - Art Hist Methods & Prac

ARTH 8140 - Grad Prob Renaissance

ARTH 8150 - Grad Prob 19th Century

ARTH 8152 - Grad Prob 20th Century

ARTH 8165 - Gr Prob Am Art Anc/Mod

ARTH 8660 - Dir Indiv Study

BINF 7092 - Research

BINF 7201 - Special Topics in Bioinformatics

BINF 7701 - Adv. Genomics & Bioinformatics

BINF 7970 - Curr Lit Bioinformatics

BINF 7980 - Rsch Sem/Bioinformatics

BINF 7991 - Bioinformatics Internship

BINF 7992 - Bioinformatics Project

BINF 7996 - Bioinformatics Thesis

BIOL 6049 - Marine Ecology Lab

BIOL 6051 - Marine Ecology

BIOL 6053 - Plant Ecology

BIOL 6054 - Wetland Ecology

BIOL 6055 - Ecological/Environ Issues

BIOL 6056 - Tropical Ecology

BIOL 6071 - Human Genetics

BIOL 6090 - Special Topics

BIOL 6090 - Vertebrate Histology

BIOL 6091 - Special Topics

BIOL 6092 - Special Topics

BIOL 6093 - Special Topics

BIOL 6094 - Special Topics

BIOL 6095 - Special Topics

BIOL 6096 - Special Topics

BIOL 6097 - Special Topics

BIOL 6098 - Special Topics

BIOL 6099 - Special Topics

BIOL 6100 - Evolution

BIOL 6150 - Developmental Biology

BIOL 6230 - Plant Physiology

BIOL 6241 - Biogeog/GIS Analyses/Ecology

BIOL 6245 - Plant Systematics/Evolution

BIOL 6375 - Molec Biol/Parasites

BIOL 6380 - Vertebrate Histology

BIOL 6401 - Plant Cell Molec Biol

BIOL 6440 - Pathogenic Bacteriology

BIOL 6445 - Immunology

BIOL 6450 - Microbial Ecology

BIOL 6465 - Adv Medical Microbiol Lab

BIOL 6470 - Molecular Biology of the Gene

BIOL 6480 - Cellular/Molec Pharmacol

BIOL 6490 - Intro Genomics/Bioinformatics

BIOL 6501 - Virology

BIOL 6503 - Lab Tech In Biochem

BIOL 6504 - Lab Tech Molecular Biol

BIOL 6511 - Biochemistry I

BIOL 6512 - Biochemistry II

BIOL 6604 - Animal Behavior

BIOL 6630 - Gen Endocrinology

BIOL 6635 - Neurobiology

BIOL 6640 - Ornithology

BIOL 6651 - Field Tech/Vertebrate Zoology

BIOL 6730 - Urban Ecol/Wildlife Mgmt

BIOL 6740 - Mammalogy

BIOL 6744 - Herpetology

BIOL 6800 - Marine Invertebrate Zool

BIOL 6801 - Marine Invertebrate Zoo Lab

BIOL 6802 - Elasmobranch Biology

BIOL 6803 - Elasmobranch Biology Lab

BIOL 6804 - Elasmobranch Physiology

BIOL 6806 - Marine Mammals

BIOL 6807 - Marine Mammals Lab

BIOL 6808 - Marine Ichthyology

BIOL 6809 - Marine Ichthyology Lab

BIOL 6810 - Field Exercises Coast Herpetol

BIOL 6844 - Parasites Marine Animals

BIOL 6900 - Entomology

BIOL 7000 - Orientation Grad Stdy

BIOL 7004 - College Biol Teaching

BIOL 7006 - Care/Humane Use Lab Animals

BIOL 7007 - Exp Cell/Molec Biol Tchr

BIOL 7008 - Adv. Genomics & Bioinformatics

BIOL 7010 - Prin Meth Sys Biology

BIOL 7011 - Adv Topics Wetland Ecol

BIOL 7012 - Plant Ecophysiology

BIOL 7014 - Tchng Skills Grad Asst

BIOL 7015 - Aquaculture

BIOL 7016 - Mol Syst Ecology

BIOL 7017 - Topics In Evolution

BIOL 7018 - Topics In Physiology

BIOL 7019 - Topics In Animal Behavior

BIOL 7020 - Topics In Ecology

BIOL 7030 - Stem Cells: Culture/Appl

BIOL 7031 - Cell Physiology

BIOL 7040 - Light Microsc/Theory & Appl

BIOL 7051 - Vertebrate Cell Cultr Tech

BIOL 7080 - Public Health Microbiol

BIOL 7092 - Research

BIOL 7093 - Problems In Zoology

BIOL 7102 - Thesis Proposal

BIOL 7130 - Curr Lit Cell & Molec Biol

BIOL 7131 - Cell & Molecular Biol

BIOL 7135 - Protein Trafficking

BIOL 7140 - Receptors & Signaling

BIOL 7200 - Seminar In Biology

BIOL 7250 - Comm & Landscape Ecol

BIOL 7290 - Molecular Computing

BIOL 7331 - Photosynthesis

BIOL 7335 - Hormones And Behavior

BIOL 7338 - Biological Clocks

BIOL 7340 - Behavioral Ecology

BIOL 7345 - Animal Communication

BIOL 7350 - Evolutionary Ecology

BIOL 7360 - Plant And Environment

BIOL 7370 - Wetland Ecol & Mgmt

BIOL 7400 - Comparative Immunology

BIOL 7440 - Molecular Biol/Cancer

BIOL 7464 - Advanced Immunology

BIOL 7470 - Adv Bacterial Genetics

BIOL 7530 - Bacterial Physiology

BIOL 7550 - Food & Indust Toxicol

BIOL 7600 - Seminar In Biology

BIOL 7610 - Environ Effects On Devel

BIOL 7700 - Special Topics in Biology

BIOL 7701 - Special Topics in Biology

BIOL 7702 - Special Topics in Biology

BIOL 7703 - Special Topics in Biology

BIOL 7704 - Special Topics in Biology

BIOL 7705 - Special Topics in Biology

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BIOL 7738 - Special Topics in Biology

BIOL 7739 - Special Topics in Biology

BIOL 7740 - Special Topics in Biology

BIOL 7750 - Population Ecology

BIOL 7751 - Conservation Biology

BIOL 7752 - Ecological Genetics

BIOL 7996 - Thesis

BIOL 8000 - Orientation Grad Stdy

BIOL 8004 - College Biol Teaching

BIOL 8006 - Care/Humane Use Lab Animals

BIOL 8007 - Exp Cell/Molec Biol Tchr

BIOL 8010 - Prin Meth Sys Biology

BIOL 8011 - Adv Topics Wetland Ecol

BIOL 8012 - Plant Ecophysiology

BIOL 8014 - Tchng Skills Grad Asst

BIOL 8015 - Aquaculture

BIOL 8015 - Aquaculture

BIOL 8016 - Mol Syst Ecology

BIOL 8017 - Topics In Evolution

BIOL 8018 - Topics In Physiology

BIOL 8019 - Topics In Animal Behavior

BIOL 8020 - Topics In Ecology

BIOL 8030 - Stem Cells: Culture/Appl

BIOL 8031 - Cell Physiology

BIOL 8040 - Light Microsc/Theory & Appl

BIOL 8051 - Vertebrate Cell Cultr Tech

BIOL 8080 - Public Health Microbiol

BIOL 8092 - Research

BIOL 8103 - Dissertation Proposal

BIOL 8130 - Curr Lit Cell & Molec Biol

BIOL 8131 - Cell & Molecular Biol

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BIOL 8140 - Receptors & Signaling

BIOL 8200 - Seminar In Biology

BIOL 8250 - Comm & Landscape Ecol

BIOL 8290 - Molecular Computing

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BIOL 8335 - Hormones And Behavior

BIOL 8338 - Biological Clocks

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BIOL 8350 - Evolutionary Ecology

BIOL 8360 - Plant And Environment

BIOL 8370 - Wetland Ecol & Mgmt

BIOL 8400 - Comparative Immunology

BIOL 8440 - Molecular Biol/Cancer

BIOL 8464 - Advanced Immunology

BIOL 8470 - Adv Bacterial Genetics

BIOL 8530 - Bacterial Physiology

BIOL 8550 - Food & Indust Toxicol

BIOL 8600 - Seminar In Biology

BIOL 8610 - Environ Effects On Devel

BIOL 8700 - Special Topics in Biology

BIOL 8701 - Special Topics in Biology

BIOL 8702 - Special Topics in Biology

BIOL 8703 - Special Topics in Biology

BIOL 8704 - Special Topics in Biology

BIOL 8705 - Special Topics in Biology

BIOL 8706 - Special Topics in Biology

BIOL 8707 - Special Topics in Biology

BIOL 8708 - Data Science for Biologists

BIOL 8708 - Special Topics in Biology

BIOL 8709 - Special Topics in Biology

BIOL 8710 - Special Topics in Biology

BIOL 8711 - Special Topics in Biology

BIOL 8712 - Special Topics in Biology

BIOL 8713 - Special Topics in Biology

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BIOL 8737 - Special Topics in Biology

BIOL 8738 - Special Topics in Biology

BIOL 8739 - Special Topics in Biology

BIOL 8740 - Special Topics in Biology

BIOL 8750 - Population Ecology

BIOL 8751 - Conservation Biology

BIOL 8752 - Ecological Genetics

BIOL 9000 - Doc Res & Dissert

BIOM 6110 - Science of Medicine

BIOM 6150 - Engr Tools Design Med Devices

BIOM 6205 - Intro Biomed and Chem Sensors

BIOM 6210 - Research Studies

BIOM 6393 - Appld Finite Element Analysis

BIOM 6702 - Biotechn Tools for BME Res

BIOM 6720 - Bioelectricity

BIOM 6750 - Biomechanics

BIOM 6900 - Special Topics in Biomedical Engineering I

BIOM 6901 - Special Topics in Biomedical Engineering I

BIOM 6902 - Special Topics in Biomedical Engineering I

BIOM 6903 - Special Topics in Biomedical Engineering I

BIOM 6904 - Special Topics in Biomedical Engineering I

BIOM 6905 - Special Topics in Biomedical Engineering I

BIOM 6906 - Special Topics in Biomedical Engineering I

BIOM 6907 - Special Topics in Biomedical Engineering I

BIOM 6908 - Special Topics in Biomedical Engineering I

BIOM 6909 - Special Topics in Biomedical Engineering I

BIOM 6910 - Special Topics in Biomedical Engineering I

BIOM 6911 - Special Topics in Biomedical Engineering I

BIOM 6912 - Special Topics in Biomedical Engineering I

BIOM 6913 - Special Topics in Biomedical Engineering I

BIOM 6914 - Special Topics in Biomedical Engineering I

BIOM 6915 - Special Topics in Biomedical Engineering I

BIOM 6916 - Special Topics in Biomedical Engineering I

BIOM 6917 - Special Topics in Biomedical Engineering I

BIOM 6918 - Special Topics in Biomedical Engineering I

BIOM 6919 - Special Topics in Biomedical Engineering I

BIOM 7004 - Life Sciences Biom I

BIOM 7005 - Life Sciences Biom II

BIOM 7030 - Stem Cells: Culture/Appl

BIOM 7101 - Biomed Engr Analysis I

BIOM 7103 - Theory Continuous Media

BIOM 7105 - Physlgcl Control Sys

BIOM 7110 - Biostatistics

BIOM 7114 - Professional Dvlpmnt

BIOM 7116 - Math Model Biol Phenomn

BIOM 7203 - Bioelectricity

BIOM 7209 - Biom Msrmnt/Instrmnt

BIOM 7222 - Biosensors

BIOM 7301 - Functional Anatomy I

BIOM 7302 - Functional Anatomy II

BIOM 7303 - Mvmnt/Jnt/Implnt Mech

BIOM 7305 - Adv Image Instrmntn

BIOM 7313 - Biomechanics II

BIOM 7331 - Advnces Orthopedic Biom

BIOM 7408 - Biochemical Engineering

BIOM 7430 - Biomaterials

BIOM 7432 - Advanced Biomaterials

BIOM 7452 - Fluid Mech Biomed Engr

BIOM 7460 - Cell Adhesion

BIOM 7470 - Tissue Engineering

BIOM 7480 - Expr Tech Cell/Tis Engr

BIOM 7501 - Medical Imaging

BIOM 7502 - Medical Imaging II

BIOM 7580 - Molecular Imaging

BIOM 7721 - Clin/Indust Intern BME

BIOM 7730 - Supervised Research I

BIOM 7740 - Supervised Research II

BIOM 7760 - Recent Adv & Crit Rev in BME

BIOM 7900 - Special Topics in Biomedical Engineering

BIOM 7901 - Special Topics in Biomedical Engineering

BIOM 7902 - Special Topics in Biomedical Engineering

BIOM 7903 - Special Topics in Biomedical Engineering

BIOM 7904 - Special Topics in Biomedical Engineering

BIOM 7905 - Special Topics in Biomedical Engineering

BIOM 7906 - Special Topics in Biomedical Engineering

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BIOM 7908 - Special Topics in Biomedical Engineering

BIOM 7909 - Special Topics in Biomedical Engineering

BIOM 7910 - Special Topics in Biomedical Engineering

BIOM 7911 - Special Topics in Biomedical Engineering

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BIOM 7916 - Special Topics in Biomedical Engineering

BIOM 7917 - Special Topics in Biomedical Engineering

BIOM 7918 - Special Topics in Biomedical Engineering

BIOM 7919 - Special Topics in Biomedical Engineering

BIOM 7920 - Special Topics in Biomedical Engineering

BIOM 7991 - Project I

BIOM 7992 - Project II

BIOM 7996 - Masters Thesis

BIOM 8004 - Life Sciences Biom I

BIOM 8005 - Life Sciences Biom II

BIOM 8030 - Stem Cells: Culture/Appl

BIOM 8101 - Biomed Engr Analysis I

BIOM 8103 - Theory Continuous Media

BIOM 8105 - Physlgcl Control Sys

BIOM 8110 - Biostatistics

BIOM 8114 - Professional Dvlpmnt

BIOM 8116 - Math Model Biol Phenomn

BIOM 8203 - Bioelectricity

BIOM 8209 - Biom Msrmnt/Instrmnt

BIOM 8222 - Biosensors

BIOM 8301 - Functional Anatomy I

BIOM 8302 - Functional Anatomy II

BIOM 8303 - Mvmnt/Jnt/Implnt Mech

BIOM 8305 - Adv Image Instrmntn

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BIOM 8470 - Tissue Engineering

BIOM 8480 - Expr Tech Cell/Tis Engr

BIOM 8501 - Medical Imaging

BIOM 8502 - Medical Imaging II

BIOM 8580 - Molecular Imaging

BIOM 8710 - Integrity-Conduct of Sci Res

BIOM 8721 - Clin/Indust Intern Bme

BIOM 8730 - Supervised Research I

BIOM 8750 - Supervised Research III

BIOM 8760 - Recent Adv & Crit Rev in BME

BIOM 8900 - Special Topics in Biomedical Engineering

BIOM 8901 - Special Topics in Biomedical Engineering

BIOM 8902 - Special Topics in Biomedical Engineering

BIOM 8903 - Special Topics in Biomedical Engineering

BIOM 8904 - Special Topics in Biomedical Engineering

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BIOM 8919 - Special Topics in Biomedical Engineering

BIOM 8920 - Special Topics in Biomedical Engineering

BIOM 8991 - Project I

BIOM 8992 - Project II

BIOM 9000 - Dissertation

BA 7634 - Hlthcare Exec Leadership Skill

BA 7651 - Health Systems Pharmacy Mgmt

BA 7703 - Special Topics in Business Administration

BA 7717 - Special Topics in Business Administration

BA 7719 - Special Topics in Business Administration

BA 7750 - Surv Internatl Business

BA 7800 - Internship In Business

BA 7900 - Research Pract/Masters

BA 7902 - Workshop In Business

BA 7910 - Problems Intl Bus

BA 7920 - Contxt Envrn Intl Bus

BA 7950 - Practicum Intl Business

BA 7960 - Pharm Exec Innovation Project

BA 8800 - Reading For Comps

BA 8900 - Research Pract/Doctoral

BA 8901 - Teaching Practicum

BA 8902 - Workshop In Business

BA 8920 - Dissertation Seminar

BA 9000 - Dissertation

BUED 7655 - Mat & Meth In Voc Educ

MIS 6000 - Topics in Teaching Methods in Information Technology

MIS 6001 - Topics in Teaching Methods in Information Technology

MIS 6002 - Topics in Teaching Methods in Information Technology

MIS 6003 - Topics in Teaching Methods in Information Technology

MIS 6004 - Topics in Teaching Methods in Information Technology

MIS 6005 - Topics in Teaching Methods in Information Technology

MIS 6006 - Topics in Teaching Methods in Information Technology

MIS 6007 - Topics in Teaching Methods in Information Technology

MIS 6008 - Topics in Teaching Methods in Information Technology

MIS 6009 - Topics in Teaching Methods in Information Technology

MIS 6160 - Mobile Application Development

MIS 6672 - Project Mgmt Tools/Lead

MIS 6681 - Fundamental/Software Testing

MIS 6682 - Advanced Software Testing

MIS 7030 - Integ Software Appl

MIS 7060 - Program Devel & File Str

MIS 7070 - Intro to MIS in Business

MIS 7160 - Mobile Application Development

MIS 7170 - Global Info Tech Mgmt

MIS 7190 - Programing For Business

MIS 7435 - Web Site Devel

MIS 7455 - Cyber Ethics in IT

MIS 7470 - Special Topics: Fundamentals in Data Science

MIS 7471 - Topics in Information Systems

MIS 7472 - Topics in Information Systems

MIS 7473 - Topics in Information Systems

MIS 7474 - Topics in Information Systems

MIS 7475 - Topics in Information Systems

MIS 7476 - Topics in Information Systems

MIS 7477 - Topics in Information Systems

MIS 7478 - Topics in Information Systems

MIS 7479 - Topics in Information Systems

MIS 7480 - Thriving In Info Age

MIS 7605 - Bus Database Systems

MIS 7610 - Sys Analysis & Design **

MIS 7615 - Enterprise Network & Security

MIS 7620 - Business Machine Learning I

MIS 7621 - Business Machine Learning II

MIS 7630 - Informatn Systms Proj

MIS 7640 - Inform Sys Mgmt/Plan

MIS 7650 - Info Syst Global Enterprise **

MIS 7655 - Adv Systems Analysis

MIS 7660 - Advanced Data Management

MIS 7665 - Adv Business Compt Envn

MIS 7670 - Information Security Mgmt

MIS 7671 - Project/Change Mgmt

MIS 7700 - Fundamentals of Data Analytics

MIS 7710 - Web Analytics

MIS 7720 - Bus. Artificial Intelligence

MIS 7910 - Prob Mgmt Info Syst

MIS 7996 - Thesis

MIS 8465 - Inform Sys In Organiztns

MIS 8470 - Topics in Information Systems

MIS 8471 - Topics in Information Systems

MIS 8472 - Topics in Information Systems

MIS 8473 - Topics in Information Systems

MIS 8474 - Topics in Information Systems

MIS 8475 - Topics in Information Systems

MIS 8476 - Topics in Information Systems

MIS 8477 - Topics in Information Systems

MIS 8478 - Topics in Information Systems

MIS 8479 - Topics in Information Systems

MIS 8605 - Bus Database Systems

MIS 8610 - Sys Analysis & Design

MIS 8615 - Enterprise Network and Security

MIS 8620 - Business Intelligence

MIS 8621 - Data Analytics for Business

MIS 8640 - Inform Sys Mgmt/Plan

MIS 8650 - Global Informatn Techn

MIS 8655 - Adv Systems Analysis

MIS 8660 - Advanced Data Management

MIS 8665 - Adv Business Compt Envn

MIS 8670 - Information Security Management

MIS 8710 - Sem/Inform Systms I

MIS 8720 - Sem/Inform Systms II

MIS 8730 - Theory Building

MIS 8800 - Experimental Research Methods

MIS 8910 - Prob Mgmt Info Syst

CERI 7020 - Special Topics in Geophysics

CERI 7021 - Special Topics in Geophysics

CERI 7022 - Special Topics in Geophysics

CERI 7023 - Special Topics in Geophysics

CERI 7024 - Special Topics in Geophysics

CERI 7025 - Special Topics in Geophysics

CERI 7026 - Special Topics in Geophysics

CERI 7027 - Special Topics in Geophysics

CERI 7028 - Special Topics in Geophysics

CERI 7029 - Special Topics in Geophysics

CERI 7102 - Programming Tools

CERI 7104 - Data Analysis in Geophysics

CERI 7105 - Global Seismology

CERI 7106 - Signal Processing Earth Sci

CERI 7124 - Earthquake Ground Motion Simul

CERI 7130 - Engineering Analysis

CERI 7204 - Prob Earthquake Hazard Anal

CERI 7211 - Intro Global Geophysics

CERI 7214 - Near Surface Geophysics

CERI 7230 - Exploration Seismology

CERI 7240 - Earthquake Surface Processes

CERI 7244 - Regional Geop Synthesis

CERI 7260 - Inverse Methods in Geophysics

CERI 7270 - Earthquake Source Physics

CERI 7280 - Seismotectonics

CERI 7315 - Comp Methods in Geodynamics

CERI 7353 - Geodynamics

CERI 7355 - Appls Space-Base Geodesy

CERI 7375 - Method/Math Physics I

CERI 7376 - Method/Math Physics II

CERI 7402 - Intermediate Seismology

CERI 7403 - Advanced Topics in Geophysics

CERI 7405 - Struct Interp Seism Reflec Dat

CERI 7621 - Independent Study

CERI 7701 - Seminar in Geophysics

CERI 7702 - Seminar in Seismology

CERI 7703 - Seminar Earthquake Sys. Sci.

CERI 7996 - Thesis

CERI 8020 - Special Topics in Geophysics

CERI 8021 - Special Topics in Geophysics

CERI 8022 - Special Topics in Geophysics

CERI 8023 - Special Topics in Geophysics

CERI 8024 - Special Topics in Geophysics

CERI 8025 - Special Topics in Geophysics

CERI 8026 - Special Topics in Geophysics

CERI 8027 - Special Topics in Geophysics

CERI 8028 - Special Topics in Geophysics

CERI 8029 - Special Topics in Geophysics

CERI 8102 - Programming Tools

CERI 8104 - Data Analysis in Geophysics

CERI 8105 - Global Seismology

CERI 8106 - Signal Processing Earth Sci

CERI 8124 - Earthquake Ground Motion Simul

CERI 8130 - Engineering Analysis

CERI 8204 - Prob Earthquake Hazard Anal

CERI 8211 - Intro Global Geophysics

CERI 8214 - Near Surface Geophysics

CERI 8230 - Exploration Seismology

CERI 8240 - Earthquake Surface Processes

CERI 8244 - Regional Geop Synthesis

CERI 8260 - Inverse Methods in Geophysics

CERI 8270 - Earthquake Source Physics

CERI 8280 - Seismotectonics

CERI 8315 - Comp Methods in Geodynamics

CERI 8353 - Geodynamics

CERI 8355 - Appls Space-Base Geodesy

CERI 8402 - Intermediate Seismology

CERI 8403 - Advanced Topics in Geophysics

CERI 8405 - Struct Interp Seism Reflec Dat

CERI 8701 - Seminar in Geophysics

CERI 8702 - Seminar in Seismology

CERI 8703 - Seminar Earthquake Sys. Sci.

CERI 9000 - Dissertation

CHEM 6001 - Environmental Chemistry

CHEM 6111 - Intermediate Inorganic CHEM

CHEM 6180 - Special Topics in Inorganic Chemistry

CHEM 6181 - Special Topics in Inorganic Chemistry

CHEM 6182 - Special Topics in Inorganic Chemistry

CHEM 6183 - Special Topics in Inorganic Chemistry

CHEM 6184 - Special Topics in Inorganic Chemistry

CHEM 6185 - Special Topics in Inorganic Chemistry

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CHEM 6196 - Special Topics in Inorganic Chemistry

CHEM 6197 - Special Topics in Inorganic Chemistry

CHEM 6198 - Special Topics in Inorganic Chemistry

CHEM 6199 - Special Topics in Inorganic Chemistry

CHEM 6201 - Instrumental Analysis Lab

CHEM 6211 - Instrumntl Analysis

CHEM 6280 - Special Topics in Analytical Chemistry

CHEM 6281 - Special Topics in Analytical Chemistry

CHEM 6282 - Special Topics in Analytical Chemistry

CHEM 6283 - Special Topics in Analytical Chemistry

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CHEM 6296 - Special Topics in Analytical Chemistry

CHEM 6297 - Special Topics in Analytical Chemistry

CHEM 6298 - Special Topics in Analytical Chemistry

CHEM 6299 - Special Topics in Analytical Chemistry

CHEM 6310 - Intermediate Organic Chemistry

CHEM 6311 - Physical Organic Chemistry

CHEM 6315 - Organic Medicinal Chem

CHEM 6380 - Special Topics in Organic Chemistry

CHEM 6381 - Special Topics in Organic Chemistry

CHEM 6382 - Special Topics in Organic Chemistry

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CHEM 6397 - Special Topics in Organic Chemistry

CHEM 6398 - Special Topics in Organic Chemistry

CHEM 6399 - Special Topics in Organic Chemistry

CHEM 6406 - Molecular Spectroscopy Lab

CHEM 6411 - Advanced Physical Chem

CHEM 6414 - Quantum Chemistry/Spectroscopy

CHEM 6416 - Molecular Spectroscopy

CHEM 6480 - Special Topics in Physical Chemistry

CHEM 6481 - Special Topics in Physical Chemistry

CHEM 6482 - Special Topics in Physical Chemistry

CHEM 6483 - Special Topics in Physical Chemistry

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CHEM 6498 - Special Topics in Physical Chemistry

CHEM 6499 - Special Topics in Physical Chemistry

CHEM 6501 - Lab Tech In Biochem

CHEM 6511 - Biochemistry I

CHEM 6512 - Biochemistry II

CHEM 6580 - Special Topics in Biochemistry

CHEM 6581 - Special Topics in Biochemistry

CHEM 6582 - Special Topics in Biochemistry

CHEM 6583 - Special Topics in Biochemistry

CHEM 6584 - Special Topics in Biochemistry

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CHEM 6596 - Special Topics in Biochemistry

CHEM 6597 - Special Topics in Biochemistry

CHEM 6598 - Special Topics in Biochemistry

CHEM 6599 - Special Topics in Biochemistry

CHEM 6603 - Materials Synthesis Lab

CHEM 6613 - Materials Synthesis

CHEM 6614 - Polymer Chemistry

CHEM 7001 - Directed Research

CHEM 7011 - Accel CHEM Educator Profnl

CHEM 7100 - Special Topics in Inorganic Chemistry

CHEM 7101 - Special Topics in Inorganic Chemistry

CHEM 7102 - Special Topics in Inorganic Chemistry

CHEM 7103 - Special Topics in Inorganic Chemistry

CHEM 7104 - Special Topics in Inorganic Chemistry

CHEM 7105 - Special Topics in Inorganic Chemistry

CHEM 7106 - Special Topics in Inorganic Chemistry

CHEM 7107 - Special Topics in Inorganic Chemistry

CHEM 7108 - Special Topics in Inorganic Chemistry

CHEM 7109 - Special Topics in Inorganic Chemistry

CHEM 7111 - Systematic Inor Chem

CHEM 7112 - Structural Inor Chem

CHEM 7200 - Special Topics in Analytical Chemistry

CHEM 7201 - Special Topics in Analytical Chemistry

CHEM 7202 - Special Topics in Analytical Chemistry

CHEM 7203 - Special Topics in Analytical Chemistry

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CHEM 7206 - Special Topics in Analytical Chemistry

CHEM 7207 - Special Topics in Analytical Chemistry

CHEM 7208 - Special Topics in Analytical Chemistry

CHEM 7209 - Special Topics in Analytical Chemistry

CHEM 7211 - Adv Analytical Chem I

CHEM 7212 - Adv Analytical Chem II

CHEM 7300 - Special Topics in Organic Chemistry

CHEM 7301 - Special Topics in Organic Chemistry

CHEM 7302 - Special Topics in Organic Chemistry

CHEM 7303 - Special Topics in Organic Chemistry

CHEM 7304 - Special Topics in Organic Chemistry

CHEM 7305 - Special Topics in Organic Chemistry

CHEM 7306 - Special Topics in Organic Chemistry

CHEM 7307 - Special Topics in Organic Chemistry

CHEM 7308 - Special Topics in Organic Chemistry

CHEM 7309 - Special Topics in Organic Chemistry

CHEM 7311 - Adv Organic Chemistry

CHEM 7312 - Synthetic Organic Chem

CHEM 7400 - Special Topics in Physical Chemistry

CHEM 7401 - Special Topics in Physical Chemistry

CHEM 7402 - Special Topics in Physical Chemistry

CHEM 7403 - Special Topics in Physical Chemistry

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CHEM 7406 - Special Topics in Physical Chemistry

CHEM 7407 - Special Topics in Physical Chemistry

CHEM 7408 - Special Topics in Physical Chemistry

CHEM 7409 - Special Topics in Physical Chemistry

CHEM 7411 - Elect Structure & Sym

CHEM 7414 - Adv Quantum Chemistry

CHEM 7500 - Special Topics in Biochemistry

CHEM 7501 - Special Topics in Biochemistry

CHEM 7502 - Special Topics in Biochemistry

CHEM 7503 - Special Topics in Biochemistry

CHEM 7504 - Special Topics in Biochemistry

CHEM 7505 - Special Topics in Biochemistry

CHEM 7506 - Special Topics in Biochemistry

CHEM 7507 - Special Topics in Biochemistry

CHEM 7508 - Special Topics in Biochemistry

CHEM 7509 - Special Topics in Biochemistry

CHEM 7600 - Intro Grad Study Chem

CHEM 7711 - Approx Chem Model Meth

CHEM 7713 - Adv Solid St Phys/Chem

CHEM 7910 - Spec Prob In Chem

CHEM 7911 - Presentation

CHEM 7913 - Chemistry Seminar

CHEM 7996 - Thesis

CHEM 8001 - Directed Research

CHEM 8101 - Organometallics

CHEM 8111 - Systematic Inor Chem

CHEM 8112 - Structural Inor Chem

CHEM 8113 - Organometallics

CHEM 8200 - Chemistry Internship

CHEM 8200 - Special Topics in Analytical Chemistry

CHEM 8200 - Special Topics in Inorganic Chemistry

CHEM 8201 - Special Topics in Analytical Chemistry

CHEM 8201 - Special Topics in Inorganic Chemistry

CHEM 8202 - Special Topics in Analytical Chemistry

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CHEM 8210 - Special Topics in Analytical Chemistry

CHEM 8211 - Adv Analytical Chem I

CHEM 8211 - Special Topics in Analytical Chemistry

CHEM 8212 - Adv Analytical Chem II

CHEM 8212 - Special Topics in Analytical Chemistry

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CHEM 8261 - Special Topics in Analytical Chemistry

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CHEM 8264 - Special Topics in Analytical Chemistry

CHEM 8265 - Special Topics in Analytical Chemistry

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CHEM 8299 - Special Topics in Analytical Chemistry

CHEM 8300 - Special Topics in Analytical Chemistry

CHEM 8300 - Special Topics in Organic Chemistry

CHEM 8301 - Special Topics in Analytical Chemistry

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CHEM 8302 - Special Topics in Analytical Chemistry

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CHEM 8308 - Special Topics in Organic Chemistry

CHEM 8309 - Special Topics in Analytical Chemistry

CHEM 8309 - Special Topics in Organic Chemistry

CHEM 8311 - Adv Organic Chemistry

CHEM 8312 - Synthetic Organic Chem

CHEM 8400 - Special Topics in Physical Chemistry

CHEM 8401 - Special Topics in Physical Chemistry

CHEM 8402 - Special Topics in Physical Chemistry

CHEM 8403 - Special Topics in Physical Chemistry

CHEM 8404 - Special Topics in Physical Chemistry

CHEM 8405 - Adv Biophysical Chemistry

CHEM 8405 - Special Topics in Physical Chemistry

CHEM 8406 - Special Topics in Physical Chemistry

CHEM 8407 - Special Topics in Physical Chemistry

CHEM 8408 - Special Topics in Physical Chemistry

CHEM 8409 - Special Topics in Physical Chemistry

CHEM 8411 - Elect Structure & Sym

CHEM 8414 - Adv Quantum Chemistry

CHEM 8500 - Special Topics in Biochemistry

CHEM 8501 - Special Topics in Biochemistry

CHEM 8502 - Special Topics in Biochemistry

CHEM 8503 - Special Topics in Biochemistry

CHEM 8504 - Special Topics in Biochemistry

CHEM 8505 - Special Topics in Biochemistry

CHEM 8506 - Special Topics in Biochemistry

CHEM 8507 - Special Topics in Biochemistry

CHEM 8508 - Special Topics in Biochemistry

CHEM 8509 - Special Topics in Biochemistry

CHEM 8601 - Chemistry Internship

CHEM 8700 - Special Topics in Computational Chemistry

CHEM 8701 - Special Topics in Computational Chemistry

CHEM 8702 - Special Topics in Computational Chemistry

CHEM 8703 - Special Topics in Computational Chemistry

CHEM 8704 - Special Topics in Computational Chemistry

CHEM 8705 - Special Topics in Computational Chemistry

CHEM 8706 - Special Topics in Computational Chemistry

CHEM 8707 - Special Topics in Computational Chemistry

CHEM 8708 - Special Topics in Computational Chemistry

CHEM 8709 - Special Topics in Computational Chemistry

CHEM 8711 - Approx Chem Model Meth

CHEM 8713 - Adv Solid St Phys/Chem

CHEM 8910 - Spec Prob In Chem

CHEM 8911 - Advanced Presentation

CHEM 8913 - Chemistry Seminar

CHEM 9000 - Dissertation

CHIN 7101 - Advanced Business Chinese I

CHIN 7102 - Advanced Business Chinese II

PLAN 6002 - Urban Food Security

PLAN 6003 - Community Economic Development

PLAN 6004 - Community Organizing

PLAN 6201 - Urbanization/Environmnt

PLAN 6231 - Water Resources

PLAN 6261 - Plan/Sustainable Cities/Region

PLAN 6443 - Transportation Planning

PLAN 6502 - Computer Cartography

PLAN 6515 - Geographic Info Science

PLAN 6521 - Quantitative Methods

PLAN 6800 - Special Topics in City and Regional Planning

PLAN 6801 - Design Collaborative Studio

PLAN 6801 - Special Topics in City and Regional Planning

PLAN 6802 - Special Topics in City and Regional Planning

PLAN 6803 - Special Topics in City and Regional Planning

PLAN 6804 - Special Topics in City and Regional Planning

PLAN 6805 - Special Topics in City and Regional Planning

PLAN 6806 - Special Topics in City and Regional Planning

PLAN 6807 - Special Topics in City and Regional Planning

PLAN 6808 - Special Topics in City and Regional Planning

PLAN 6809 - Special Topics in City and Regional Planning

PLAN 6810 - Special Topics in City and Regional Planning

PLAN 7000 - Planning the American City

PLAN 7002 - Planning Theory & Perspectives

PLAN 7004 - Land Use Controls

PLAN 7006 - Comprehensive Planning Studio

PLAN 7007 - Project Planning Studio

PLAN 7008 - Site Planning

PLAN 7011 - Planning & the Metro Economy

PLAN 7012 - Analysis for Comm Planning

PLAN 7101 - Regional Planning

PLAN 7201 - Plan Comm Facilities

PLAN 7202 - Land Use Planning

PLAN 7203 - Ecology and Planning

PLAN 7204 - Urban Revitalz Plan

PLAN 7205 - Sem Urban Design

PLAN 7206 - Housing

PLAN 7208 - Economics of Cities

PLAN 7210 - Research Problems Seminar

PLAN 7302 - Geographic Environ Anly

PLAN 7504 - Sem Geog Info Systems

PLAN 7610 - Special Topics in City and Regional Planning

PLAN 7611 - Special Topics in City and Regional Planning

PLAN 7612 - Special Topics in City and Regional Planning

PLAN 7613 - Special Topics in City and Regional Planning

PLAN 7614 - Special Topics in City and Regional Planning

PLAN 7615 - Special Topics in City and Regional Planning

PLAN 7616 - Special Topics in City and Regional Planning

PLAN 7617 - Special Topics in City and Regional Planning

PLAN 7618 - Special Topics in City and Regional Planning

PLAN 7619 - Special Topics in City and Regional Planning

PLAN 7620 - Special Topics in City and Regional Planning

PLAN 7701 - Directed Research

PLAN 7708 - Planning Practice

PLAN 7801 - Design Collaborative Studio

PLAN 7890 - Planning Internship

PLAN 7896 - Capstone Project

PLAN 8208 - Economics of Cities

CIVL 6122 - Structural Analysis II

CIVL 6131 - Inter Steel Design

CIVL 6136 - Inter Rein Concr Design

CIVL 6140 - Environmentl Engr Design

CIVL 6143 - Physical/Chem Treatment

CIVL 6144 - Biol Wastewater Treat

CIVL 6149 - Pump Station Design

CIVL 6152 - Applied Soil Mechanics

CIVL 6155 - Pavement Design and Evaluation

CIVL 6162 - Traffic Engineering

CIVL 6163 - Airport Plnng & Design

CIVL 6164 - Route Location & Design

CIVL 6180 - Adv Hydrology/Hydraulics

CIVL 6190 - Water Resrc Plan/Dsgn

CIVL 6900 - Special Topics in Civil Engineering

CIVL 6901 - Special Topics in Civil Engineering

CIVL 6902 - Special Topics in Civil Engineering

CIVL 6903 - Special Topics in Civil Engineering

CIVL 6904 - Special Topics in Civil Engineering

CIVL 6905 - Special Topics in Civil Engineering

CIVL 6906 - Special Topics in Civil Engineering

CIVL 6907 - Special Topics in Civil Engineering

CIVL 6908 - Special Topics in Civil Engineering

CIVL 6909 - Special Topics in Civil Engineering

CIVL 6910 - Special Topics in Civil Engineering

CIVL 7001 - Engineering Analysis

CIVL 7002 - Prog Tools for Scits & Engrs

CIVL 7012 - Prob Meth In Engr

CIVL 7111 - Computatnl Mechncs

CIVL 7112 - Plstc Dsgn Steel Strctr

CIVL 7113 - Prestressed Cncrte Dsgn

CIVL 7114 - Elastic Stability

CIVL 7115 - Plate Shell Struc

CIVL 7116 - Structural Dynamics

CIVL 7117 - Finite Elem Struc Mech

CIVL 7119 - Earthquake Resist Design

CIVL 7123 - Seismic Risk Assess

CIVL 7125 - Earthquake Ground Motion Simul

CIVL 7126 - Data Analysis in Geophysics

CIVL 7127 - Signal Processing Earth Sci

CIVL 7128 - Inverse Methods in Geophysics

CIVL 7132 - Advanced Soil Mech

CIVL 7133 - Slopes and Embankments

CIVL 7135 - Soil Dynamics

CIVL 7136 - Prob & Earthquake Haz Anly

CIVL 7137 - Geotechnical Earthquake

CIVL 7138 - Shallow and Deep Foundations

CIVL 7139 - Earth Retaining Structures

CIVL 7141 - Water Trt Plant Dsgn

CIVL 7142 - Wastewater Trt Plnt Dsgn

CIVL 7143 - Solid Waste Mgmt

CIVL 7144 - Residuals Mgmt

CIVL 7145 - Adv Biological Treatmnt

CIVL 7146 - Adv Phys/Chem Treatmnt

CIVL 7147 - Hazardous Waste Mgmt

CIVL 7154 - Indust Wastewater Treat

CIVL 7162 - Transportation Sys Eval

CIVL 7164 - Urban Transport Engr

CIVL 7165 - Geom Dsgn Trnsprtn Syst

CIVL 7166 - Design Hgwy Airpt Pvmt

CIVL 7168 - Traffic Engr Operations

CIVL 7169 - Mass Transit Systems

CIVL 7170 - GW Cont Fate/Transport

CIVL 7173 - Environmental Geochem

CIVL 7177 - Quantitative Hydrogeol

CIVL 7181 - Statistical Hydrol Modl

CIVL 7182 - Engr Sedimen & Erosion

CIVL 7185 - Hydraul Open Channels

CIVL 7191 - Computer Appl Water Res

CIVL 7192 - River Engineering

CIVL 7193 - Hydraul Sediment Transp

CIVL 7194 - Comp River Hydraulics

CIVL 7195 - Groundwater Hydraulics

CIVL 7196 - Urban Drainage

CIVL 7197 - Ground Water Qual Cntrl

CIVL 7261 - Traffic Flow Theory

CIVL 7262 - Freight Demand Modeling

CIVL 7263 - Intro. to Num. Opt. for Eng

CIVL 7264 - Simulation Modeling

CIVL 7265 - Intro to Intermodal Freight

CIVL 7266 - Freight Terms and Distr Facils

CIVL 7267 - Maritime Economics

CIVL 7268 - Transport Network Flows

CIVL 7269 - Quant Meth for Engr Dec Making

CIVL 7360 - Transp Econ & Decision Making

CIVL 7362 - Port Planning Mgmt & Operation

CIVL 7363 - Discr. Choice Model for Transp

CIVL 7900 - Special Topics in Civil Engineering

CIVL 7901 - Special Topics in Civil Engineering

CIVL 7902 - Special Topics in Civil Engineering

CIVL 7903 - Special Topics in Civil Engineering

CIVL 7904 - Special Topics in Civil Engineering

CIVL 7905 - Special Topics in Civil Engineering

CIVL 7906 - Special Topics in Civil Engineering

CIVL 7907 - Special Topics in Civil Engineering

CIVL 7908 - Special Topics in Civil Engineering

CIVL 7909 - Special Topics in Civil Engineering

CIVL 7910 - Special Topics in Civil Engineering

CIVL 7991 - Projects

CIVL 7993 - Project & Report

CIVL 7996 - Thesis

CIVL 8001 - Engineering Analysis

CIVL 8002 - Prog Tools for Scits & Engrs

CIVL 8012 - Prob Meth In Engr

CIVL 8111 - Computatnl Mechncs

CIVL 8112 - Plstc Dsgn Steel Strctr

CIVL 8113 - Prestressed Cncrte Dsgn

CIVL 8114 - Elastic Stability

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CIVL 8116 - Structural Dynamics

CIVL 8117 - Finite Elem Struc Mech

CIVL 8119 - Earthquake Resist Design

CIVL 8124 - Software Develop

CIVL 8125 - Earthquake Ground Motion Simul

CIVL 8126 - Data Analysis in Geophysics

CIVL 8127 - Signal Processing Earth Sci

CIVL 8128 - Inverse Methods in Geophysics

CIVL 8132 - Advanced Soil Mech

CIVL 8133 - Slopes and Embankments

CIVL 8135 - Soil Dynamics

CIVL 8137 - Geotechnical Earthquake

CIVL 8138 - Shallow and Deep Foundations

CIVL 8139 - Earth Retaining Structures

CIVL 8141 - Water Trt Plant Dsgn

CIVL 8142 - Wastewater Trt Plnt Dsgn

CIVL 8143 - Solid Waste Mgmt

CIVL 8144 - Residuals Mgmt

CIVL 8145 - Adv Biological Treatmnt

CIVL 8146 - Adv Phys/Chem Treatmnt

CIVL 8147 - Hazardous Waste Mgmt

CIVL 8154 - Indust Wastewater Treat

CIVL 8162 - Transportation Sys Eval

CIVL 8164 - Urban Transport Engr

CIVL 8165 - Geom Dsgn Trnsprtn Syst

CIVL 8166 - Design Hgwy Airpt Pvmt

CIVL 8168 - Traffic Engr Operations

CIVL 8169 - Mass Transit Systems

CIVL 8170 - GW Cont Fate/Transport

CIVL 8177 - Quantitative Hydrogeol

CIVL 8181 - Statistical Hydrol Modl

CIVL 8182 - Engr Sedimen & Erosion

CIVL 8185 - Hydraul Open Channels

CIVL 8191 - Computer Appl Water Res

CIVL 8192 - River Engineering

CIVL 8193 - Hydraul Sediment Transp

CIVL 8194 - Comp River Hydraulics

CIVL 8195 - Groundwater Hydraulics

CIVL 8196 - Urban Drainage

CIVL 8197 - Ground Water Qual Cntrl

CIVL 8261 - Traffic Flow Theory

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CIVL 8263 - Intro. to Num. Opt. for Eng

CIVL 8264 - Simulation Modeling

CIVL 8265 - Intro to Intermodal Freight

CIVL 8266 - Freight Terms and Distr Facils

CIVL 8267 - Maritime Economics

CIVL 8268 - Transport Network Flows

CIVL 8269 - Quant Meth for Engr Dec Making

CIVL 8360 - Transp Econ & Decision Making

CIVL 8362 - Port Planning Mgmt & Operation

CIVL 8363 - Discr. Choice Model for Transp

CIVL 8900 - Special Topics in Civil Engineering

CIVL 8901 - Special Topics in Civil Engineering

CIVL 8902 - Special Topics in Civil Engineering

CIVL 8903 - Special Topics in Civil Engineering

CIVL 8904 - Special Topics in Civil Engineering

CIVL 8905 - Special Topics in Civil Engineering

CIVL 8906 - Special Topics in Civil Engineering

CIVL 8907 - Special Topics in Civil Engineering

CIVL 8908 - Special Topics in Civil Engineering

CIVL 8909 - Special Topics in Civil Engineering

CIVL 8910 - Special Topics in Civil Engineering

CIVL 8991 - Projects

CIVL 8993 - Project & Report

CIVL 9000 - Dissertation

AVIA 7110 - Foundations AV Human Factors

AVIA 7111 - Cognitive Ergonomics in AV

AVIA 7113 - Judgment & Decision Making AV

AVIA 7115 - Selection & Beh Health in AV

AVIA 7117 - Flight Deck Ergonomics

AVIA 7119 - Training and Simulation

AVIA 7121 - HF Techniques and Methods

AVIA 7998 - Comprehensive Exam

UNIV 7000 - Fndtns Liberal Studies **

UNIV 7002 - Seminar in University Studies

UNIV 7003 - 7005 - Special Topics

UNIV 7100 - Rsrch/Intrdiscipl Study **

UNIV 7110 - Internship

UNIV 7111 - Data-Based Decision-making

UNIV 7115 - Experiential Learning Credit

UNIV 7200 - Liberal Studies Sem **

UNIV 7210 - Rise and Fall of Empires

UNIV 7300 - Prof Issues & Ethics

UNIV 7350 - Globalization&Professns

UNIV 7700 - Graduate Student Internships

UNIV 7796 - Independent Study

UNIV 7997 - Special Project **

UNIV 7998 - Professional Project

UNIV 8000 - Foundations of Liberal Studies

UNIV 8100 - Rsrch/Intrdiscipl Study **

UNIV 8200 - Liberal Studies Seminar

COMM 6011 - Communctn In Orgnztns

COMM 6013 - Political Communication

COMM 6014 - Communication in Internet

COMM 6015 - Health Literacy

COMM 6016 - Public Health Campaigns

COMM 6210 - Special Topics in Communication Studies

COMM 6211 - Special Topics in Communication Studies

COMM 6212 - Special Topics in Communication Studies

COMM 6213 - Special Topics in Communication Studies

COMM 6214 - Special Topics in Communication Studies

COMM 6215 - Special Topics in Communication Studies

COMM 6216 - Special Topics in Communication Studies

COMM 6217 - Special Topics in Communication Studies

COMM 6218 - Special Topics in Communication Studies

COMM 6219 - Special Topics in Communication Studies

COMM 6220 - Special Topics in Film

COMM 6221 - Special Topics in Film

COMM 6222 - Special Topics in Film

COMM 6223 - Special Topics in Film

COMM 6224 - Special Topics in Film

COMM 6225 - Special Topics in Film

COMM 6226 - Special Topics in Film

COMM 6227 - Special Topics in Film

COMM 6228 - Special Topics in Film

COMM 6229 - Special Topics in Film

COMM 6340 - Listening

COMM 6341 - Interprsnl Communicatn

COMM 6342 - Small Group Communcatn

COMM 6360 - American Eloquence

COMM 6363 - Dialogue

COMM 6364 - Gender and Public Discourse

COMM 6365 - Place/Community/Comm

COMM 6373 - Interracial Comm

COMM 6375 - Intercultrl Communicatn

COMM 6380 - Communication/Conflict

COMM 6400 - Contemplative Communication

COMM 6802 - Internship

COMM 6811 - Media 2.0

COMM 6822 - Audio Prdctn Film/Video

COMM 6824 - Cinema/Videography

COMM 6825 - Editing/Post Production

COMM 6841 - Television Workshop

COMM 6842 - TV Studio Production II

COMM 6850 - Film History I

COMM 6851 - Film History II

COMM 6853 - Documentary Form Film

COMM 6854 - Documentary Form/Broadcasting

COMM 6856 - Gender and Film

COMM 6858 - Contemporary Cinema

COMM 6859 - Monster Films

COMM 6891 - Produce/Direct Film/Vid

COMM 6960 - Documentary Writing

COMM 6970 - Screenwriting

COMM 7010 - Writ./Comm Cent. Theory/Meth

COMM 7012 - Seminar Health Comm **

COMM 7013 - Sem Political Comm

COMM 7014 - Public Health Communication

COMM 7110 - Leadership/Communicatn

COMM 7210 - Special Topics in Communication Studies

COMM 7211 - Special Topics in Communication Studies

COMM 7212 - Special Topics in Communication Studies

COMM 7213 - Special Topics in Communication Studies

COMM 7214 - Special Topics in Communication Studies

COMM 7215 - Special Topics in Communication Studies

COMM 7216 - Special Topics in Communication Studies

COMM 7217 - Special Topics in Communication Studies

COMM 7218 - Special Topics in Communication Studies

COMM 7219 - Special Topics in Communication Studies

COMM 7321 - Communication Theory

COMM 7322 - Persuasion & Influence

COMM 7331 - Sem Communication Thry

COMM 7332 - Seminar Comm Research

COMM 7345 - Health Literacy

COMM 7350 - Rhetorical Theory

COMM 7362 - Sem Public Address

COMM 7369 - Sem Org Communications

COMM 7371 - Rhetorical Criticism

COMM 7374 - Independent Studies Comm Arts

COMM 7434 - Qual Research Methods

COMM 7450 - Sem Interpersonal Comm

COMM 7474 - Supv Comm & Leadership

COMM 7616 - Contemp Rhet Theory

COMM 7621 - Seminar Argumentation

COMM 7632 - Sem Rhet Criticism

COMM 7802 - Internship

COMM 7803 - Seminar Film Criticism

COMM 7804 - Sem Media Theory/Crit

COMM 7806 - Trends Mass Communicatn

COMM 7808 - Mass Comm & Society

COMM 7809 - Sem Communication Hist

COMM 7815 - Sem History Rhetoric

COMM 7819 - Rhetoric Of Science

COMM 7820 - Topics In Rhetoric

COMM 7892 - Film/Video Production

COMM 7991 - Sem Comparative Media

COMM 7993 - Special Problems

COMM 7994 - Culminating Project

COMM 7995 - Production Practicum

COMM 7996 - Thesis

COMM 8010 - Writ./Comm Cent. Theory/Meth

COMM 8012 - Seminar Health Comm **

COMM 8013 - Sem Political Comm

COMM 8014 - Public Health Communication

COMM 8210 - Special Topics in Communication Studies

COMM 8211 - Special Topics in Communication Studies

COMM 8212 - Special Topics in Communication Studies

COMM 8213 - Special Topics in Communication Studies

COMM 8214 - Special Topics in Communication Studies

COMM 8215 - Special Topics in Communication Studies

COMM 8216 - Special Topics in Communication Studies

COMM 8217 - Special Topics in Communication Studies

COMM 8218 - Special Topics in Communication Studies

COMM 8219 - Special Topics in Communication Studies

COMM 8321 - Communication Theory

COMM 8322 - Persuasion & Influence

COMM 8331 - Communication Theory

COMM 8332 - Seminar Comm Rsearch

COMM 8345 - Health Literacy

COMM 8350 - Rhetorical Theory

COMM 8362 - Seminar Public Address

COMM 8369 - Sem Org Communications

COMM 8371 - Rhetorical Criticism

COMM 8374 - Independent Studies Comm Arts

COMM 8434 - Qual Research Methods

COMM 8450 - Sem Interpersonal Comm

COMM 8474 - Supv Comm & Leadership

COMM 8616 - Comtemp Rhet Theory

COMM 8621 - Seminar Argumentation

COMM 8632 - Sem Rhet Criticism

COMM 8803 - Seminar Film Criticism

COMM 8804 - Sem Media Theory/Crit

COMM 8806 - Trends Mass Communicatn

COMM 8808 - Mass Comm & Society

COMM 8809 - Sem Communication Hist

COMM 8815 - Sem History Rhetoric

COMM 8819 - Rhetoric Of Science

COMM 8820 - Topics In Rhetoric

COMM 8993 - Special Problems

COMM 8995 - Production Practicum

COMM 8996 - Reading for Comps

COMM 9000 - Dissertation

AUSP 6001 - Accent Modification

AUSP 6006 - Language & Speech Development

AUSP 6006 - Language & Speech Development

AUSP 6106 - Introduction to Audiology

AUSP 6205 - ASL for Speech, Audio, & Educ

AUSP 6206 - Deaf Culture & Deaf History

AUSP 6207 - Psychological, Sociological, and Educational Perspectives of Deafness

AUSP 6300 - Autism: Communic & Socializtn

AUSP 6301 - Survey Neurological Disorders

AUSP 7000 - Speech Science

AUSP 7001 - Psychoacoustics

AUSP 7002 - Sem Comm Sciences

AUSP 7003 - Anat Phys Spch Mech

AUSP 7004 - Anat Phys Hear Mec

AUSP 7005 - Language Sample Analysis

AUSP 7006 - Lang & Speech Devel

AUSP 7007 - Commun Interaction

AUSP 7008 - Acoustic/Percept Phonetics

AUSP 7010 - Neurol Bases Comm

AUSP 7011 - Psycholinguistics

AUSP 7015 - Prof Writing/Comm Dsord

AUSP 7016 - Sociocultrl Base Comm

AUSP 7101 - Audiol Concepts

AUSP 7104 - Clincl Exper Audiology

AUSP 7106 - Intro Surv Of Audiology

AUSP 7107 - Auditory Implant Technology

AUSP 7113 - Intro to Audiologic Rehab

AUSP 7117 - Individual Study/Audiol

AUSP 7122 - Aural Rehabilitation

AUSP 7123 - Clinical Applic Sign Language

AUSP 7124 - Clinical Educ Comm Disorders

AUSP 7127 - Rehabilitatv Audiol II

AUSP 7129 - Psychosoc Adj Hrng Impr

AUSP 7200 - Intro Clin Pract

AUSP 7201 - Clft Palate/Craniofcl Dis

AUSP 7202 - Motor Speech Dis/Child

AUSP 7203 - Voice Disorders

AUSP 7204 - Disorders Phonology/Articulatn

AUSP 7205 - Fluency Disorders

AUSP 7206 - Developmental and Acquired Speech Motor Disorders

AUSP 7207 - Clinical Instrumentation

AUSP 7208 - Clin Exp Spch Lang Path

AUSP 7209 - Dysphagia/Related Disor

AUSP 7210 - Sem Speech Pathology

AUSP 7211 - Clinical Exp School Pers

AUSP 7212 - Autism Spect Disord/Rel Disabl

AUSP 7213 - Comm Dis in Diverse Cultures

AUSP 7300 - Lang Dis In Children

AUSP 7302 - Lang Disordrs/Adults I

AUSP 7303 - Lang Disordrs/Adults II

AUSP 7304 - Sem Lang Disorders

AUSP 7305 - Language Learning Disabilities

AUSP 7308 - Augmentative/Alternatv Comm

AUSP 7309 - Sp Rehab/Head-Neck Path

AUSP 7500 - Eval Resrch Comm Disord

AUSP 7501 - Phonetic Transcript

AUSP 7502 - Intro to Phonetic Transcriptio

AUSP 7505 - Interprofessional Educ & Pract

AUSP 7700 - Individ Readings Audiol

AUSP 7800 - Ind Read Speech-Language Path

AUSP 7990 - Special Projects

AUSP 7991 - Clinical-Research Colloquium

AUSP 7996 - Thesis

AUSP 8000 - Speech Science

AUSP 8001 - Psychoacoustics

AUSP 8002 - Sem Comm Sciences

AUSP 8003 - Anat Phys Speech Mech

AUSP 8004 - Anat Phys Hear Mec

AUSP 8005 - Language Sample Analysis

AUSP 8006 - Lang & Speech Devel

AUSP 8007 - Commun Interaction

AUSP 8008 - Acoustic/Percept Phonetics

AUSP 8010 - Neurol Bases Comm

AUSP 8011 - Psycholinguistics

AUSP 8012 - Measurement Techniques

AUSP 8013 - Instr, Calib, & Hear Conserv

AUSP 8016 - Sociocultrl Base Comm

AUSP 8017 - Digitl Signl Proc Sp/Hear

AUSP 8019 - Anat/Phys Aud Sys I

AUSP 8020 - Anat/Phys Aud Sys II

AUSP 8021 - Prof Prep/Scientists

AUSP 8100 - Ind Read Audiology

AUSP 8101 - Audiol Concepts

AUSP 8103 - Diag/Medical Audiology

AUSP 8104 - Clinicl Exper Audiology

AUSP 8105 - Vestibular Assmt/Rehab

AUSP 8107 - Auditory Implant Technology

AUSP 8110 - Studebaker Lectures

AUSP 8112 - Sem Audiology

AUSP 8113 - Intro to Audiologic Rehab

AUSP 8114 - Intro Hearing Aids

AUSP 8115 - Pediatric Audiology

AUSP 8116 - Hearing Aid Provision

AUSP 8117 - Individual Study/Audiol

AUSP 8118 - Electrophys Assessmnt

AUSP 8119 - Hearing Conservation

AUSP 8121 - Ind Proj Audiology

AUSP 8124 - Clinical Educ Comm Disorders

AUSP 8125 - Clinical Extrnshp Audio

AUSP 8127 - Adult Audiologic Rehab & Aging

AUSP 8128 - Evidenc-Based Pract Ampl

AUSP 8129 - Psychosoc Adj Hrng Impr

AUSP 8200 - Ind Read Sp Path

AUSP 8201 - Clft Pllate/Craniofcl Dis

AUSP 8202 - Motor Speech Dis/Child

AUSP 8203 - Voice Disorders

AUSP 8204 - Phonological Disorders

AUSP 8205 - Fluency Disorders

AUSP 8206 - Dev & Acquired Motor Spch Dis

AUSP 8207 - Clinical Instrumentation

AUSP 8208 - Clin Exp Spch Lang Path

AUSP 8209 - Dysphagia/Related Disor

AUSP 8210 - Sem Speech Pathology

AUSP 8212 - Autism Spect Disord/Rel Disabl

AUSP 8221 - Ind Proj Sp Path

AUSP 8300 - Lang Dis In Children

AUSP 8302 - Lang Disordrs/Adults I

AUSP 8303 - Lang Disordrs/Adults II

AUSP 8304 - Sem Lang Disorders

AUSP 8305 - Language Learning Disabilities

AUSP 8308 - Augmentative/Alternatv Comm

AUSP 8309 - Sp Rehab/Head-Neck Path

AUSP 8400 - Teaching Experience

AUSP 8505 - Interprofessional Educ & Pract

AUSP 8999 - Predoctoral Practicum

AUSP 9000 - Dissertation

COMP 6001 - Intro to Python Programming

COMP 6005 - Web Design/Development

COMP 6014 - Intro Java Programming

COMP 6016 - Java Prog For Teachers

COMP 6019 - Competitive Prog/Tech Interview

COMP 6030 - Desgn/Anlys Algorithms

COMP 6040 - Programming Languages

COMP 6041 - Intro To Compilers

COMP 6118 - Introduction to Data Mining

COMP 6242 - Intro Computer Graphics

COMP 6270 - Operating Systems

COMP 6272 - System Admin and Unix Prog

COMP 6302 - Web Service/Internet

COMP 6310 - Wireless Mobile Comp

COMP 6410 - Computer Security

COMP 6420 - Network and Mobile Security

COMP 6430 - Digital Forensics

COMP 6432 - Secure Coding & Testing

COMP 6601 - Models Of Computation

COMP 6720 - Intro Artificial Intlg

COMP 6730 - Expert Systems

COMP 6731 - Data Visualization

COMP 6745 - Intro to Machine Learning

COMP 6882 - Capstone Software Proj

COMP 6901 - Ind Study Computer Sci

COMP 6911 - Internshp Com Science

COMP 6990 - Topics in Computer Science

COMP 6991 - Topics in Computer Science

COMP 6992 - Topics in Computer Science

COMP 6993 - Topics in Computer Science

COMP 6994 - Topics in Computer Science

COMP 6995 - Topics in Computer Science

COMP 6996 - Topics in Computer Science

COMP 6997 - Topics in Computer Science

COMP 6998 - Topics in Computer Science

COMP 6999 - Topics in Computer Science

COMP 7012 - Fndtns/Software Engr

COMP 7041 - Compiler Design

COMP 7081 - Software Engr Methodologies

COMP 7083 - Engineering Secure Software

COMP 7085 - Program Comprehension

COMP 7087 - Topics Software ENGR

COMP 7115 - Database Systems

COMP 7116 - Adv Database Systems

COMP 7117 - Topic Database Mgmt Sys

COMP 7118 - Data Mining

COMP 7120 - Cryptgrphy/Data Securty

COMP 7125 - Computer Forensics

COMP 7130 - Inform Retrieval/Web Search

COMP 7150 - Fundamentals of Data Science **

COMP 7212 - Operating/Distrib Sys

COMP 7272 - Parallel Computing

COMP 7274 - Topics Distrib Computng

COMP 7282 - Evolutionry Computation

COMP 7290 - Molecular Computing

COMP 7295 - Algorithms Comp Biol/Bioinform

COMP 7311 - Adv Computer Networks

COMP 7313 - Network Model/Perf Analysis

COMP 7327 - Network/Internet Secrty

COMP 7514 - Cognitive Science Sem

COMP 7515 - Complex Systems Sem

COMP 7517 - Human/Comptr Interact **

COMP 7601 - Topics Discrete Modelng

COMP 7612 - Foundations of Computing

COMP 7613 - Computational Complexity

COMP 7712 - Algorithms/Prob Solv

COMP 7713 - Advanced Topics Algorithms

COMP 7717 - Topics In Algorithms

COMP 7719 - Combinatorial Optimiztn

COMP 7720 - Artificial Intelligence

COMP 7740 - Neural Networks

COMP 7745 - Machine Learning

COMP 7747 - Adv Topics in Machine Learning

COMP 7760 - Control Auto Agents

COMP 7770 - Knowledge Rep/Reason

COMP 7780 - Natural Lang Processng

COMP 7820 - Pci Algrthms/Mach Visn

COMP 7900 - Cyber Ethics

COMP 7901 - Ind Studies COMP SCI

COMP 7950 - Research Methods Comp Sci

COMP 7960 - Sem Teaching/Res/Consult

COMP 7980 - Master's Project

COMP 7990 - Advanced Topics in Computer Science

COMP 7991 - Advanced Topics in Computer Science

COMP 7992 - Advanced Topics in Computer Science

COMP 7993 - Advanced Topics in Computer Science

COMP 7994 - Advanced Topics in Computer Science

COMP 7995 - Advanced Topics in Computer Science

COMP 7996 - Advanced Topics in Computer Science

COMP 7996 - Thesis

COMP 7997 - Advanced Topics in Computer Science

COMP 7998 - Advanced Topics in Computer Science

COMP 7999 - Advanced Topics in Computer Science

COMP 8012 - Fndtns/Software Engr

COMP 8041 - Compiler Design

COMP 8081 - Software Engr Methodologies

COMP 8083 - Engineering Secure Software

COMP 8085 - Program Comprehension

COMP 8087 - Topics Software ENGR

COMP 8115 - Database Systems

COMP 8116 - Adv Database Systems

COMP 8117 - Topic Database Mgmt Sys

COMP 8118 - Data Mining

COMP 8120 - Cryptgrphy/Data Securty

COMP 8125 - Computer Forensics

COMP 8130 - Inform Retrieval/Web Search

COMP 8150 - Fundamentals of Data Science

COMP 8212 - Operating/Distrib Sys

COMP 8272 - Parallel Computing

COMP 8274 - Topics Distrib Computng

COMP 8282 - Evolutionry Computation

COMP 8290 - Molecular Computing

COMP 8295 - Algorithms Comp Biol/Bioinform

COMP 8311 - Adv Computer Networks

COMP 8313 - Ntwrk Dsgn/Perf Anlys

COMP 8327 - Network/Internet Secrty

COMP 8514 - Cognitive Science Sem

COMP 8515 - Complex Systems Sem

COMP 8517 - Human/Comptr Interact

COMP 8601 - Topcis Discrete Modelng

COMP 8612 - Foundations of Computing

COMP 8613 - Computational Complexity

COMP 8712 - Algorithms/Prob Solv

COMP 8713 - Advanced Topics Algorithms

COMP 8717 - Topics In Algorithms

COMP 8719 - Combinatorial Optimiztn

COMP 8720 - Artificial Intelligence

COMP 8740 - Neural Networks

COMP 8745 - Machine Learning

COMP 8747 - Adv Topics in Machine Learning

COMP 8760 - Control Auto Agents

COMP 8770 - Knowledge Rep/Reason

COMP 8780 - Natural Lang Processng

COMP 8820 - Pci Algrthms/Mach Visn

COMP 8901 - Ind Studies COMP SCI

COMP 8960 - Sem Teaching/Res/Consult

COMP 8990 - Advanced Topics in Computer Science

COMP 8991 - Advanced Topics in Computer Science

COMP 8992 - Advanced Topics in Computer Science

COMP 8993 - Advanced Topics in Computer Science

COMP 8994 - Advanced Topics in Computer Science

COMP 8995 - Advanced Topics in Computer Science

COMP 8996 - Advanced Topics in Computer Science

COMP 8997 - Advanced Topics in Computer Science

COMP 8998 - Advanced Topics in Computer Science

COMP 8999 - Advanced Topics in Computer Science

COMP 9000 - Dissertation

CCFA 6001 - Arts/Schools Institute

CSED 6101 - Preschool Curriculum

CSED 6204 - Frnshng Prblms Prsntns

CSED 6205 - Behv Sci Aspct Clothng

CSED 6300 - Family Resource Mgmt

CSED 6304 - Trnds Hsng Home Frnsh

CSED 6383 - Mat/Meth Family CSED

CSED 6393 - Occp Meth Family CSed

CSED 6405 - Textiles

CSED 6900 - Study Tour: CSed

CSED 6904 - Sty Tour: Hsng/Hm Frnsh

CSED 6906 - Sty Tr: Fshn/Mrchnd

CSED 7300 - Independent Stdy In CSED

CSED 7312 - Intrn Child Care Srv

CSED 7313 - Intrn Food Service

CSED 7393 - Sem Family/Consumr Sci

CSED 7400 - Internship In CSed

CSED 7401 - Intrnshp In Chl/Fam St

CSED 7403 - Intrnshp Fam/Consmr Sci

CSED 7404 - Intrnshp Hous/Hom Fur

CSED 7405 - Intrnshp Fash Ind

CSED 7406 - Intrnshp Mktg Ed

CSED 7600 - Entrprnpshp Merch/CSED

CSED 7700 - Merch Thry/Prin/Pract

CSED 7800 - Cnsmr Iss:Fam Syst Mgmt

CPSY 7570 - Hlth Psych/Diverse Populations

CPSY 7700 - Intrvntns Mntl Disordrs

CPSY 7798 - Soc Just Coun & CPSY I

CPSY 7799 - Soc Just Coun & CPSY II

CPSY 8008 - Directed Readings CPSY

CPSY 8101 - CPSY Foundations/Prfsnl Issues

CPSY 8102 - Seminar In Grp Cpsy

CPSY 8200 - Coun Psyc Practicum

CPSY 8201 - Advocacy,Consultation,&Ethics

CPSY 8202 - Vocational Psychology

CPSY 8203 - Sem Coun/Coun Psy Res

CPSY 8204 - Coun & Coun Psyc Rsrch I

CPSY 8300 - Adv Prac Coun Psyc

CPSY 8501 - Coun Psyc Research

CPSY 8570 - Hlth Psych/Diverse Populations

CPSY 8570 - Special Topics in Counseling Psychology

CPSY 8571 - Special Topics in Counseling Psychology

CPSY 8572 - Special Topics in Counseling Psychology

CPSY 8573 - Resil/Wellns/Well Being

CPSY 8573 - Special Topics in Counseling Psychology

CPSY 8574 - History Psyc/CPSY

CPSY 8574 - Special Topics in Counseling Psychology

CPSY 8575 - Adult Pers Assessmnt

CPSY 8576 - Adult Cog Assessment

CPSY 8577 - Supervisn in Coun Psyc

CPSY 8578 - Constructivist Psychotherapy

CPSY 8600 - Coun Psyc Seminar

CPSY 8700 - Intrvntns Mntl Disordrs

CPSY 8790 - Spc Prblms in Coun Psychology

CPSY 8798 - Soc Just Coun

CPSY 8799 - Soc Just Coun & CPSY II

CPSY 8800 - Predoctoral Intrnshp

CPSY 8999 - Prof Devel Coun Psyc

CPSY 9000 - Dissertation

COUN 6611 - Intro To Counseling

COUN 6781 - Strat Crisis Intrvntn

COUN 6783 - Alcohol/Drug Abuse Ser

COUN 6901 - Prin/Tech/Rehab Counsel

COUN 6913 - Med/Psyc Aspects/Rehab

COUN 6921 - Vocational Dev/Occ Info

COUN 7000 - Students w Dis in Post Sec Edu

COUN 7001 - Disability Support Services

COUN 7002 - Univ Des, Ast Tech, & Accomm

COUN 7003 - Legal Issues in Dis Spt Svcs

COUN 7006 - Special Topics in Counseling and Personnel Services

COUN 7007 - Special Topics in Counseling and Personnel Services

COUN 7008 - Special Topics in Counseling and Personnel Services

COUN 7009 - Special Topics in Counseling and Personnel Services

COUN 7010 - Special Topics in Counseling and Personnel Services

COUN 7011 - Special Topics in Counseling and Personnel Services

COUN 7012 - Special Topics in Counseling and Personnel Services

COUN 7013 - Special Topics in Counseling and Personnel Services

COUN 7014 - Special Topics in Counseling and Personnel Services

COUN 7015 - Special Topics in Counseling and Personnel Services

COUN 7411 - Foundatns of Counseling

COUN 7513 - Secondary School Transition

COUN 7531 - Group Counseling Procss

COUN 7541 - Theories Counsel & Pers

COUN 7542 - Child Counseling, Consultation and Intervention in Schools

COUN 7551 - Assessment Techniques

COUN 7561 - Career Counseling

COUN 7571 - Clinical Techniques

COUN 7630 - Clinical Mental Health Coun

COUN 7631 - Pract Mental Health Coun

COUN 7632 - Intern Cmty/Mntl Hlth

COUN 7640 - Principles Schl Couns

COUN 7641 - Prac Elem Sch Coun

COUN 7642 - Intern Elem Sch Coun

COUN 7643 - Prac Middle School Coun

COUN 7644 - Intern Middle School Coun

COUN 7645 - Prac Sec School Coun

COUN 7646 - Intern Sec Sch Coun

COUN 7700 - Spiritual Issues in Counseling

COUN 7710 - Addiction Counseling

COUN 7720 - Sys Develp Family Thrpy

COUN 7721 - Thry/Tchnqs Fam Thrpy

COUN 7722 - Couple Coun/Therapy

COUN 7723 - Hum Sexulty Coun/Psyc

COUN 7730 - Crisis Intrvntn Coun

COUN 7740 - Coun Victmzd Chld/Fam

COUN 7750 - Multicultural Counseling

COUN 7751 - Gender Issues In Coun

COUN 7752 - Coun Gay/Lesbian/Bisexl

COUN 7770 - Consult Theories/Pract

COUN 7771 - Clinical Hypnotherapy

COUN 7780 - Seminar In Counseling

COUN 7790 - Spc Prblms In Coun

COUN 7820 - Special Topics in Counseling

COUN 7821 - Special Topics in Counseling

COUN 7822 - Special Topics in Counseling

COUN 7823 - Special Topics in Counseling

COUN 7824 - College Admission Counseling

COUN 7824 - Special Topics in Counseling

COUN 7825 - Special Topics in Counseling

COUN 7825 - Strategies Career Coun in K-12

COUN 7826 - Schl Coun to Close Achvmnt Gap

COUN 7826 - Special Topics in Counseling

COUN 7827 - Capstone College & Career Coun

COUN 7827 - Special Topics in Counseling

COUN 7828 - Special Topics in Counseling

COUN 7829 - Special Topics in Counseling

COUN 7841 - Adv Coun Thry & Tech

COUN 7885 - Legal/Eth Issues Coun

COUN 7905 - Case Mgmt In Counseling

COUN 7912 - Intro Psych Rehab Coun

COUN 7941 - Prac In Rehab Counsel

COUN 7942 - Internshp Rehab Counsel

COUN 8000 - Spec Culmn Experience

COUN 8501 - Doctoral Sem Coun

COUN 8502 - Coun Residency Resrch Semn

COUN 8510 - Counselor Supervision

COUN 8511 - Practicum in Counseling

COUN 8512 - Teaching Counselor Education

COUN 8530 - Doctoral Intern Counseling

COUN 8571 - Clinical Techniques

COUN 8630 - Clinical Mental Health Coun

COUN 8640 - Principles Schl Couns

COUN 8700 - Spiritual Issues in Counseling

COUN 8710 - Alcohol/Drug Coun

COUN 8720 - Sys Develp Family Thrpy

COUN 8721 - Thry/Tchnqs Fam Thrpy

COUN 8722 - Couple Coun/Therapy

COUN 8723 - Hum Sexulty Coun/Psyc

COUN 8730 - Crisis Intrvntn Coun

COUN 8740 - Coun Victmzd Chld/Fam

COUN 8750 - Multicultural Counseling

COUN 8751 - Gender Issues In Coun

COUN 8752 - Coun Gay/Lesbian/Bisexl

COUN 8770 - Consult Theories/Pract

COUN 8771 - Clinical Hypnotherapy

COUN 8780 - Seminar In Counseling

COUN 8790 - Spc Prblms In Coun

COUN 8820 - Special Topics in Counseling

COUN 8821 - Special Topics in Counseling

COUN 8822 - Special Topics in Counseling

COUN 8823 - Special Topics in Counseling

COUN 8824 - College Admission Counseling

COUN 8824 - Special Topics in Counseling

COUN 8825 - Special Topics in Counseling

COUN 8825 - Strategies Career Coun in K-12

COUN 8826 - Schl Coun to Close Achvmnt Gap

COUN 8826 - Special Topics in Counseling

COUN 8827 - Capstone College & Career Coun

COUN 8827 - Special Topics in Counseling

COUN 8828 - Special Topics in Counseling

COUN 8829 - Special Topics in Counseling

COUN 8831 - Adv Group Processes

COUN 8841 - Adv Coun Thry & Tech

COUN 8885 - Legal/Eth Issues Coun

COUN 8905 - Case Mgmt In Counseling

COUN 8912 - Intro Psych Rehab Coun

COUN 9000 - Dissertation

CJUS 6010 - Special Topics in Criminal Justice

CJUS 6011 - Special Topics in Criminal Justice

CJUS 6012 - Special Topics in Criminal Justice

CJUS 6013 - Special Topics in Criminal Justice

CJUS 6014 - Special Topics in Criminal Justice

CJUS 6015 - Special Topics in Criminal Justice

CJUS 6016 - Special Topics in Criminal Justice

CJUS 6017 - Special Topics in Criminal Justice

CJUS 6018 - Special Topics in Criminal Justice

CJUS 6019 - Special Topics in Criminal Justice

CJUS 6152 - Drug Misuse and Abuse

CJUS 6160 - Forensic Sciences

CJUS 6180 - Corp/White Collar Crime **

CJUS 6190 - Terrorism Soc/Legl Prsp **

CJUS 6520 - Substantive Crimnl Law

CJUS 6531 - Issues/Constitnl Rights

CJUS 6533 - Juvnl Delinq Thry/Procs

CJUS 6535 - Capital Punishment/America

CJUS 7100 - CJ Administration **

CJUS 7110 - Ind Dir Study

CJUS 7128 - Rsrch Mthds Crim Justce **

CJUS 7129 - Advanced Stat In Cj

CJUS 7130 - Crime Anly/Crim Bhvr **

CJUS 7131 - Res Practicum In Cj

CJUS 7141 - Reading For Comps

CJUS 7150 - Intrnshp Criminl Justce

CJUS 7160 - Sem Cj Administration

CJUS 7161 - Intervention Strategies **

CJUS 7190 - Special Topics in Criminal Justice

CJUS 7191 - JV Delin.: C. Pr. & Int.

CJUS 7191 - Special Topics in Criminal Justice

CJUS 7192 - Special Topics in Criminal Justice

CJUS 7193 - Special Topics in Criminal Justice

CJUS 7194 - Special Topics in Criminal Justice

CJUS 7195 - Special Topics in Criminal Justice

CJUS 7196 - Special Topics in Criminal Justice

CJUS 7197 - Special Topics in Criminal Justice

CJUS 7198 - Special Topics in Criminal Justice

CJUS 7199 - Special Topics in Criminal Justice

CJUS 7460 - Race,Ethnicity,Gender **

CJUS 7510 - Law And Society

CJUS 7523 - Cncpt Of Criminal Law

CJUS 7535 - Seminar in Capital Punishment **

CJUS 7541 - Crim Theory **

CJUS 7542 - Victimology **

CJUS 7570 - Legal Issues CJ Admin

CJUS 7996 - Thesis

CJUS 8100 - Cj Administration

CJUS 8110 - Ind Dir Study

CJUS 8141 - Reading For Comps

CJUS 8150 - Intrnshp Criminl Justce

DANC 6000 - Special Topics in Dance

DANC 6001 - Special Topics in Dance

DANC 6002 - Special Topics in Dance

DANC 6003 - Special Topics in Dance

DANC 6004 - Special Topics in Dance

DANC 6005 - Special Topics in Dance

DANC 6006 - Special Topics in Dance

DANC 6007 - Special Topics in Dance

DANC 6008 - Special Topics in Dance

DANC 6009 - Special Topics in Dance

DANC 6010 - Special Topics in Dance

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DANC 6016 - Special Topics in Dance

DANC 6017 - Special Topics in Dance

DANC 6018 - Special Topics in Dance

DANC 6019 - Special Topics in Dance

DANC 6020 - Special Topics in Dance

DANC 6021 - Special Topics in Dance

DANC 6022 - Special Topics in Dance

DANC 6023 - Special Topics in Dance

DANC 6024 - Special Topics in Dance

DANC 6025 - Special Topics in Dance

DANC 6026 - Special Topics in Dance

DANC 6027 - Special Topics in Dance

DANC 6028 - Special Topics in Dance

DANC 6029 - Special Topics in Dance

DANC 6101 - Dance Repertory

DANC 6201 - Dance Composition

DANC 6202 - Adv Dance Composition

DANC 6301 - Directed Studies Dance

DANC 6402 - Dance Ed/Diverse Settng

DISS 9000 - Dissertation Complete

ECED 6510 - Erly Chld Prgms/Pr

ECED 6520 - Pln/Fclt Scl Lrng/Dev

ECED 6530 - Pln/Fclt Math/Sci Lrng

ECED 6540 - Pln/Fclt Infnt/Tdlr Dev

ECED 7100 - Foundtn/Early Child Ed

ECED 7101 - Early Child Teach/Learn

ECED 7102 - Obs/Asmt Intsv Chld Stg

ECED 7103 - Ltrcy Dvlp/Erly Chldhd

ECED 7104 - Play/Erly Chldhd Dev

ECED 7107 - Constructivism In ECED

ECED 7108 - Sem Erly Chldhd Ed

ECED 7109 - Admin Prog Young Child

ECED 7113 - Rsrch/Erly Chd/Math/Sci

ECED 7115 - Rdng Erly Chld Ed Rsrch

ECED 8100 - Foundtn/Early Child Ed

ECED 8101 - Early Child Teach/Learn

ECED 8102 - Obs/Asmt Intsv Chld Stg

ECED 8103 - Ltrcy Dvlp/Erly Chldhd

ECED 8104 - Play/Erly Chldhd Dev

ECED 8107 - Constructivism in ECED

ECED 8108 - Sem Erly Chldhd Ed

ECED 8109 - Admin Prog Young Child

ECED 8110 - Readings Early Chld

ECED 8112 - Research Early Chld Ed

ECED 8113 - Rsrch/Erly Chd/Math/Sci

ECED 8115 - Rdng Erly Chld Ed Rsrch

ESCI 6122 - Soils & Soil Processes

ESCI 6201 - Urbanization/Environmt

ESCI 6202 - Geomorphology

ESCI 6211 - Physical Hydrology

ESCI 6213 - Field Method/Hydrology

ESCI 6214 - Climatology

ESCI 6215 - Physical Climatology

ESCI 6216 - Synoptic Meteorology

ESCI 6231 - Water Resources

ESCI 6241 - Biogeog/GIS Analyses/Ecology

ESCI 6251 - Environmental Hazards

ESCI 6252 - Global Environ Change

ESCI 6261 - Plan/Sustainable Cities/Region

ESCI 6270 - Ancient Human Soc/Envir Chng

ESCI 6301 - Archaeology of the Americas

ESCI 6307 - Thematic Studies/China

ESCI 6308 - Special Topics in Geography Techniques

ESCI 6309 - Special Topics in Geography Techniques

ESCI 6310 - Special Topics in Geography Techniques

ESCI 6311 - Special Topics in Geography Techniques

ESCI 6312 - Special Topics in Geography Techniques

ESCI 6325 - Archaeol Fld/Lab Techn

ESCI 6332 - Intro To Geochemistry

ESCI 6335 - Analysis of Stone Artifacts

ESCI 6341 - Aqueous Geochemistry

ESCI 6350 - Archaeology of Collapse

ESCI 6352 - Archaeology/World Prehistory

ESCI 6365 - Cultural Resource Mgmt

ESCI 6370 - Special Topics in Archaeology

ESCI 6371 - Special Topics in Archaeology

ESCI 6372 - Special Topics in Archaeology

ESCI 6373 - Special Topics in Archaeology

ESCI 6374 - Special Topics in Archaeology

ESCI 6375 - Special Topics in Archaeology

ESCI 6376 - Special Topics in Archaeology

ESCI 6377 - Special Topics in Archaeology

ESCI 6378 - Special Topics in Archaeology

ESCI 6379 - Special Topics in Archaeology

ESCI 6430 - Economic Geography

ESCI 6431 - Urban Geography

ESCI 6443 - Transportation Planning

ESCI 6511 - Remote Sensing/Environ

ESCI 6512 - Structural Geology

ESCI 6515 - Geographic Info Science

ESCI 6521 - Quantitative Methods

ESCI 6525 - Adv Geographic Info Sci

ESCI 6526 - Advanced Remote Sensing

ESCI 6531 - Field Methods/Geography

ESCI 6535 - Modular GIS

ESCI 6610 - Special Topics in Geography

ESCI 6611 - Special Topics in Geography

ESCI 6612 - Special Topics in Geography

ESCI 6613 - Special Topics in Geography

ESCI 6614 - Special Topics in Geography

ESCI 6615 - Special Topics in Geography

ESCI 6616 - Special Topics in Geography

ESCI 6617 - Special Topics in Geography

ESCI 6618 - Special Topics in Geography

ESCI 6619 - Special Topics in Geography

ESCI 6680 - Applied Archaeology/Museums

ESCI 6700 - Earth Science Internshp

ESCI 6701 - ESCI Field Excursions

ESCI 7000 - Art Of Earth Sciences

ESCI 7010 - Special Topics in Geology

ESCI 7011 - Special Topics in Geology

ESCI 7012 - Special Topics in Geology

ESCI 7013 - Special Topics in Geology

ESCI 7014 - Special Topics in Geology

ESCI 7015 - Special Topics in Geology

ESCI 7016 - Special Topics in Geology

ESCI 7017 - Special Topics in Geology

ESCI 7018 - Special Topics in Geology

ESCI 7019 - Special Topics in Geology

ESCI 7100 - Basin Analysis

ESCI 7101 - Regional Planning

ESCI 7102 - Electron Beam Analysis

ESCI 7120 - Seminar/Geomorphology

ESCI 7131 - Seminar in Extreme Weather

ESCI 7160 - Tectonics

ESCI 7170 - Sedimentary Petrology

ESCI 7190 - Igneous/Metamrphic Petr

ESCI 7195 - Groundwater Hydraulics

ESCI 7197 - Ground Water Qual Cntrl

ESCI 7201 - Geographic Environ/Anly

ESCI 7202 - Quaternary Geology

ESCI 7204 - Prob & Earthquake Haz Anly

ESCI 7220 - Geochronology

ESCI 7221 - River Conservation

ESCI 7230 - Exploration Seismology

ESCI 7231 - Seminar Water Resources

ESCI 7240 - Earthquake Surface Processes

ESCI 7252 - Multihazard Mitigation

ESCI 7254 - Archaeology & Hunter Gatherers

ESCI 7256 - Archaeology & Complex Society

ESCI 7301 - Seminar In Geography

ESCI 7310 - Archaeol Theory/Method

ESCI 7311 - Public Archaeology

ESCI 7312 - Spatial Statistics

ESCI 7320 - Spatial Analysis - Earth Sci

ESCI 7325 - Quat Paleoeco/Env Recon

ESCI 7327 - Lithic Artifact Analysis

ESCI 7333 - Adv Archaeol Field Tech

ESCI 7345 - Geoarchlg Material Sci

ESCI 7353 - Geodynamics

ESCI 7357 - Archaeol Of Southeast

ESCI 7390 - Special Topics in Archaeology

ESCI 7391 - Special Topics in Archaeology

ESCI 7392 - Special Topics in Archaeology

ESCI 7393 - Special Topics in Archaeology

ESCI 7394 - Special Topics in Archaeology

ESCI 7395 - Special Topics in Archaeology

ESCI 7396 - Special Topics in Archaeology

ESCI 7397 - Special Topics in Archaeology

ESCI 7398 - Special Topics in Archaeology

ESCI 7399 - Special Topics in Archaeology

ESCI 7400 - Adv Field Methods/Geol

ESCI 7405 - Struc Interp/Seism Data

ESCI 7430 - Adv Economic Geog

ESCI 7434 - Studies In Land Use

ESCI 7440 - Tectonic Geomorphology

ESCI 7471 - Cultural Geography

ESCI 7504 - Sem Geog Info Systems

ESCI 7541 - Field Studies In Geog

ESCI 7613 - GIS and Human Health

ESCI 7621 - Independent Study

ESCI 7623 - Spatial Health Inequalities

ESCI 7700 - Seminar in Earth Sciences

ESCI 7703 - Seminar In Geology

ESCI 7704 - Seminar In Tectonics

ESCI 7800 - Seminar In Archaeology

ESCI 7801 - Geog Thought & Mthdlgy

ESCI 7850 - Principles of Geoarchaeology

ESCI 7900 - Professional Paper

ESCI 7990 - Research/Earth Science

ESCI 7996 - Thesis

ESCI 7998 - Capstone GIS Project

ESCI 8010 - Special Topics in Geology

ESCI 8011 - Special Topics in Geology

ESCI 8012 - Special Topics in Geology

ESCI 8013 - Special Topics in Geology

ESCI 8014 - Special Topics in Geology

ESCI 8015 - Special Topics in Geology

ESCI 8016 - Special Topics in Geology

ESCI 8017 - Special Topics in Geology

ESCI 8018 - Special Topics in Geology

ESCI 8019 - Special Topics in Geology

ESCI 8120 - Seminar/Geomorphology

ESCI 8201 - Geographic Environ/Anly

ESCI 8221 - River Conservation

ESCI 8230 - Exploration Seismology

ESCI 8231 - Seminar Water Resources

ESCI 8240 - Earthquake Surface Processes

ESCI 8254 - Archaeology & Hunter Gatherers

ESCI 8256 - Archaeology & Complex Society

ESCI 8301 - Seminar In Geography

ESCI 8312 - Spatial Statistics

ESCI 8320 - Archeological Spatial Analysis

ESCI 8405 - Struc Interp/Seism Data

ESCI 8430 - Adv Econonic Geog

ESCI 8434 - Studies In Land Use

ESCI 8471 - Cultural Geography

ESCI 8504 - Sem Geog Info Systems

ESCI 8541 - Field Studies In Geog

ESCI 8613 - GIS and Human Health

ESCI 8623 - Spatial Health Inequalities

ESCI 8702 - Seminar In Seismology

ESCI 8703 - Seminar In Geology

ESCI 8704 - Seminar In Tectonics

ESCI 8800 - Seminar In Archaeology

ESCI 8850 - Principles of Geoarchaeology

ESCI 9000 - Dissertation

ECON 6120 - Economic Forecasting

ECON 6315 - Applied Macroeconomics

ECON 6550 - Game Theory/Strategic Analysis

ECON 6760 - Special Topics in Economics

ECON 6761 - Special Topics in Economics

ECON 6762 - Special Topics in Economics

ECON 6763 - Special Topics in Economics

ECON 6764 - Special Topics in Economics

ECON 6765 - Special Topics in Economics

ECON 6766 - Special Topics in Economics

ECON 6767 - Special Topics in Economics

ECON 6768 - Special Topics in Economics

ECON 6769 - Special Topics in Economics

ECON 6810 - Quant Economic Analysis

ECON 6820 - Econometrics

ECON 7100 - Econ for Global Executive **

ECON 7120 - Adv Quant Econ Analysis

ECON 7125 - Appl Stat Mthds for Bus & Econ

ECON 7126 - Economic Forecasting

ECON 7130 - Industrial Organization

ECON 7170 - Intnl Trade & Investmts

ECON 7175 - Intnl Trade Theory/Pol

ECON 7176 - Intnl Monetary Thry/Pol

ECON 7210 - Labor Economics

ECON 7300 - Econ Theory & Decisions

ECON 7310 - Adv Microeconomics I

ECON 7313 - Econ Risk & Uncertainty

ECON 7320 - Adv Macroeconomics I

ECON 7322 - Monetary Theory & Pol

ECON 7710 - Health Care Economics

ECON 7711 - Appl Health Care Econ

ECON 7712 - Pharmaceutical Econ

ECON 7715 - Global Healthcare Economics

ECON 7720 - Econ Public Sector

ECON 7810 - Econometrics I

ECON 7811 - Econometrics II

ECON 7901 - Teaching Practicum

ECON 7910 - Prob In Economics

ECON 7940 - Special Topics in Economics

ECON 7941 - Special Topics in Economics

ECON 7942 - Special Topics in Economics

ECON 7943 - Labor and Education Economics

ECON 7943 - Special Topics in Economics

ECON 7944 - Special Topics in Economics

ECON 7945 - Special Topics in Economics

ECON 7946 - Special Topics in Economics

ECON 7947 - Special Topics in Economics

ECON 7948 - Special Topics in Economics

ECON 7949 - Special Topics in Economics

ECON 7996 - Thesis

ECON 8120 - Adv Quant Econ Analysis

ECON 8125 - Appl Stat Mthds for Bus & Econ

ECON 8126 - Economic Forecasting

ECON 8130 - Industrial Organization

ECON 8175 - Intnl Trade Theory/Pol

ECON 8176 - Intnl Monetary Thry/Pol

ECON 8210 - Labor Economics

ECON 8310 - Adv Microeconomics I

ECON 8311 - Adv Microecon II

ECON 8313 - Econ Risk & Uncertainty

ECON 8320 - Adv Macroeconomics I

ECON 8321 - Adv Macroecon II

ECON 8322 - Monetary Theory & Pol

ECON 8710 - Health Care Economics

ECON 8711 - Appl Health Care Econ

ECON 8712 - Pharmaceutical Econ

ECON 8720 - Econ Public Sector

ECON 8810 - Econometrics I

ECON 8811 - Econometrics II

ECON 8812 - Econometrics III

ECON 8901 - Teaching Practicum

ECON 8910 - Prob In Economics

ECON 8940 - Special Topics in Economics

ECON 8941 - Special Topics in Economics

ECON 8942 - Special Topics in Economics

ECON 8943 - Labor and Education Economics

ECON 8943 - Special Topics in Economics

ECON 8944 - Special Topics in Economics

ECON 8945 - Special Topics in Economics

ECON 8946 - Special Topics in Economics

ECON 8947 - Special Topics in Economics

ECON 8948 - Special Topics in Economics

ECON 8949 - Special Topics in Economics

EDAD 7050 - Educational Law

ELPA 7560 - Small Group Leadership **

EDPR 7000 - Research Project

EDPR 7001 - Feminist Research Meths in Edu

EDPR 7001 - Special Topics in Educational Psychology and Research

EDPR 7002 - Special Topics in Educational Psychology and Research

EDPR 7003 - Special Topics in Educational Psychology and Research

EDPR 7004 - Special Topics in Educational Psychology and Research

EDPR 7005 - Special Topics in Educational Psychology and Research

EDPR 7006 - Special Topics in Educational Psychology and Research

EDPR 7008 - Directed Readings

EDPR 7009 - Practicum Ed Psych

EDPR 7081 - Supervised Research

EDPR 7109 - Infant Development

EDPR 7110 - Erly Chldhd Dvlpmnt

EDPR 7111 - Child Psyc App To Educ **

EDPR 7112 - Adol Psyc Appld Educ **

EDPR 7113 - Midlife/Adult Development

EDPR 7114 - Psychology Of Aging

EDPR 7115 - Child Dev/Begin Tchrs

EDPR 7116 - Chldhd Dvlpmnt in Digital Age

EDPR 7117 - Life-Span Human Dev **

EDPR 7121 - Learning & Cognition

EDPR 7125 - Giftedness/Talent Development

EDPR 7126 - Intro to Piaget's Work

EDPR 7131 - Cultural Diverse Stdnts **

EDPR 7149 - Sem Cognitive Processes

EDPR 7150 - Motivation

EDPR 7151 - Individual Differences **

EDPR 7155 - Understanding Respect Research

EDPR 7161 - Moral Dvlpmnt & Educ

EDPR 7165 - Social Devlpmnt/Child

EDPR 7400 - Youth Development/Digital Era

EDPR 7511 - Measurmt & Evaluatn

EDPR 7512 - Psychomet Thry/Ed Appl

EDPR 7521 - Intro to Educ Research **

EDPR 7523 - Applied Educ Research

EDPR 7524 - Res Meths for Schl Accntblty

EDPR 7531 - Computer As Res Tool

EDPR 7541 - Stat Meth App Ed I **

EDPR 7542 - Stat Meth App Ed II **

EDPR 7543 - Res Design Analysis

EDPR 7544 - SEM in EDU/Behav Research

EDPR 7547 - Sampling/Survey Methods

EDPR 7551 - Intro To Eval Systems

EDPR 7554 - Nonparmtrc Stats Appl Educatn

EDPR 7561 - Qualitative Mthds Educ **

EDPR 7562 - Designing Qualitative Research

EDPR 7563 - Theoretical Frameworks in Qual

EDPR 7565 - Qual Methods and Analysis

EDPR 7566 - Writing Qualitative Research

EDPR 7572 - Institutional Research

EDPR 7581 - Behav Anlys/Case Dsgn

EDPR 7732 - Randomized Clinical Trials

EDPR 7996 - Thesis

EDPR 8001 - Feminist Research Meths in Edu

EDPR 8001 - Special Topics in Educational Psychology and Research

EDPR 8002 - Special Topics in Educational Psychology and Research

EDPR 8003 - Special Topics in Educational Psychology and Research

EDPR 8004 - Report Qualitative Data

EDPR 8004 - Special Topics in Educational Psychology and Research

EDPR 8005 - Special Topics in Educational Psychology and Research

EDPR 8006 - Special Topics in Educational Psychology and Research

EDPR 8008 - Directed Readings

EDPR 8009 - Practicum Ed Psych

EDPR 8081 - Supervised Research

EDPR 8109 - Infant Development

EDPR 8110 - Erly Chldhd Dvlpmnt

EDPR 8111 - Child Psyc App To Ed

EDPR 8112 - Adol Psyc Appld Educ

EDPR 8113 - Midlife/Adult Developmt

EDPR 8114 - Psychology Of Aging

EDPR 8116 - Chldhd Dvlpmnt in Digital Age

EDPR 8117 - Life-Span Human Develop

EDPR 8121 - Learning & Cognition

EDPR 8125 - Giftedness/Talent Development

EDPR 8126 - Intro to Piaget's Work

EDPR 8131 - Cultural Diverse Stdnts

EDPR 8149 - Sem Cognitive Processes

EDPR 8150 - Motivation

EDPR 8151 - Individual Differences

EDPR 8155 - Understanding Respect Research

EDPR 8161 - Moral Dvlpmnt & Educ

EDPR 8165 - Social Devlpmnt/Child

EDPR 8171 - Pro Sem in Edu Psychology

EDPR 8400 - Youth Development/Digital Era

EDPR 8511 - Measurmt & Evaluatn

EDPR 8512 - Psychomet Thry/Ed Appl

EDPR 8519 - Sem In Educ Measurement

EDPR 8531 - Computer As Res Tool

EDPR 8541 - Stat Meth App Ed I **

EDPR 8542 - Stat Meth App Ed II **

EDPR 8543 - Res Design Analysis

EDPR 8544 - SEM in EDU/Behav Research

EDPR 8547 - Survey Research: Sampling Design and Analysis

EDPR 8549 - Multivariate Meth Educ

EDPR 8551 - Intro To Eval Systems

EDPR 8552 - HLM in Education/SocSci Rsch

EDPR 8554 - Nonparmtrc Stats Appl Educatn **

EDPR 8561 - Qualitative Mthds Educ **

EDPR 8562 - Designing Qualitative Research

EDPR 8563 - Theoretical Frameworks in Qual

EDPR 8565 - Qual Methods and Analysis

EDPR 8566 - Writing Qualitative Research

EDPR 8572 - Institutional Research

EDPR 8581 - Behav Anlys/Case Dsgn

EDPR 8732 - Randomized Clinical Trials

EDPR 9000 - Dissertation

EECE 6202 - Electricl Power Systems

EECE 6204 - Power Distribution Sys

EECE 6205 - Modern Grid with Renewables

EECE 6206 - Electrical Power Quality

EECE 6213 - Antenna Theory/Design

EECE 6214 - Em Fields Laboratory

EECE 6215 - Applied Em Fields

EECE 6221 - Electronics III

EECE 6222 - Digital Logic/Comp Dsgn

EECE 6230 - Data Communicatn System

EECE 6231 - Communication Theory

EECE 6232 - Discrete Signal Process

EECE 6235 - Probabilistic Sys Anlys

EECE 6241 - Solid State Physcl Elct

EECE 6242 - Electro-Optics

EECE 6243 - Linear Optical Systems

EECE 6251 - Control System Engr

EECE 6252 - Digital Control Systems

EECE 6253 - Control Systems Lab

EECE 6254 - Digital Control Sys Lab

EECE 6272 - Engineering Software

EECE 6273 - Database Engineering

EECE 6275 - Network Programming

EECE 6276 - Adv Network Programming

EECE 6277 - Dsp Microprocessors

EECE 6278 - Computer Organization

EECE 6710 - Computer Architecture

EECE 6711 - Fault Tolerant Comp Des

EECE 6712 - Embedded Systems

EECE 6720 - Intro Artificial Intelg

EECE 6730 - Expert Systems

EECE 6731 - Data Visualization

EECE 6900 - Special Topics in Electrical and Computer Engineering

EECE 6901 - Special Topics in Electrical and Computer Engineering

EECE 6902 - Special Topics in Electrical and Computer Engineering

EECE 6903 - Special Topics in Electrical and Computer Engineering

EECE 6904 - Special Topics in Electrical and Computer Engineering

EECE 6905 - Electrical Power Quality

EECE 6905 - Special Topics in Electrical and Computer Engineering

EECE 6906 - Special Topics in Electrical and Computer Engineering

EECE 6907 - Special Topics in Electrical and Computer Engineering

EECE 6908 - Special Topics in Electrical and Computer Engineering

EECE 6909 - Special Topics in Electrical and Computer Engineering

EECE 7001 - Professional Develpmnt

EECE 7012 - Fndtns/Software Engr

EECE 7100 - Linear Sys Analysis

EECE 7211 - Adv Elctrmgntc Field

EECE 7214 - Image Processing

EECE 7215 - Digital Signal Proc

EECE 7216 - Computer Vision

EECE 7217 - Multimedia Info Process

EECE 7220 - Scientific Computing

EECE 7224 - Physically Based Animation

EECE 7230 - Solid State Devices

EECE 7231 - Communicatn Electronics

EECE 7232 - Analog Comm Circ Dsgn

EECE 7233 - Power Electronics

EECE 7234 - VLSI Design

EECE 7243 - Fourier Optics

EECE 7245 - Statistical Optics

EECE 7251 - Random Signals & Noise

EECE 7252 - Information Theory

EECE 7253 - Wireless Telecommunictn

EECE 7254 - Modern Telecom

EECE 7255 - Digital Communications

EECE 7261 - Arch & Design Dig Comp

EECE 7262 - Logicl Fndtns Artf Intl

EECE 7266 - Prolog Proc/Intel Syst

EECE 7267 - Artfcl Intel In Lisp

EECE 7268 - Obj Oriented Data Engr

EECE 7269 - Machine Learning & Applicatns

EECE 7273 - Modern Microprocessors

EECE 7310 - Power System Stability/Control

EECE 7318 - Introduction to Smart Grid

EECE 7320 - Wind Energy Conversion Systems

EECE 7521 - Adv Control Syst Engr

EECE 7522 - Stoch/Adapt Cntrl Thry

EECE 7523 - Thry Optical Cntrol Sys

EECE 7524 - Parameter Est & Cntrls

EECE 7720 - Artificial Intelligence

EECE 7740 - Neural Networks

EECE 7900 - Introduction to Smart Grid

EECE 7900 - Special Topics in Electrical Engineering

EECE 7901 - Advanced Machine Learning

EECE 7901 - Special Topics in Electrical Engineering

EECE 7902 - Adv Comp & Wireless Networks

EECE 7902 - Special Topics in Electrical Engineering

EECE 7903 - Special Topics in Electrical Engineering

EECE 7903 - Wind Energy Conversion Systems

EECE 7904 - Special Topics in Electrical Engineering

EECE 7905 - Special Topics in Electrical Engineering

EECE 7906 - Advanced Pattern Recognition

EECE 7906 - Advanced Pattern Recognition

EECE 7906 - Special Topics in Electrical Engineering

EECE 7907 - Special Topics in Electrical Engineering

EECE 7908 - Special Topics in Electrical Engineering

EECE 7909 - Special Topics in Electrical Engineering

EECE 7910 - Special Topics in Electrical Engineering

EECE 7991 - Independent Study I

EECE 7992 - Independent Study II

EECE 7993 - Project & Report

EECE 7996 - Thesis

EECE 8001 - Professional Develpmnt

EECE 8012 - Fndtns/Software Engr

EECE 8100 - Linear Sys Analysis

EECE 8211 - Adv Electrmgntc Field

EECE 8214 - Image Processing

EECE 8215 - Digital Signal Proc

EECE 8216 - Computer Vision

EECE 8217 - Multimedia Info Process

EECE 8220 - Scientific Computing

EECE 8224 - Physically Based Animation

EECE 8230 - Solid State Devices

EECE 8231 - Communicatn Electronics

EECE 8232 - Analog Comm Circ Dsgn

EECE 8233 - Power Electronics

EECE 8234 - VLSI Design

EECE 8243 - Fourier Optics

EECE 8245 - Statistical Optics

EECE 8251 - Random Signals & Noise

EECE 8252 - Information Theory

EECE 8253 - Wireless Telecommunictn

EECE 8254 - Modern Telecom

EECE 8255 - Digital Communications

EECE 8261 - Arch & Design Dig Comp

EECE 8262 - Logicl Fndtns Artf Intl

EECE 8266 - Prolog Proc/Intel Syst

EECE 8267 - Artfcl Intel In Lisp

EECE 8268 - Obj Oriented Data Engr

EECE 8269 - Machine Learning & Applicatns

EECE 8273 - Modern Microprocessors

EECE 8310 - Power System Stability/Control

EECE 8318 - Introduction to Smart Grid

EECE 8320 - Wind Energy Conversion Systems

EECE 8521 - Adv Control Syst Engr

EECE 8522 - Stoch/Adapt Cntrl Thry

EECE 8523 - Thry Optical Cntrol Sys

EECE 8524 - Parameter Est & Cntrls

EECE 8720 - Artificial Intelligence

EECE 8740 - Neural Networks

EECE 8900 - Introduction to Smart Grid

EECE 8900 - Special Topics in Electrical Engineering

EECE 8901 - Advanced Machine Learning

EECE 8901 - Special Topics in Electrical Engineering

EECE 8902 - Adv Comp & Wireless Networks

EECE 8902 - Special Topics in Electrical Engineering

EECE 8903 - Special Topics in Electrical Engineering

EECE 8903 - Wind Energy Conversion Systems

EECE 8904 - Special Topics in Electrical Engineering

EECE 8905 - Special Topics in Electrical Engineering

EECE 8906 - Advanced Pattern Recognition

EECE 8906 - Special Topics in Electrical Engineering

EECE 8907 - Special Topics in Electrical Engineering

EECE 8908 - Special Topics in Electrical Engineering

EECE 8909 - Special Topics in Electrical Engineering

EECE 8910 - Special Topics in Electrical Engineering

EECE 8991 - Projects I

EECE 8992 - Projects II

EECE 9000 - Dissertation

ELED 6250 - Tech Tools Thnkng/Lrng

TECH 6234 - Microproc Interface Technology

TECH 6242 - Client Application Technolgy

TECH 6262 - Modern Programming

TECH 6263 - Server Application Technology

TECH 6272 - Operating Systems

TECH 6281 - Computer Network Technology

TECH 6381 - Principles of Supervision

TECH 6460 - Work Design/Improvement

TECH 6462 - Quality improvement

TECH 6463 - Quality Systems

TECH 6464 - Production Control Systems

TECH 6466 - Facility Design

TECH 6472 - Computer Aided Design

TECH 6474 - Automation and Robotics

TECH 6476 - Computer Aided Manufacturing

TECH 6571 - Tool Design

TECH 6821 - Microwave Technology

TECH 6823 - Adv Programmable Logic Control

TECH 7015 - App Stat Meth Industry

TECH 7020 - Techn Research Writing

TECH 7105 - Project Plan & Scheduling **

TECH 7233 - Adv Software Appl

TECH 7263 - Adv Dgitl Circuit/Appl

TECH 7273 - Adv Microproc Arch

TECH 7283 - Adv Data Acquisition

TECH 7401 - Lean Fundamentals **

TECH 7402 - Adv Quality Control

TECH 7404 - Wrld/Clas Manfct Concpt **

TECH 7406 - Material Handling/Auto

TECH 7408 - Production Processes

TECH 7414 - Manuf Strat/Syst Design

TECH 7801 - Advanced Instrumentation

TECH 7811 - Tech Elect Comm System

TECH 7821 - Adv Microwave Tech

TECH 7822 - Ind Press Control Syst

TECH 7831 - Adv Int Circuits Tech

TECH 7841 - Fiber Optics in Comm

TECH 7991 - Projects I

TECH 7992 - Projects II

TECH 7993 - Internship In Engr Tech

TECH 7994 - Seminar

TECH 7996 - Thesis

ENGL 6243 - Studies in British Literature

ENGL 6346 - Studies in American Literature

ENGL 6454 - Studies in Forms & Genres

ENGL 6500 - Lang Skills For Intrntl

ENGL 6533 - ESL/EFL in Multicultural Settings

ENGL 6610 - Creative Writing/Translation

ENGL 6611 - English Studies/Internl Locale

ENGL 6618 - Document Design

ENGL 6619 - Web Design/Online Writing **

ENGL 6701 - Being an English Teacher

ENGL 7000 - Literary Research

ENGL 7001 - Acad Genre and Sch Pub

ENGL 7003 - Thry/Prac Tchng Comp

ENGL 7008 - Thry/Prac Tchng Online

ENGL 7010 - Writ./Comm Cent. Theory/Meth

ENGL 7012 - Seminar Health Comm

ENGL 7013 - Wkshp Hlth Care Writing

ENGL 7014 - Wkshp Public Hlth Care Writing

ENGL 7020 - Special Topics in English

ENGL 7021 - Special Topics in English

ENGL 7022 - Special Topics in English

ENGL 7023 - Special Topics in English

ENGL 7024 - Special Topics in English

ENGL 7025 - Special Topics in English

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ENGL 7040 - Special Topics in English

ENGL 7041 - Special Topics in English

ENGL 7042 - Special Topics in English

ENGL 7043 - Special Topics in English

ENGL 7044 - Special Topics in English

ENGL 7045 - Special Topics in English

ENGL 7046 - Special Topics in English

ENGL 7047 - Special Topics in English

ENGL 7048 - Special Topics in English

ENGL 7049 - Special Topics in English

ENGL 7100 - Independent Study

ENGL 7211 - Medieval Literature

ENGL 7230 - Chaucer

ENGL 7242 - English Renaissance Lit

ENGL 7254 - English Lit 17c

ENGL 7255 - Shakespeare

ENGL 7256 - Milton

ENGL 7264 - 18th-Century British Lit

ENGL 7276 - English Lit Romantic

ENGL 7278 - Victorian Literature

ENGL 7281 - Studies in Early American Literature

ENGL 7292 - Modern British Poetry

ENGL 7293 - Modern British Drama

ENGL 7294 - Studies in 19th-Century American Literature

ENGL 7296 - Stud British Novel

ENGL 7326 - African American Literature of Memphis and the Mid-South

ENGL 7327 - Studies in Form and Genre: African American Literature

ENGL 7328 - Studies in Major Authors: African American Literature

ENGL 7329 - African American Literature, Beginnings to 1850

ENGL 7330 - Afr-Amer Lit 1850-1900

ENGL 7332 - Literature of the African Diaspora

ENGL 7335 - African American Literature, 1989-Present

ENGL 7336 - African American Literary Theory

ENGL 7337 - African-American Literature, 1930-1988

ENGL 7338 - Amiri Baraka and the Black Arts Movement

ENGL 7350 - Rhetorical Theory

ENGL 7371 - Rhetorical Criticism

ENGL 7391 - Modern American Novel

ENGL 7392 - American Poetry

ENGL 7393 - American Drama

ENGL 7394 - Modern American Lit

ENGL 7395 - Am Literary Movements

ENGL 7398 - Cultural Contexts of Am Lit

ENGL 7399 - Multi-Cultural Am Lit

ENGL 7441 - Studies in European Drama/Lit

ENGL 7451 - Women And Literature

ENGL 7460 - Pop Lit Traditions

ENGL 7462 - Cont British/Cmwlth Lit

ENGL 7464 - Contemporary American Literature

ENGL 7466 - World Lit in Translation

ENGL 7468 - Literature of the Harlem Renaissance

ENGL 7469 - African American Women Writers

ENGL 7470 - Forms Creative Nonfict

ENGL 7471 - Forms Of Fiction

ENGL 7472 - Forms Of Poetry

ENGL 7473 - Verbal/Visual Texts

ENGL 7475 - Literary Publishing

ENGL 7480 - Cultural Texts and Theories

ENGL 7485 - Lit Arts Programming

ENGL 7501 - History English Lang

ENGL 7507 - Empirical Mthds Ling Rsrch

ENGL 7508 - Corpus Linguistics

ENGL 7509 - African American Linguistics

ENGL 7510 - Gender and Language

ENGL 7511 - Survey of Linguistics

ENGL 7512 - Morphology and Syntax

ENGL 7514 - Sociolinguistics **

ENGL 7515 - Language & Literature

ENGL 7516 - Phonetics & Phonology

ENGL 7517 - Discourse Analysis

ENGL 7530 - Field Experience and Practicum in ESL **

ENGL 7531 - Theory and History of ESL **

ENGL 7532 - Principles of Skills Assessment **

ENGL 7533 - Methods/Techniques of ESL in K-12 **

ENGL 7534 - Second Lang Acquisition

ENGL 7535 - ESL Grammar

ENGL 7536 - Issues in Second Language Writing

ENGL 7537 - Issues in Second Language Reading

ENGL 7538 - Cultural Issues in ESL

ENGL 7590 - Appl/Theory Linguistics

ENGL 7601 - Creative Nonfiction Wkshp

ENGL 7602 - Fiction Workshop

ENGL 7603 - Poetry Workshop

ENGL 7604 - Creative Writing Wkshp

ENGL 7605 - Adv Grad Fiction Wkshp

ENGL 7606 - Adv Creative Non-Fict Wkshp

ENGL 7607 - Advanced Poetry Workshop

ENGL 7701 - Hist Crit Theory

ENGL 7702 - Contemp Crit Theory

ENGL 7801 - History Composition

ENGL 7804 - Af Am Issues in Composition

ENGL 7805 - Foundations of Writing Studies

ENGL 7806 - Resch Meth In Writing

ENGL 7807 - Wksp/Govmt & Corp Wrtg

ENGL 7808 - Wksp/Sci & Techn Wrtg

ENGL 7809 - Technical Editing

ENGL 7811 - Internship Prof Wrtng

ENGL 7812 - Mphs Urban Wrtng Ins I

ENGL 7813 - Mphs Urban Wrtng Ins II

ENGL 7815 - Sem History Rhetoric

ENGL 7818 - Collaborative Writing

ENGL 7819 - Rhetoric Of Science

ENGL 7820 - Topics In Rhetoric

ENGL 7822 - Cont Comp Theory

ENGL 7823 - Topics In Composition

ENGL 7890 - Topic/Technical Writing

ENGL 7900 - Creative Writing Colloquium

ENGL 7996 - Thesis

ENGL 7997 - Portfolio

ENGL 8000 - Literary Research

ENGL 8001 - Acad Genre and Sch Pub

ENGL 8002 - Reading for Comps

ENGL 8003 - Thry/Prac Tchng Comp

ENGL 8008 - Thry/Prac Tchng Online

ENGL 8010 - Writ./Comm Cent. Theory/Meth

ENGL 8012 - Seminar Health Comm

ENGL 8013 - Wkshp Hlth Care Writing

ENGL 8014 - Wkshp Public Hlth Care Writing

ENGL 8020 - Writing and Communication Center Theory and Methodology

ENGL 8021 - Special Topics in English

ENGL 8022 - Special Topics in English

ENGL 8023 - Special Topics in English

ENGL 8024 - Special Topics in English

ENGL 8025 - Special Topics in English

ENGL 8026 - Special Topics in English

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ENGL 8100 - Independent Study

ENGL 8211 - Medieval Literature

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ENGL 8254 - English Lit 17c

ENGL 8255 - Shakespeare

ENGL 8256 - Milton

ENGL 8264 - 18th-Century British Lit

ENGL 8276 - English Lit Romatic

ENGL 8278 - Victorian Literature

ENGL 8281 - Stud Early Am Lit

ENGL 8292 - Modern British Poetry

ENGL 8293 - Modern British Drama

ENGL 8294 - Stud 19th-C Am Lit

ENGL 8296 - Stud British Novel

ENGL 8326 - A A Lit/Memphis/M South

ENGL 8327 - Form/Genre:Afr-Amer Lit

ENGL 8328 - Maj Authors:Afr-Amer Lit

ENGL 8329 - Afr-Amer Lit/Beg to 1850

ENGL 8330 - Afr-Amer Lit 1850-1900

ENGL 8332 - Lit of the African Diaspora

ENGL 8335 - Afr-Amer Lit 1989 to Present

ENGL 8336 - Afr-Amer Literary Theory

ENGL 8337 - Afr-Amer Lit, 1930-1988

ENGL 8338 - Baraka and Black Arts

ENGL 8350 - Rhetorical Theory

ENGL 8371 - Rhetorical Criticism

ENGL 8391 - American Novel

ENGL 8392 - American Poetry

ENGL 8393 - American Drama

ENGL 8394 - Modern American Lit

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ENGL 8516 - Phonetics & Phonology

ENGL 8517 - Discourse Analysis

ENGL 8530 - Fld Exp/Pract In ESL

ENGL 8531 - Theory/History ESL **

ENGL 8532 - Theor Skill Assess ESL **

ENGL 8533 - Meth/Tech ESL In K-12 **

ENGL 8534 - Second Lang Acquisition

ENGL 8535 - ESL Grammar

ENGL 8536 - Second Language Writing

ENGL 8537 - Second Language Reading

ENGL 8538 - Cultural Issues ESL

ENGL 8590 - Appl/Theory Linguistics

ENGL 8601 - Creative Nonfiction Wkshp

ENGL 8602 - Fiction Workshop

ENGL 8603 - Poetry Workshop

ENGL 8606 - Adv Creative Non-Fict Wkshp

ENGL 8607 - Advanced Poetry Workshop

ENGL 8701 - Hist Crit Theory

ENGL 8702 - Contemp Crit Theory

ENGL 8801 - History Composition

ENGL 8804 - Af Am Issues in Composition

ENGL 8805 - Foundations of Writing Studies

ENGL 8806 - Resch Meth In Writing

ENGL 8807 - Wksp/Govmt & Corp Wrtg

ENGL 8808 - Wksp/Sci & Techn Wrtg

ENGL 8809 - Technical Editing

ENGL 8811 - Internship Prof Wrtng

ENGL 8812 - Mphs Urban Wrtng Ins I

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ENGL 8822 - Cont Comp Theory

ENGL 8823 - Topics In Composition

ENGL 8890 - Topic/Technical Writing

ENGL 8900 - Engl Stds Colloquium

ENGL 9000 - Dissertation

ESMS 6000 - Exer Test Interp Lab

ESMS 6010 - Supp/Food/Drugs Health

ESMS 6020 - Clinical Biomechanics

ESMS 6406 - Exercise Test/ECG Intrp

ESMS 6603 - Adv Meth Strength Cond

ESMS 6902 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6903 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6904 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6905 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6906 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6907 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6908 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6909 - Special Topics in Exercise, Sport, and Movement Science

ESMS 6910 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 6911 - Special Topics in Exercise, Sport, and Movement Sciences

ESMS 7007 - Nutraceuticls/Diet Supp Hlth

ESMS 7020 - Pub/Prop in Health & Biomed

ESMS 7123 - Mech Analysis Mtr Skill

ESMS 7133 - Current Readings ESMS

ESMS 7142 - Seminar/Health Sprt Sci

ESMS 7152 - Problems in ESMS

ESMS 7163 - Advanced Motor Learning

ESMS 7173 - Sport/Exercise Psych

ESMS 7201 - Phys Exer Musculoskltl

ESMS 7202 - Phys Ex Mtbolc/Cardresp

ESMS 7210 - Anlys Muscle Function

ESMS 7220 - Adv Skltl Mscl Str/Fnct

ESMS 7230 - Exercise Endocrinology

ESMS 7240 - Athero/Cvd Patho/Interv

ESMS 7250 - Motor Control Bhvl Emp

ESMS 7255 - Anatomy of Motor Control

ESMS 7300 - Coach-Musclsketl Antmy Strngth

ESMS 7532 - Resrch/Sport Neuromechn

ESMS 7542 - Adv Kinesiology

ESMS 7800 - Internship in ESMS

ESMS 7850 - Research Lab Residency in ESMS

ESMS 7902 - Special Topics ESMS

ESMS 7903 - Special Topics ESMS

ESMS 7904 - Special Topics ESMS

ESMS 7905 - Special Topics ESMS

ESMS 7906 - Special Topics ESMS

ESMS 7907 - Special Topics ESMS

ESMS 7908 - Special Topics ESMS

ESMS 7909 - Special Topics ESMS

ESMS 7910 - Special Topics ESMS

ESMS 7911 - Special Topics ESMS

ESMS 7950 - Applied Project in ESMS

ESMS 8007 - Nutraceuticals/Diet Supp Hlth

ESMS 8020 - Pub/Prop in Health & Biomed

ESMS 8081 - Supervised Research

ESMS 8123 - Mech Analysis Mtr Skill

ESMS 8133 - Current Readings ESMS

ESMS 8142 - Seminar/Health Sprt Sci

ESMS 8163 - Advanced Motor Learning

ESMS 8173 - Sport/Exercise Psych

ESMS 8201 - Phys Exer Musculosklt

ESMS 8202 - Phys Ex Mtbolc/Cardresp

ESMS 8210 - Anlys Muscle Function

ESMS 8220 - Adv Skltl Mscl Str/Fnct

ESMS 8230 - Exercise Endocrinology

ESMS 8240 - Athero/Cvd Patho/Interv

ESMS 8250 - Motor Control Bhvl Emp

ESMS 8255 - Anatomy of Motor Control

ESMS 8532 - Resrch/Sport Neuromechn

ESMS 8542 - Adv Kinesiology

ESMS 8902 - Special Topics ESMS

ESMS 8903 - Special Topics ESMS

ESMS 8904 - Special Topics ESMS

ESMS 8905 - Special Topics ESMS

ESMS 8906 - Special Topics ESMS

ESMS 8907 - Special Topics ESMS

ESMS 8908 - Special Topics ESMS

ESMS 8909 - Special Topics ESMS

ESMS 8910 - Special Topics ESMS

ESMS 8911 - Special Topics ESMS

ELC 7115 - Experiential Learning Credit

FTHT 7000 - Practicum in Faith Health 1

FTHT 7001 - Practicum in Faith Health 2

FTHT 7002 - Comm & Whole Person Healthcare

FTHT 7003 - Intersection Faith and Health

FIR 6011 - Retirement and Estate Planning

FIR 6310 - Real Estate Law **

FIR 6320 - Real Estate Finance **

FIR 6331 - Stock Portfolio Mgmt

FIR 6340 - Real Estate Appraisal

FIR 6350 - Real Estate Investment **

FIR 6550 - International Finance

FIR 6610 - Cases Managerial Fin

FIR 6620 - Cases in Financial Planning

FIR 6710 - Commercial Banking

FIR 6720 - Mgmt Financl Institutns

FIR 6721 - Fixed Income and Derivatives

FIR 6730 - Financial Analysis/Certification

FIR 6770 - Security Analysis/Port Mgmt

FIR 6810 - Prop & Lbility Insur

FIR 6820 - Life & Health Insurance

FIR 6870 - Risk Management

FIR 7070 - Financial Conc/Business

FIR 7155 - Global Financial Mgmt **

FIR 7160 - Executive Financial Mgmt

FIR 7170 - Multinational Financial Mgmt

FIR 7171 - Intl Financial Markets

FIR 7173 - Financial Analys/Certification

FIR 7301 - Contemp Rles Thry/Prac

FIR 7302 - Rl Estate Dvlpmt & Sustainblty

FIR 7310 - Sustainable Real Estate

FIR 7320 - Financing Real Est Trans

FIR 7350 - Real Est Invest Analys

FIR 7410 - Invst Thry Portfol Mgmt

FIR 7648 - Entrepreneurial Finance

FIR 7710 - Sem Investment Thry

FIR 7721 - Financial Derivatives

FIR 7724 - Micro-Structure Theory

FIR 7725 - Eqty Mkts:Trad/Struct

FIR 7726 - Current Topics in Finance, Insurance, and Real Estate

FIR 7727 - Current Topics in Finance, Insurance, and Real Estate

FIR 7728 - Current Topics in Finance, Insurance, and Real Estate

FIR 7729 - Current Topics in Finance, Insurance, and Real Estate

FIR 7730 - Current Topics in Finance, Insurance, and Real Estate

FIR 7731 - Current Topics in Finance, Insurance, and Real Estate

FIR 7732 - Current Topics in Finance, Insurance, and Real Estate

FIR 7733 - Current Topics in Finance, Insurance, and Real Estate

FIR 7734 - Current Topics in Finance, Insurance, and Real Estate

FIR 7735 - Current Topics in Finance, Insurance, and Real Estate

FIR 7810 - Adv Financial Mgmt

FIR 7840 - Quantitative Finan App

FIR 7910 - Problems In Fir

FIR 7911 - Internship in FIR

FIR 7996 - Thesis

FIR 8170 - Intl Financial Mgmt

FIR 8410 - Invst Thry Portfol Mgmt

FIR 8710 - Sem Investment Thry

FIR 8721 - Financial Derivatives

FIR 8724 - Microstructure Theory

FIR 8725 - Financial Mkts: Trad/Struct

FIR 8726 - Current Topics in Finance, Insurance, and Real Estate

FIR 8727 - Current Topics in Finance, Insurance, and Real Estate

FIR 8728 - Current Topics in Finance, Insurance, and Real Estate

FIR 8729 - Current Topics in Finance, Insurance, and Real Estate

FIR 8730 - Current Topics in Finance, Insurance, and Real Estate

FIR 8731 - Current Topics in Finance, Insurance, and Real Estate

FIR 8732 - Current Topics in Finance, Insurance, and Real Estate

FIR 8733 - Current Topics in Finance, Insurance, and Real Estate

FIR 8734 - Current Topics in Finance, Insurance, and Real Estate

FIR 8735 - Current Topics in Finance, Insurance, and Real Estate

FIR 8810 - Adv Financial Mgmt

FIR 8820 - Thry/Prac Finan Mgmt

FIR 8840 - Quantitative Finan App

FIR 8850 - Seminar In Finance

FIR 8910 - Problems In Finance

FREN 6302 - Adv French Grammar

FREN 6307 - French Lit & Civ to 1789

FREN 6308 - French Lit & Civ 1789-Present

FREN 6310 - French Translation

FREN 6415 - Francophone Literature

FREN 6791 - Special Topics in French

FREN 6792 - Special Topics in French

FREN 6793 - Special Topics in French

FREN 6794 - Special Topics in French

FREN 6795 - Special Topics in French

FREN 6796 - Special Topics in French

FREN 6797 - Special Topics in French

FREN 6798 - Special Topics in French

FREN 6799 - Special Topics in French

FREN 6801 - Cont France/Francophone World

FREN 7000 - French for Reading Knowledge

FREN 7101 - French/Busn & Econ

FREN 7305 - French Stylistics

FREN 7430 - 17th-century French Literature

FREN 7470 - Special Topics in French Literature

FREN 7471 - Special Topics in French Literature

FREN 7472 - French Teach & Special Purpose

FREN 7472 - Special Topics in French Literature

FREN 7473 - Special Topics in French Literature

FREN 7474 - Special Topics in French Literature

FREN 7475 - Special Topics in French Literature

FREN 7476 - Special Topics in French Literature

FREN 7477 - Special Topics in French Literature

FREN 7478 - Special Topics in French Literature

FREN 7479 - Special Topics in French Literature

FREN 7492 - Resch In French Stds

FREN 7501 - 19th Century French Lit

FREN 7502 - 20th Century French Literature

FREN 7503 - Advanced French Pedagogy

FREN 7504 - Topics Francophone Literature

FREN 7531 - Age of Enlightenment

FREN 7532 - Research in Lit and Culture

GERM 7000 - German for Reading Knowledge

GERM 7101 - Adv Busn German I

GERM 7102 - Adv Busn German II

HADM 7100 - Day 1 Sem I: Leadership Skills

HADM 7101 - Day 1 Sem II: LeadershipSkills

HADM 7102 - Health Care Law

HADM 7103 - Health Planning

HADM 7105 - Hlth Policy & Org Hlth Svs **

HADM 7106 - Health Services Resrch

HADM 7107 - Health Care Ethics

HADM 7108 - Health Care Finance I

HADM 7109 - Health Information Systems

HADM 7110 - Leadershp/Org Chg in Hlth Care

HADM 7111 - Issues Hlth Serv Admn

HADM 7113 - Sem Managed Hlth Care

HADM 7115 - Public Health Organizatn/Mgmt

HADM 7116 - Adm Health Serv Orgs

HADM 7117 - Physician Practice Mgmt

HADM 7120 - Independent Study

HADM 7130 - Quality Tools in HC Management

HADM 7140 - Population Health Management **

HADM 7150 - The Business of Wellness

HADM 7190 - Internship Hlth Admn I

HADM 7204 - Healthcare Qual & Outcms Mgmt

HADM 7206 - Managerial Epidemiology

HADM 7208 - Health Care Finance II

HADM 7209 - Quant Methods for Hlth Svcs

HADM 7210 - Comp Expr/Hlth Care Mgmt

HADM 7605 - Human Resources Admin

HADM 7634 - Hlthcare Exec Leadership Skill

HADM 7703 - Reading For Comps

HADM 7705 - Special Topics in Health Administration

HADM 7706 - Special Topics in Health Administration

HADM 7707 - Special Topics in Health Administration

HADM 7708 - Special Topics in Health Administration

HADM 7709 - Special Topics in Health Administration

HADM 7710 - Special Topics in Health Administration

HADM 7711 - Special Topics in Health Administration

HADM 7712 - Special Topics in Health Administration

HADM 7713 - Special Topics in Health Administration

HADM 7714 - Special Topics in Health Administration

HADM 7715 - Special Topics in Health Administration

HADM 7718 - Med Tech Purchasing/Sales

HADM 7996 - Thesis

HADM 8102 - Health Care Law

HADM 8103 - Health Planning

HADM 8105 - Health Policy and the Organization of Health Services

HADM 8106 - Health Services Resrch

HADM 8107 - Health Care Ethics

HADM 8108 - Health Care Finance I

HADM 8109 - Health Information Systems

HADM 8110 - Leadershp/Org Chg in Hlth Care

HADM 8113 - Sem Managed Hlth Care

HADM 8115 - Public Health Organizatn/Mgmt

HADM 8116 - Adm Health Serv Orgs

HADM 8117 - Ambulatory Pract Mgmt

HADM 8120 - Independent Study

HADM 8140 - Population Health Management

HADM 8204 - Quality/Outcome Mgmt Hlth Care

HADM 8208 - Health Care Finance II

HADM 8605 - Human Resources Admin

HADM 8718 - Med Tech Purchasing/Sales

HADM 8800 - Guided Research in HSP

HADM 9000 - Dissertation

HMSE 7010 - Research Methods in HS **

HMSE 7403 - Measurement/Evaluation

HMSE 7996 - Thesis

HPRO 6202 - Workshops in HPRO

HPRO 6203 - Workshops in HPRO

HPRO 6204 - Workshops in HPRO

HPRO 6205 - Workshops in HPRO

HPRO 6206 - Workshops in HPRO

HPRO 6207 - Workshops in HPRO

HPRO 6208 - Workshops in HPRO

HPRO 6209 - Workshops in HPRO

HPRO 6210 - Workshops in HPRO

HPRO 6211 - Workshops in HPRO

HPRO 6212 - Workshops in HPRO

HPRO 6213 - Workshops in HPRO

HPRO 6214 - Workshops in HPRO

HPRO 6215 - Workshops in HPRO

HPRO 6216 - Workshops in HPRO

HPRO 6217 - Workshops in HPRO

HPRO 6218 - Workshops in HPRO

HPRO 6219 - Workshops in HPRO

HPRO 6220 - Workshops in HPRO

HPRO 6902 - Special Topics HPRO

HPRO 6903 - Special Topics HPRO

HPRO 6904 - Special Topics HPRO

HPRO 6905 - Special Topics HPRO

HPRO 6906 - Special Topics HPRO

HPRO 6907 - Special Topics HPRO

HPRO 6908 - Special Topics HPRO

HPRO 6909 - Special Topics HPRO

HPRO 6910 - Special Topics HPRO

HPRO 6911 - Special Topics HPRO

HPRO 7122 - Current Readings HPRO **

HPRO 7142 - Seminar in HPRO

HPRO 7152 - Problems In HPRO

HPRO 7182 - Health Promotion **

HPRO 7183 - Lifestyle/Wellness/Disease **

HPRO 7702 - Contemporary Hlth Issue

HPRO 7703 - Life Phys Act & Hlth

HPRO 7704 - Int Hlth Beh Evdy Life

HPRO 7710 - Prog/Event Planning for HPRO **

HPRO 7712 - Epidemiology **

HPRO 7722 - Hlth Intrvntn Thry/Apps **

HPRO 7732 - Random Cln Trial/HS

HPRO 7780 - Health Counseling **

HPRO 7790 - Program Management in HPRO

HPRO 7800 - Internship in HPRO

HPRO 7902 - Special Topics HPRO

HPRO 7903 - Special Topics HPRO

HPRO 7904 - Special Topics HPRO

HPRO 7905 - Special Topics HPRO

HPRO 7906 - Special Topics HPRO

HPRO 7907 - Special Topics HPRO

HPRO 7908 - Special Topics HPRO

HPRO 7909 - Special Topics HPRO

HPRO 7910 - Special Topics HPRO

HPRO 7911 - Special Topics HPRO

HPRO 7950 - Applied Project in HPRO **

HPRO 8732 - Random Cln Trial/HS

HIAD 7060 - Intrnshp Hi/Adult Ed **

HIAD 7170 - Community Educ Administration

HIAD 7171 - Adult & Conti Educ Admin

HIAD 7172 - Curri Planning in Adu Basic Ed

HIAD 7403 - Rsrch Hghr/Adult Educ

HIAD 7404 - Supervised Research

HIAD 7410 - Overview Higher Educ **

HIAD 7411 - Community Colleges

HIAD 7415 - It Trends & Issues **

HIAD 7430 - The Professoriate

HIAD 7440 - Stdnt Prsnl Svc High Ed

HIAD 7441 - College Studnt/Culture

HIAD 7442 - College Student Dev

HIAD 7443 - College Environments

HIAD 7444 - Multiculturalism Coll Camp

HIAD 7445 - Group Work in Stud Per

HIAD 7450 - College/Unvsty Curric

HIAD 7452 - Developmental Educ

HIAD 7510 - Overview Of Adult Educ

HIAD 7511 - Admin/Govt Comm College

HIAD 7512 - Dev Grant Proposals/Ldrsp Prog

HIAD 7530 - Continuing Prof Educ **

HIAD 7541 - Issues/Trends Tchg Adults **

HIAD 7542 - Global/Compartv Issues Ldrshp

HIAD 7543 - External Relations/Fundraising

HIAD 8000 - Change Theory in Higher Educ

HIAD 8060 - Intrnshp Hi/Adult Ed

HIAD 8170 - Community Educ Administration

HIAD 8171 - Adult & Conti Educ Admin

HIAD 8172 - Curri Planning in Adu Basic Ed

HIAD 8400 - Writing for Publication

HIAD 8401 - Higher Educ Adminstratn **

HIAD 8403 - Rsrch Hghr/Adult Educ **

HIAD 8404 - Supervised Research

HIAD 8405 - Sem Higher/Adlt Educ

HIAD 8406 - Designing Research in HIAD

HIAD 8410 - Overview Higher Edu **

HIAD 8411 - Community Colleges

HIAD 8412 - Hist/Policy Persp Hied

HIAD 8415 - IT Trends & Issues **

HIAD 8420 - Legal/Ethical Issues in HIAD **

HIAD 8422 - Higher Educ Finance **

HIAD 8430 - The Professoriate

HIAD 8440 - Stdnt Prsnl Svc High Ed

HIAD 8441 - College Studnt/Culture

HIAD 8442 - College Student Dev

HIAD 8443 - College Environments

HIAD 8450 - College/Unvsty Curric

HIAD 8510 - Overview of Adult Educ **

HIAD 8511 - Admin/Govt Comm College

HIAD 8512 - Dev Grant Proposals/Ldrsp Prog

HIAD 8530 - Continuing Prof Educ **

HIAD 8541 - Issues/Trends Tchg Adults **

HIAD 8542 - Global/Compartv Issues Ldrshp **

HIAD 8543 - External Relations/Fundraising

HIST 6020 - Internship In History

HIST 6022 - Oral History

HIST 6050 - Special Topics in History

HIST 6051 - Special Topics in History

HIST 6052 - Special Topics in History

HIST 6053 - Special Topics in History

HIST 6054 - Special Topics in History

HIST 6055 - Hist & Film in Latin Amer

HIST 6055 - Special Topics in History

HIST 6056 - Special Topics in History

HIST 6057 - Special Topics in History

HIST 6058 - Special Topics in History

HIST 6059 - Special Topics in History

HIST 6060 - Special Topics in History

HIST 6061 - Special Topics in History

HIST 6062 - Special Topics in History

HIST 6063 - Special Topics in History

HIST 6064 - Special Topics in History

HIST 6065 - Socialism: A History

HIST 6065 - Special Topics in History

HIST 6066 - Special Topics in History

HIST 6067 - Special Topics in History

HIST 6068 - Special Topics in History

HIST 6069 - Special Topics in History

HIST 6105 - War in the Ancient World

HIST 6106 - War in the Modern World

HIST 6126 - Victorian/Edwardian England

HIST 6145 - History of Modern Germany

HIST 6151 - Habsburg Cent Europe 1740-1918

HIST 6160 - Russia to 1917

HIST 6162 - Russia after 1917

HIST 6213 - Women/Gender/Latin Amer

HIST 6221 - 20th Century Latin Amr Rev

HIST 6222 - Race/Class Latin America

HIST 6223 - Contemporary Latin America

HIST 6260 - World Since 1945

HIST 6272 - Modern Middle East

HIST 6276 - The Arab-Israeli Conflict

HIST 6277 - Ottoman Empire

HIST 6283 - History/South Africa

HIST 6285 - Afro-Cuban History and Culture

HIST 6288 - West Africa/Diaspora

HIST 6289 - African Women's History

HIST 6292 - Modern China 1800-Present

HIST 6294 - Modern Japan 1800-Present

HIST 6320 - Ancient Near East

HIST 6321 - Greek Experience **

HIST 6322 - The Roman World

HIST 6323 - Egypt Of The Pharaohs

HIST 6361 - Hist Byzantine Empire **

HIST 6372 - High Middle Ages

HIST 6380 - Renaissance Europe

HIST 6390 - Europe-Age Reformation

HIST 6401 - Europe-Age Baroque

HIST 6440 - French Revolution

HIST 6453 - Europe 1815-1914

HIST 6461 - Europe 1914-1945

HIST 6506 - Cultural Intlctl Hist Europe

HIST 6620 - Colonial America to 1783

HIST 6630 - New Nation/1783-1815

HIST 6640 - Jackson Amer 1815-1850 **

HIST 6680 - Emr Mod Am 1877-1914

HIST 6701 - U S 1914 To W War II

HIST 6702 - U S Since W War II

HIST 6823 - American Labor History

HIST 6824 - Business History

HIST 6831 - History American Family

HIST 6851 - Hist Women In America **

HIST 6853 - African American Women

HIST 6861 - Parks/People/Public Pol

HIST 6863 - Hist Childhood/America **

HIST 6871 - U S Urban History **

HIST 6879 - Africa To The Americas

HIST 6880 - Slavery/Freedom/Segretn

HIST 6882 - Civil Rights Movement

HIST 6941 - Hist American Indian

HIST 7011 - Phil & Theory of History

HIST 7012 - Directed Readings **

HIST 7023 - Practicum in History

HIST 7024 - Fieldwork in History

HIST 7025 - Principles&Practices Hist Ed **

HIST 7030 - Topics in History

HIST 7031 - Topics in History

HIST 7032 - Topics in History

HIST 7033 - Topics in History

HIST 7034 - Topics in History

HIST 7035 - Topics in History

HIST 7036 - Topics in History

HIST 7037 - Topics in History

HIST 7038 - Topics in History

HIST 7039 - Topics in History

HIST 7060 - Women/Gender Historiography

HIST 7061 - Studies Women/Gender Hist

HIST 7070 - Research Seminar **

HIST 7100 - Global Historiography

HIST 7101 - Studies Global History **

HIST 7120 - Studies English History

HIST 7160 - Studies Russian Hist

HIST 7210 - Studies Latin Am Hist

HIST 7270 - Studies Near East Hist

HIST 7272 - Historiography Mod Middle East

HIST 7280 - Studies in African History

HIST 7290 - Studies Asian History

HIST 7310 - Ancient Historiography

HIST 7320 - Studies Ancient Hist **

HIST 7370 - Studies Medv/Renai Hist

HIST 7400 - Studies Early Mod Hist

HIST 7430 - European Historiography

HIST 7440 - Studies in Modern Europe

HIST 7601 - US Historiography to 1877

HIST 7602 - US Historiography after 1877

HIST 7650 - Studies U S Hist To 1877 **

HIST 7680 - Studies U S After 1877 **

HIST 7880 - Af Amer Historiography to 1800

HIST 7881 - Af Amer Historiography: 19 ce

HIST 7882 - Af Amer Historiography: 20ce

HIST 7883 - Studies African Am Hist

HIST 7884 - Af Amer History and Profession

HIST 7980 - Thematic Studies Amer

HIST 7991 - Independent Readings

HIST 7996 - Thesis **

HIST 8011 - Phil & Theory of History

HIST 8012 - Directed Readings

HIST 8023 - Practicum in History

HIST 8024 - Fieldwork in History

HIST 8025 - Principles&Practices Hist Ed

HIST 8030 - Topics in History

HIST 8031 - Topics in History

HIST 8032 - Topics in History

HIST 8033 - Topics in History

HIST 8034 - Topics in History

HIST 8035 - Topics in History

HIST 8036 - Topics in History

HIST 8037 - Topics in History

HIST 8038 - Topics in History

HIST 8039 - Topics in History

HIST 8060 - Women/Gender Historiography

HIST 8061 - Studies Women/Gender Hist

HIST 8070 - Research Seminar

HIST 8100 - Global Historiography

HIST 8101 - Studies Global History

HIST 8120 - Studies English History

HIST 8160 - Studies Russian Hist

HIST 8210 - Studies Latin Am Hist

HIST 8270 - Studies Near East Hist

HIST 8272 - Historiography Mod Middle East

HIST 8280 - Studies in African History

HIST 8290 - Studies Asian History

HIST 8310 - Ancient Historiography

HIST 8320 - Studies Ancient Hist

HIST 8370 - Studies Medv/Renai Hist

HIST 8400 - Studies Early Mod Hist

HIST 8430 - European Historiography

HIST 8440 - Modern Europe

HIST 8601 - US Historiography to 1877

HIST 8602 - US Historiography after 1877

HIST 8650 - Studies U S Hist To 1877

HIST 8680 - Studies U S After 1877

HIST 8880 - Af Amer Historiography to 1800

HIST 8881 - Af Amer Historiography: 19 ce

HIST 8882 - Af Amer Historiography: 20ce

HIST 8883 - Studies African Am Hist

HIST 8884 - Af Amer History and Profession

HIST 8980 - Thematic Studies Amer

HIST 8990 - Reading for/Writing Comps

HIST 8991 - Independent Readings

HIST 9000 - Doctorl Dissertation

HPRM 6320 - Hospitality Services Mktg

HPRM 6331 - Adv Resort/Lodging Management

HPRM 6340 - Information Technology HPRM

HPRM 6350 - Properties Develomnt/Planning

HPRM 7020 - Analz/Decision-Mkng in Hosp

HPRM 7111 - Hospitality Grad Study Seminar

HPRM 7141 - Experiential Learning Credit

HPRM 7152-7160 - Special Topics in Hospitality

HPRM 7200 - Hospitality Studies Seminar

HPRM 7320 - Advanced Hospitality Marketing

HPRM 7331 - Hospitality Services Op Mgmt

HPRM 7340 - Strategic Pricing & Revnue Max

HPRM 7350 - Hospitality Asset Management

HPRM 7413 - Employee Development Issues

HPRM 7421 - Legal and Sustainability Issues in Hospitality

HPRM 7442 - Adv Strtg Mgmt in Hosp

HPRM 7651 - Drv Sales & Rev in Hosp

HPRM 7870 - Res. & Data Analysis in Hosp

HPRM 7911 - Hospitality Grad Internship

HPRM 7950 - Applied Project in Hospitality

HPRM 7996 - Thesis

MUAP 6111 - Applied Music Trumpet

MUAP 6111 - Trumpet

MUAP 6121 - Horn

MUAP 6121 - Horn

MUAP 6131 - Trombone

MUAP 6131 - Trombone

MUAP 6141 - Tuba

MUAP 6141 - Tuba

MUAP 6142 - Euphonium

MUAP 6142 - Euphonium

MUAP 6311 - Piano

MUAP 6311 - Piano

MUAP 6321 - Harpsichord

MUAP 6321 - Harpsichord

MUAP 6331 - Organ

MUAP 6331 - Organ

MUAP 6411 - Percussion

MUAP 6411 - Percussion

MUAP 6414 - Ethnic Percussion

MUAP 6414 - Ethnic Percussion

MUAP 6511 - Violin

MUAP 6511 - Violin

MUAP 6521 - Viola

MUAP 6521 - Viola

MUAP 6531 - Cello

MUAP 6531 - Cello

MUAP 6541 - Bass

MUAP 6541 - Bass

MUAP 6551 - Guitar

MUAP 6551 - Guitar

MUAP 6561 - Harp

MUAP 6561 - Harp

MUAP 6611 - Voice

MUAP 6611 - Voice

MUAP 6711 - Flute

MUAP 6711 - Flute

MUAP 6721 - Oboe

MUAP 6721 - Oboe

MUAP 6731 - Clarinet

MUAP 6731 - Clarinet

MUAP 6741 - Saxophone

MUAP 6741 - Saxophone

MUAP 6751 - Bassoon

MUAP 6751 - Bassoon

MUAP 6761 - Recorder

MUAP 6761 - Recorder

MUAP 7111 - Trumpet

MUAP 7111 - Trumpet

MUAP 7121 - Horn

MUAP 7121 - Horn

MUAP 7131 - Trombone

MUAP 7131 - Trombone

MUAP 7141 - Tuba

MUAP 7141 - Tuba

MUAP 7142 - Euphonium

MUAP 7142 - Euphonium

MUAP 7214 - Tuba Ensemble

MUAP 7215 - Trumpet Ensemble

MUAP 7311 - Piano

MUAP 7311 - Piano

MUAP 7321 - Harpischord

MUAP 7321 - Harpsichord

MUAP 7331 - Organ

MUAP 7331 - Organ

MUAP 7411 - Percussion

MUAP 7411 - Percussion

MUAP 7506 - Trombone Ensemble

MUAP 7511 - Violin

MUAP 7511 - Violin

MUAP 7521 - Viola

MUAP 7521 - Viola

MUAP 7531 - Cello

MUAP 7531 - Cello

MUAP 7541 - Bass

MUAP 7541 - Bass

MUAP 7551 - Guitar

MUAP 7551 - Guitar

MUAP 7561 - Harp

MUAP 7561 - Harp

MUAP 7611 - Voice

MUAP 7611 - Voice

MUAP 7620 - Ind Study Sym/Op Cond

MUAP 7711 - Flute

MUAP 7711 - Flute

MUAP 7721 - Oboe

MUAP 7721 - Oboe

MUAP 7731 - Clarinet

MUAP 7731 - Clarinet

MUAP 7741 - Saxophone

MUAP 7741 - Saxophone

MUAP 7751 - Bassoon

MUAP 7751 - Bassoon

MUAP 8111 - Trumpet

MUAP 8111 - Trumpet

MUAP 8121 - Horn

MUAP 8121 - Horn

MUAP 8131 - Trombone

MUAP 8131 - Trombone

MUAP 8141 - Tuba

MUAP 8141 - Tuba

MUAP 8142 - Euphonium

MUAP 8142 - Euphonium

MUAP 8311 - Piano

MUAP 8311 - Piano

MUAP 8321 - Harpischord

MUAP 8321 - Harpsichord

MUAP 8331 - Organ

MUAP 8331 - Organ

MUAP 8411 - Percussion

MUAP 8411 - Percussion

MUAP 8511 - Violin

MUAP 8511 - Violin

MUAP 8521 - Viola

MUAP 8521 - Viola

MUAP 8531 - Cello

MUAP 8531 - Cello

MUAP 8541 - Bass

MUAP 8541 - Bass

MUAP 8551 - Guitar

MUAP 8551 - Guitar

MUAP 8611 - Voice

MUAP 8611 - Voice

MUAP 8711 - Flute

MUAP 8721 - Oboe

MUAP 8721 - Oboe

MUAP 8731 - Clarinet

MUAP 8731 - Clarinet

MUAP 8731 - Clarinet

MUAP 8741 - Saxophone

MUAP 8741 - Saxophone

MUAP 8751 - Bassoon

MUAP 8751 - Bassoon

MUAP 8811 - Flute

ICL 6121 - Lbry Mtrl Yng Peop/Adlts

ICL 6761 - Aerospace Ed In Schools

ICL 6762 - Adv Aerospace Ed Schls

ICL 6950 - Special Topics in Curriculum and Instruction

ICL 6951 - Special Topics in Curriculum and Instruction

ICL 6952 - Special Topics in Curriculum and Instruction

ICL 6953 - Special Topics in Curriculum and Instruction

ICL 6954 - Special Topics in Curriculum and Instruction

ICL 6955 - Special Topics in Curriculum and Instruction

ICL 6956 - Special Topics in Curriculum and Instruction

ICL 6957 - Special Topics in Curriculum and Instruction

ICL 6958 - Special Topics in Curriculum and Instruction

ICL 6959 - Special Topics in Curriculum and Instruction

ICL 7000 - Analysis Pract Teach I

ICL 7001 - Fund Of Curriculum

ICL 7002 - Curriculum Leadership

ICL 7003 - Curric Design/Evalatn

ICL 7004 - Innovative Curricula

ICL 7008 - Sem Curric Improvement

ICL 7010 - Analysis Pract Teach II

ICL 7020 - Prof Develop Semnr I

ICL 7021 - Prof Develop Semnr II

ICL 7022 - Prof Develop Semnr III

ICL 7030 - Assessment & Evaluation **

ICL 7032 - Classroom Management

ICL 7040 - Integrated Tchg Strtgy

ICL 7051 - Simulation

ICL 7054 - Creativity Tchg/Curric

ICL 7058 - Values Education

ICL 7059 - Models of Instruction **

ICL 7080 - Instr Multiethnic Schl

ICL 7082 - Seminar in Urban Education

ICL 7100 - Fld Exp Intro Teaching

ICL 7103 - Tchg Hlth Phy Act Nutr

ICL 7104 - Accom Div Urb Lrnrs

ICL 7105 - Lang/Comm Inclusive Classrm **

ICL 7106 - Prof/Eth Prac Inclusive Class **

ICL 7130 - Elem School Curriculum

ICL 7132 - Catalog/Classification **

ICL 7133 - School Library Admin **

ICL 7134 - Internet in the School Library **

ICL 7138 - Sem In Elem Educ

ICL 7151 - Special Topics

ICL 7152 - Special Topics

ICL 7153 - Special Topics

ICL 7154 - Special Topics

ICL 7155 - Special Topics

ICL 7156 - Special Topics

ICL 7157 - Special Topics

ICL 7158 - Special Topics

ICL 7159 - Special Topics

ICL 7160 - Mdrn Meth Scndry Educ

ICL 7161 - Methods/Middle School Science

ICL 7162 - Methods/Middle School Lang

ICL 7163 - Methods/Middle School Math

ICL 7164 - Methods/Middle School Soc Stdy

ICL 7165 - The Middle School

ICL 7168 - Semnr Secondary Educ

ICL 7172 - Spec Mthds Soc Stu Educ **

ICL 7174 - Spec Mthds For Lang Ed **

ICL 7300 - Cont Issues Lang Arts

ICL 7301 - Literature in PreK-12 School **

ICL 7302 - Tchg Lit To Adolescents

ICL 7303 - Eng/Lan Comp Secnd Schl **

ICL 7305 - Mphs Urban Wrtng II

ICL 7308 - Seminar Engl/Lang Arts

ICL 7309 - Dev Instructional Ldrs

ICL 7310 - Supptng Cont Spec Inst

ICL 7500 - Adv Math Elem Sch

ICL 7501 - Elem Sch Math Curr

ICL 7502 - Tchg Mathematics SCED **

ICL 7503 - Secndry Math Ed Curric **

ICL 7504 - Methods Math Elem

ICL 7508 - Sem Mathematics Educ **

ICL 7600 - Adv Science Elem

ICL 7601 - Elem Science Curriculum

ICL 7602 - Tchg Sci Scndry Schl **

ICL 7603 - Scndry Schl Sci Curr **

ICL 7605 - Methods Elem Science

ICL 7608 - Sem Science Education **

ICL 7650 - Adv Elem Soc Studies

ICL 7652 - Tchng Soc Std Mid/Sec **

ICL 7653 - Mid/Sec Soc Std Curric **

ICL 7654 - Methods Elem Soc Studies

ICL 7657 - Hist of Soc Stu Education **

ICL 7658 - Seminar Soc Stu Education

ICL 7659 - Cold War Education

ICL 7701 - Adv Wksp ICL:Urban Educ

ICL 7702 - Adv Topics in ICL:Urban Educ

ICL 7704 - Wksp/Nwspaper In Clasrm

ICL 7705 - Adv Mgng Lrng Environ

ICL 7706 - Family/Comm Relations

ICL 7707 - Using Data to Inform Teaching

ICL 7709 - Urban Lrng Environment

ICL 7719 - Introduction to STEM Education

ICL 7720 - STEM Curriculum Leadership

ICL 7721 - STEM Teacher Development

ICL 7722 - Teaching and Learning in STEM

ICL 7723 - Equity in STEM Education

ICL 7730 - Found Librarianship **

ICL 7731 - Intro To Bibliography **

ICL 7800 - Adv Clinical Practicum **

ICL 7801 - Talented & Mently Gifted

ICL 7802 - Spec Populations/Gifted

ICL 7803 - Intern Kindergarten

ICL 7804 - Erly Chldhd Stu Tchg

ICL 7805 - Intern Elem Schl

ICL 7806 - Elem Student Tchg

ICL 7807 - Intern Scndry Schl

ICL 7808 - Clinical Teaching Semester

ICL 7809 - Rdng Rsrch Practicum

ICL 7810 - Teacher Leader Practicum

ICL 7811 - Mthd Tchg Giftd/Ac Tltd

ICL 7822 - Adv Mthd Giftd/Ac Tltd

ICL 7850 - Suprvsn Student Tchg

ICL 7912 - Fndtns/NBPTS Candidacy

ICL 7913 - St Tchg Mid Grds

ICL 7950 - Advanced Topics in Instruction and Curriculum

ICL 7951 - Advanced Topics in Instruction and Curriculum

ICL 7952 - Advanced Topics in Instruction and Curriculum

ICL 7953 - Advanced Topics in Instruction and Curriculum

ICL 7953 - Writing for Academic Publicatn

ICL 7954 - Advanced Topics in Instruction and Curriculum

ICL 7955 - Advanced Topics in Instruction and Curriculum

ICL 7956 - Advanced Topics in Instruction and Curriculum

ICL 7957 - Advanced Topics in Instruction and Curriculum

ICL 7958 - Advanced Topics in Instruction and Curriculum

ICL 7959 - Advanced Topics in Instruction and Curriculum

ICL 7960 - Advanced Topics in Instruction and Curriculum

ICL 7961 - Advanced Topics in Instruction and Curriculum

ICL 7962 - Advanced Topics in Instruction and Curriculum

ICL 7963 - Advanced Topics in Instruction and Curriculum

ICL 7964 - Advanced Topics in Instruction and Curriculum

ICL 7965 - Advanced Topics in Instruction and Curriculum

ICL 7966 - Advanced Topics in Instruction and Curriculum

ICL 7967 - Advanced Topics in Instruction and Curriculum

ICL 7968 - Advanced Topics in Instruction and Curriculum

ICL 7969 - Advanced Topics in Instruction and Curriculum

ICL 7991 - Independent Study

ICL 7992 - Master's Project **

ICL 7993 - Professional Seminar **

ICL 7994 - Developing Proposals

ICL 7996 - Thesis

ICL 7999 - Experiential Learning Credit

ICL 8000 - Spec Culmn Experience

ICL 8002 - Curriculum Leadership

ICL 8003 - Curric Design/Evalatn

ICL 8004 - Innovative Curricula

ICL 8005 - The Nature of Knowledge

ICL 8008 - Sem Curric Improvement

ICL 8051 - Simulation

ICL 8054 - Creativity Tchg/Curric

ICL 8058 - Values Education

ICL 8082 - Seminar in Urban Education

ICL 8105 - Lang/Comm Inclusive Classrm

ICL 8106 - Prof/Eth Prac Inclusive Class

ICL 8130 - Elem School Curriculum

ICL 8138 - Sem In Elem Educ

ICL 8151 - Special Topics

ICL 8152 - Special Topics

ICL 8153 - Special Topics

ICL 8154 - Special Topics

ICL 8155 - Special Topics

ICL 8156 - Special Topics

ICL 8157 - Special Topics

ICL 8158 - Special Topics

ICL 8159 - Special Topics

ICL 8160 - Mdrn Meth Scndry Educ

ICL 8165 - The Middle School

ICL 8172 - Spec Mthds Soc Stu Edu

ICL 8200 - Prof Sem/Doctoral Stdnt

ICL 8300 - Cont Issues Lang Arts

ICL 8301 - Literature in PreK-12 School

ICL 8302 - Tchg Lit To Adolescents

ICL 8303 - Eng/Lan Comp Secnd Schl

ICL 8308 - Seminar Engl/Lang Arts

ICL 8309 - Dev Instructional Ldrs

ICL 8310 - Supptng Cont Spec Inst

ICL 8500 - Adv Math Elem Sch

ICL 8501 - Elem Sch Math Curr

ICL 8502 - Tchg Mathematics SCED

ICL 8503 - Secndry Math Ed Curric

ICL 8508 - Sem Mathematics Educ

ICL 8600 - Adv Science Elem

ICL 8601 - Elem Science Curriculum

ICL 8602 - Tchg Sci Scndry Schl

ICL 8608 - Sem Science Education

ICL 8650 - Adv Elem Soc Studies

ICL 8652 - Tchng Soc Std Mid/Sec

ICL 8653 - Mid/Sec Soc Std Curric

ICL 8657 - Hist of Soc Studies Educatn **

ICL 8658 - Seminar Soc Stu Education

ICL 8659 - Cold War Education

ICL 8701 - Adv Wksp ICL:Urban Educ

ICL 8702 - Adv Topics in ICL:Urban Educ

ICL 8704 - Wksp/Nwspaper In Clasrm

ICL 8705 - Adv Mgng Lrng Environ

ICL 8707 - Using Data to Inform Teaching

ICL 8720 - STEM Curriculum Leadership

ICL 8721 - STEM Teacher Development

ICL 8722 - Teaching and Learning in STEM

ICL 8723 - Equity in STEM Education

ICL 8801 - Talented & Mently Gifted

ICL 8802 - Spec Populations/Gifted

ICL 8803 - Intern Kindergarten

ICL 8804 - Erly Chldhd Student Tchg

ICL 8805 - Intern Elem Schl

ICL 8806 - Elem Student Tchg

ICL 8807 - Intern Scndry Schl

ICL 8808 - SCED Student Tchg

ICL 8809 - Rdng Rsrch Practicum

ICL 8810 - Teacher Leader Practicum

ICL 8811 - Mthd Tchg Giftd/Ac Tltd

ICL 8822 - Adv Mthd Giftd/Ac Tltd

ICL 8850 - Suprvsn Student Tchg

ICL 8912 - Fndtns/NBPTS Candidacy

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ICL 8952 - Advanced Topics in Instruction and Curriculum

ICL 8953 - Advanced Topics in Instruction and Curriculum

ICL 8953 - Writing for Academic Publicatn

ICL 8954 - Advanced Topics in Instruction and Curriculum

ICL 8955 - Advanced Topics in Instruction and Curriculum

ICL 8956 - Advanced Topics in Instruction and Curriculum

ICL 8957 - Advanced Topics in Instruction and Curriculum

ICL 8958 - Advanced Topics in Instruction and Curriculum

ICL 8959 - Advanced Topics in Instruction and Curriculum

ICL 8960 - Advanced Topics in Instruction and Curriculum

ICL 8961 - Advanced Topics in Instruction and Curriculum

ICL 8962 - Advanced Topics in Instruction and Curriculum

ICL 8963 - Advanced Topics in Instruction and Curriculum

ICL 8964 - Advanced Topics in Instruction and Curriculum

ICL 8965 - Advanced Topics in Instruction and Curriculum

ICL 8966 - Advanced Topics in Instruction and Curriculum

ICL 8967 - Advanced Topics in Instruction and Curriculum

ICL 8968 - Advanced Topics in Instruction and Curriculum

ICL 8969 - Advanced Topics in Instruction and Curriculum

ICL 8991 - Independent Study

ICL 8994 - Developing Proposals

ICL 8995 - Research Seminar

ICL 8998 - Directed Reading

ICL 8999 - Supervised Research ICL

ICL 9000 - Dissertation **

IDT 7052 - Intro Instr Design & Technlgy

IDT 7060 - Applying the ID Process **

IDT 7061 - Instructional Design & EdTech **

IDT 7062 - Teaching, Learning, & Tech **

IDT 7063 - Models & Innovations of EdTech **

IDT 7064 - EdTech & Instructl Development **

IDT 7070 - Instructional Design Process I **

IDT 7071 - Principles & Appl Instr Design

IDT 7072 - Seminar in Online Instruction

IDT 7073 - Sem Computer Based Lnrng Envrn

IDT 7074 - Thry/Models Instructnal Design

IDT 7075 - Instrctnl/Performnce Consultng

IDT 7076 - Seminar in Workshop Design

IDT 7078 - Seminr Instrct Design&Technlgy

IDT 7080 - Instructnal Design Process II **

IDT 7090 - Dev Interactve Lrng Envirnmt I **

IDT 7095 - Dev Intractve Lrng Envirnmt II **

IDT 7230 - Instructional Text Design

IDT 7810 - Practicum Instr Design/Technlg **

IDT 8052 - Intro Instr Design & Technlgy

IDT 8060 - Applying the ID Process

IDT 8061 - Instructional Design & EdTech

IDT 8062 - Teaching, Learning, & Tech

IDT 8063 - Models & Innovations of EdTech

IDT 8064 - EdTech & Instructil Development

IDT 8070 - Instructional Design Process I

IDT 8071 - Principles & Appl Instr Design

IDT 8072 - Seminar in Online Instruction

IDT 8073 - Sem Computer Based Lnrng Envrn

IDT 8074 - Thry/Models Instructnal Design

IDT 8075 - Instrctnl/Performnce Consultng

IDT 8076 - Seminar in Workshop Design

IDT 8078 - Seminr Instrct Design&Technlgy

IDT 8080 - Instructnal Design Process II

IDT 8090 - Dev Interactve Lrng Envirnmt I

IDT 8091 - Directed Readings IDT **

IDT 8092 - Res. and Scholar, in IDT III **

IDT 8095 - Dev Intractve Lrng Envirnmt II

IDT 8100 - Res. and Scholar, in IDT 1 **

IDT 8230 - Instructional Text Design

IDT 8500 - Res. and Scholar, in IDT II **

IDT 8600 - Seminar in IDT Res. and School.

IDT 8810 - Practicm Instr Design/Technlgy **

IDES 6021 - I D Independent Study

IDES 6430 - Interior Design Internship

ITAL 7690 - Research in Italian Studies

JAPN 7101 - Adv Business Japn I

JAPN 7102 - Adv Business Japn II

ADVR 6328 - Strategic Adv Campaigns

ADVR 6800 - Special Topics Advertising

ADVR 6801 - Special Topics Advertising

ADVR 6802 - Special Topics Advertising

JOUR 6140 - News Design

JOUR 6150 - Sports Writing and Reporting

JOUR 6155 - Multimedia Sports Reporting

JOUR 6160 - Food Writing/Reporting

JOUR 6170 - Business Reporting and Writing

JOUR 6180 - Public Issues Writing/Reporting

JOUR 6190 - Opinion Writing and Reporting

JOUR 6500 - Web Publish I: html/CSS

JOUR 6526 - Advanced Photojournalism

JOUR 6530 - Innovative Storytelling

JOUR 6550 - Web Publish II/: html/CSS

JOUR 6629 - TV News Writing/Reporting

JOUR 6639 - TV News Producing

JOUR 6801 - Reporting Social Justice

JOUR 6806 - Special Topics in Journalism

JOUR 6807 - Special Topics in Journalism

JOUR 6808 - Special Topics in Journalism

JOUR 6809 - Special Topics in Journalism

JRSM 6700 - Media Law

JRSM 6702 - Media, Diversity & Society

JRSM 6704 - Issues in Sport and Media

JRSM 6708 - Mass Media Ethics

JRSM 6712 - Mass Media & Cultures

JRSM 6720 - Presidents and the Press

JRSM 7000 - Media Writing/Editing

JRSM 7002 - Pro Seminar **

JRSM 7015 - Advanced Media Writing **

JRSM 7025 - Law Mass Communication

JRSM 7050 - Mass Comm Theory **

JRSM 7080 - Quantitative Research Methods

JRSM 7085 - Qualitative Research Methods

JRSM 7100 - Entrepreneurial Media **

JRSM 7124 - Data Journalism **

JRSM 7200 - Special Topics in Journalism

JRSM 7201 - Special Topics in Journalism

JRSM 7202 - Special Topics in Journalism

JRSM 7203 - Special Topics in Journalism

JRSM 7204 - Special Topics in Journalism

JRSM 7205 - Special Topics in Journalism

JRSM 7206 - Special Topics in Journalism

JRSM 7207 - Special Topics in Journalism

JRSM 7208 - Special Topics in Journalism

JRSM 7209 - Special Topics in Journalism

JRSM 7320 - Mass Media & Diversity

JRSM 7330 - Soc.Media&Comm.Engagement **

JRSM 7350 - Advanced Multimedia Reporting

JRSM 7400 - PR Principles & Issues

JRSM 7410 - Advanced Crisis Communication

JRSM 7412 - Analytics and Evaluation

JRSM 7414 - Audience Analysis&Segmentation

JRSM 7416 - Global Strategic Communication **

JRSM 7418 - Integrated Strategic Mgmt

JRSM 7422 - Writing for Strategic Media

JRSM 7424 - Media Effects & Communication

JRSM 7510 - Information Design

JRSM 7530 - Visual Media Theory & Practice

JRSM 7600 - Graduate Media Practicum **

JRSM 7650 - Journalism Startup Practicum

JRSM 7700 - Individual Research **

JRSM 7800 - Directed Indiv Readings **

JRSM 7990 - Media Portfolio

JRSM 7996 - Thesis **

JRSM 7998 - Professional Project **

JRSM 8025 - Law Mass Communication

JRSM 8050 - Mass Comm Theory

JRSM 8075 - Mass Comm Res Methods

JRSM 8100 - Entrepreneurial Media

JRSM 8200 - Special Topics in Journalism

JRSM 8201 - Special Topics in Journalism

JRSM 8202 - Special Topics in Journalism

JRSM 8203 - Special Topics in Journalism

JRSM 8204 - Special Topics in Journalism

JRSM 8205 - Special Topics in Journalism

JRSM 8206 - Special Topics in Journalism

JRSM 8207 - Special Topics in Journalism

JRSM 8208 - Special Topics in Journalism

JRSM 8209 - Special Topics in Journalism

JRSM 8320 - Mass Media & Diversity

JRSM 8330 - Social Media Theory & Practice

JRSM 8350 - Advanced Multimedia Reporting

JRSM 8424 - Media Effects & Communication

JRSM 8700 - Individual Research

JRSM 8800 - Directed Indiv Readings

PBRL 6301 - Event Management/HPRM & PR

PBRL 6431 - Music Promo/Public Relations

PBRL 6440 - Public Rel Campaigns

PBRL 6803 - Special Topic Public Relation

PBRL 6804 - Special Topic Public Relation

PBRL 6805 - Special Topic Public Relation

JDST 6840 - Israel/Antqty In Mdrnty

JDST 6841 - Biblical Archaeology

JDST 7796 - Independent Study

LALI 6010 - Special Topics in Foreign Literatures

LALI 6011 - Special Topics in Foreign Literatures

LALI 6012 - Special Topics in Foreign Literatures

LALI 6013 - Special Topics in Foreign Literatures

LALI 6014 - Special Topics in Foreign Literatures

LALI 6015 - Special Topics in Foreign Literatures

LALI 6016 - Special Topics in Foreign Literatures

LALI 6017 - Special Topics in Foreign Literatures

LALI 6018 - Special Topics in Foreign Literatures

LALI 6019 - Special Topics in Foreign Literatures

LALI 6020 - Special Topics in Foreign Literatures

LALI 6021 - Special Topics in Foreign Literatures

LALI 6022 - Special Topics in Foreign Literatures

LALI 6023 - Special Topics in Foreign Literatures

LALI 6024 - Special Topics in Foreign Literatures

LALI 6025 - Special Topics in Foreign Literatures

LALI 6026 - Special Topics in Foreign Literatures

LALI 6027 - Special Topics in Foreign Literatures

LALI 6028 - Special Topics in Foreign Literatures

LALI 6029 - Special Topics in Foreign Literatures

LALI 6441 - Dante

LALI 6493 - Contemporary French Lit

LALI 6890 - Literary Criticism

LALI 7780 - Indiv Studies Busn Lang

LEAD 6000 - Educ/Schl/Am Society

LEAD 6044 - SPED Law For Educators

LEAD 7000 - Intro To Educ Ldrshp **

LEAD 7004 - Instructional Leadership

LEAD 7006 - Hist Am Ed Prek-12

LEAD 7050 - Special Topics in Leadership

LEAD 7051 - Special Topics in Leadership

LEAD 7052 - Special Topics in Leadership

LEAD 7053 - Special Topics in Leadership

LEAD 7054 - Special Topics in Leadership

LEAD 7055 - Special Topics in Leadership

LEAD 7056 - Special Topics in Leadership

LEAD 7057 - Special Topics in Leadership

LEAD 7058 - Special Topics in Leadership

LEAD 7059 - Special Topics in Leadership

LEAD 7061 - Practicum In Ldrship

LEAD 7070 - Culminating Experience

LEAD 7080 - Rdgs/Res Phil of Educ

LEAD 7081 - Rdng/Rsrch High/Adlt Ed

LEAD 7082 - Rdng/Rsrch Ed Ldrship

LEAD 7083 - Rdgs/Rsrch Educ Plcy

LEAD 7084 - Rdng/Rsrch Scl/Com Rel

LEAD 7085 - Rdng/Rsrch Ed Supv

LEAD 7086 - Rdng/Rsrch Fin/Bus Mgmt

LEAD 7087 - Rdng/Rsrch Prsnl Negtn

LEAD 7088 - Rdng/Rsrch Educ Law

LEAD 7089 - Rdng/Rsrch Plnt/Trnsptn

LEAD 7090 - Rdgs/Res Hist of Educ

LEAD 7100 - Education & Community **

LEAD 7210 - Field Experiences

LEAD 7500 - Adult Lrng/Leadership **

LEAD 7600 - Adult Experiential Learning

LEAD 7996 - Thesis

LEAD 8000 - Specialist Culmn Exp

LEAD 8001 - Educ Ldrship In Orgntns **

LEAD 8002 - Am Society & Ed Policy

LEAD 8003 - Policy-Oriented Rsrch **

LEAD 8004 - Instructional Leadership

LEAD 8006 - Hist Am Ed Prek-12

LEAD 8050 - Special Topics in Leadership

LEAD 8051 - Special Topics in Leadership

LEAD 8052 - Special Topics in Leadership

LEAD 8053 - Special Topics in Leadership

LEAD 8054 - Special Topics in Leadership

LEAD 8055 - Special Topics in Leadership

LEAD 8056 - Special Topics in Leadership

LEAD 8057 - Special Topics in Leadership

LEAD 8058 - Special Topics in Leadership

LEAD 8059 - Special Topics in Leadership

LEAD 8061 - Practicum In Ldrship

LEAD 8070 - Culminating Experience

LEAD 8080 - Rdgs/Res Phil of Educ

LEAD 8081 - Rdng/Rsrch High/Adlt Ed **

LEAD 8082 - Rdng/Rsrch Ed Ldrship

LEAD 8083 - Rdgs/Rsrch Educ Plcy

LEAD 8084 - Rdng/Rsrch Scl/Com Rel

LEAD 8085 - Rdng/Rsrch Ed Supv

LEAD 8086 - Rdng/Rsrch Fin/Bus Mgmt

LEAD 8087 - Rdng/Rsrch Prsnl Negtn

LEAD 8088 - Rdng/Rsrch Educ Law

LEAD 8089 - Rdng/Rsrch Plnt/Trnsptn

LEAD 8090 - Rdgs/Res Hist of Educ

LEAD 8140 - Planning Ed Change

LEAD 8210 - Field Experiences

LEAD 8500 - Adult Lrng/Leadership **

LEAD 8600 - Adult Experiential Learning

LEAD 9000 - Dissertation **

LDPS 7000 - Current Issue/Leadershp

LDPS 7110 - Leadership Explr Sem

LDPS 7112 - Mgmt Ed Grant/Project

LDPS 7120 - Supervisory Process

LDPS 7121 - Personnel Admin

LDPS 7131 - School Business Mgmt

LDPS 7132 - School Finance

LDPS 7140 - Ldrshp Instructionl Improvmnt

LDPS 7141 - The Principalship

LDPS 7150 - Educational Law

LDPS 7180 - Pltcs & Pwr Ed Ldrshp

LDPS 7181 - Plcy Implmntn Ed Ldrshp

LDPS 7305 - Issues in Educ Policy

LDPS 7311 - Issues Phil Educ

LDPS 7320 - Urb Ed: Hst Cntmp Persp

LDPS 7330 - Race/Ethn/Gndr/Amer Ed

LDPS 7350 - Policies/Politics Educ

LDPS 8111 - Ed Admin Perform Lab

LDPS 8112 - Mgmt Ed Grant/Project

LDPS 8115 - Educ Ldrshp Sem

LDPS 8121 - Personnel Admin

LDPS 8132 - School Finance

LDPS 8133 - Econ of Education

LDPS 8140 - Ldrshp Instructionl Improvmnt

LDPS 8155 - Seminar in Ed Law

LDPS 8180 - Pltcs & Pwr Ed Ldrshp

LDPS 8181 - Plcy Implmntn Ed Ldrshp

LDPS 8305 - Issues In Educ Policy

LDPS 8310 - Phil Anly & Educ Plcy

LDPS 8311 - Issues Phil Educ

LDPS 8320 - Urb Ed: Hst Cntmp Persp

LDPS 8330 - Race/Ethn/Gndr/Amer Ed

LDPS 8350 - Policies/Politics Educ

LING 7101 - Intro To Linguistics I

LING 7174 - Spec Method/Lang Ed

LING 7201 - Intro To Linguistics II

MGMT 7030 - Management & Orgnztn

MGMT 7125 - Org Behavior Internatnl

MGMT 7130 - Org Behav & Performance

MGMT 7135 - Seminar in Leadership **

MGMT 7136 - Exec. Seminar in Leadership

MGMT 7160 - Global Strategic Mgmt **

MGMT 7161 - Intl Business Strategy

MGMT 7170 - International Mgmt

MGMT 7173 - Executive Communications

MGMT 7210 - Sem Industrl Relations

MGMT 7220 - Semn Humn Res Mgmt I

MGMT 7250 - Strategic Human Captl Mgmt

MGMT 7260 - Semn Humn Res Mgmt II

MGMT 7270 - Ventur/Bldg/Sust Succ Enterp

MGMT 7421 - Self Leadership/Executives

MGMT 7422 - Sem Organizational Thry

MGMT 7423 - Sem/Organztl Behavr II

MGMT 7500 - Sem/Strategic Mgmt

MGMT 7506 - Sem/Indstry & Comp Anlys

MGMT 7508 - Sem/Corporate Strategy

MGMT 7510 - Sem/Strtgy & Plan Rsrch

MGMT 7520 - Semn Org Change Mgmt

MGMT 7910 - Problems In Mgmt

MGMT 7940 - Special Topics in Management

MGMT 7941 - Special Topics in Management

MGMT 7942 - Special Topics in Management

MGMT 7943 - Special Topics in Management

MGMT 7944 - Special Topics in Management

MGMT 7945 - Special Topics in Management

MGMT 7946 - Special Topics in Management

MGMT 7947 - Special Topics in Management

MGMT 7948 - Special Topics in Management

MGMT 7949 - Special Topics in Management

MGMT 7996 - Thesis

MGMT 8220 - Sem in Humn Resource Mgmt I

MGMT 8260 - Semn in Humn Resource Mgmt II

MGMT 8421 - Sem/Organztl Behavr I

MGMT 8422 - Sem Organizational Thry

MGMT 8423 - Sem/Organztl Behavr II

MGMT 8500 - Sem/Strategic Mgmt

MGMT 8506 - Sem/Indstry & Comp Anlys

MGMT 8508 - Sem/Corporate Strategy

MGMT 8510 - Sem/Strtgy & Plan Rsrch

MGMT 8520 - Semn Org Change Mgmt

MGMT 8910 - Problems In Mgmt

MGMT 8921 - Sem Mgmt Research

MGMT 8940 - Special Topics in Management

MGMT 8941 - Special Topics in Management

MGMT 8942 - Special Topics in Management

MGMT 8943 - Special Topics in Management

MGMT 8944 - Special Topics in Management

MGMT 8945 - Special Topics in Management

MGMT 8946 - Special Topics in Management

MGMT 8947 - Special Topics in Management

MGMT 8948 - Special Topics in Management

MGMT 8949 - Special Topics in Management

MKTG 7060 - Marketing Management

MKTG 7140 - Global Strategic Marketing **

MKTG 7170 - Multinational Mktg Sem

MKTG 7213 - Research Methodology

MKTG 7230 - Special Topics in Marketing and Supply Chain Management

MKTG 7231 - Special Topics in Marketing and Supply Chain Management

MKTG 7232 - Special Topics in Marketing and Supply Chain Management

MKTG 7233 - Special Topics in Marketing and Supply Chain Management

MKTG 7234 - Special Topics in Marketing and Supply Chain Management

MKTG 7235 - Special Topics in Marketing and Supply Chain Management

MKTG 7236 - Special Topics in Marketing and Supply Chain Management

MKTG 7237 - Special Topics in Marketing and Supply Chain Management

MKTG 7238 - Special Topics in Marketing and Supply Chain Management

MKTG 7239 - Special Topics in Marketing and Supply Chain Management

MKTG 7251 - Ethics In Business

MKTG 7510 - Negotiation Strategies

MKTG 7511 - Market Driven Quality

MKTG 7520 - Medical Dev New Prod Dev

MKTG 7540 - Applied Consumer Behavior

MKTG 7542 - Retail Marketing Strategy

MKTG 7544 - Integ Mktg Comm/Branding

MKTG 7546 - Mktg in Digital Environment

MKTG 7555 - Creativity and Innovation **

MKTG 7910 - Problems in Marketing

MKTG 7996 - Thesis

MKTG 8215 - Ethical Criticism

MKTG 8216 - Measurement/Stuc Equa

MKTG 8217 - Theory Const & Eval

MKTG 8222 - Adv Mktg Management

MKTG 8223 - Adv Consumer Behavior

MKTG 8225 - Adv Topics Marketing Mgmt

MKTG 8230 - Special Topics in Marketing and Supply Chain Management

MKTG 8231 - Special Topics in Marketing and Supply Chain Management

MKTG 8232 - Special Topics in Marketing and Supply Chain Management

MKTG 8233 - Special Topics in Marketing and Supply Chain Management

MKTG 8234 - Special Topics in Marketing and Supply Chain Management

MKTG 8235 - Special Topics in Marketing and Supply Chain Management

MKTG 8236 - Special Topics in Marketing and Supply Chain Management

MKTG 8237 - Special Topics in Marketing and Supply Chain Management

MKTG 8238 - Special Topics in Marketing and Supply Chain Management

MKTG 8239 - Special Topics in Marketing and Supply Chain Management

MKTG 8910 - Problems in Marketing

MKTG 8930 - Adv Research Methods

MKED 7010 - Coop Occupation Educ

MKED 7630 - Inst Dvp Mktg/Mrch/Mgmt

MKED 7641 - Tech Coord Mktg Educ

MKED 7650 - Res Prblms In Mked

MKED 7700 - Marketing Ed Stdy Tour

MKED 7993 - Occupational Exp Pract

MATH 6010 - Special Topics in Mathematics and Statistics

MATH 6011 - Special Topics in Mathematics and Statistics

MATH 6012 - Special Topics in Mathematics and Statistics

MATH 6013 - Special Topics in Mathematics and Statistics

MATH 6014 - Special Topics in Mathematics and Statistics

MATH 6015 - Special Topics in Mathematics and Statistics

MATH 6016 - Special Topics in Mathematics and Statistics

MATH 6017 - Special Topics in Mathematics and Statistics

MATH 6018 - Special Topics in Mathematics and Statistics

MATH 6019 - Special Topics in Mathematics and Statistics

MATH 6020 - Actuarial Mathematics

MATH 6022 - Fin Math I/Theory of Interest

MATH 6025 - Fin Math II/Derivatives

MATH 6028 - Models for Fin Econ/Options

MATH 6030 - Model Fin Econ/Adv Pre Thry

MATH 6050 - Foundations of Geometry and Trigonometry

MATH 6051 - Methods of Proofs for Tchrs

MATH 6083 - Dynamical Systems/Chaos

MATH 6084 - Introduction to Graph Theory

MATH 6085 - Introduction to Combinatorics

MATH 6086 - Analytic Number Theory

MATH 6120 - Ordinary Differtl Equations

MATH 6151 - History Of Math

MATH 6171 - Spec Prob In Math

MATH 6242 - Linear Algebra

MATH 6261 - Abstract Algebra

MATH 6350 - Intro Real Analysis I

MATH 6351 - Intro Real Analysis II

MATH 6361 - Complex Variables

MATH 6391 - Partial Diffrntl Equation I

MATH 6392 - Partial Diffrntl Equation II

MATH 6396 - Perturbation Methods

MATH 6411 - Topology

MATH 6607 - Intro SAS Programming

MATH 6608 - R for Data Proc and Visual

MATH 6611 - Intro Applied Statistics

MATH 6614 - Probability/Statistics

MATH 6635 - Intro Probability Theory

MATH 6636 - Intro Statistical Theory

MATH 6637 - Stat Analysis/App Big Data

MATH 6640 - Intro Probability Models

MATH 6643 - Intro Regression/Time Ser Anal

MATH 6685 - Statistical Learning I

MATH 6686 - Statistical Learning II

MATH 6721 - Numerical Analysis

MATH 7016 - Fourier Analysis

MATH 7020 - Special Topics in Mathematics

MATH 7021 - Special Topics in Mathematics

MATH 7022 - Special Topics in Mathematics

MATH 7023 - Special Topics in Mathematics

MATH 7024 - Special Topics in Mathematics

MATH 7025 - Special Topics in Mathematics

MATH 7026 - Special Topics in Mathematics

MATH 7027 - Special Topics in Mathematics

MATH 7028 - Special Topics in Mathematics

MATH 7029 - Special Topics in Mathematics

MATH 7030 - Special Topics in Mathematics

MATH 7031 - Special Topics in Mathematics

MATH 7032 - Special Topics in Mathematics

MATH 7033 - Special Topics in Mathematics

MATH 7034 - Special Topics in Mathematics

MATH 7035 - Special Topics in Mathematics

MATH 7036 - Special Topics in Mathematics

MATH 7037 - Special Topics in Mathematics

MATH 7038 - Special Topics in Mathematics

MATH 7039 - Special Topics in Mathematics

MATH 7040 - Special Topics in Mathematics

MATH 7041 - Special Topics in Mathematics

MATH 7042 - Special Topics in Mathematics

MATH 7043 - Special Topics in Mathematics

MATH 7044 - Special Topics in Mathematics

MATH 7045 - Special Topics in Mathematics

MATH 7046 - Special Topics in Mathematics

MATH 7047 - Special Topics in Mathematics

MATH 7048 - Special Topics in Mathematics

MATH 7049 - Special Topics in Mathematics

MATH 7171 - Wksp Middle Sch Math

MATH 7174 - Workshop Sr Hi Math

MATH 7221 - Stat Gene Expression

MATH 7235 - Combinatorics

MATH 7236 - Probabilistic Combinatorics

MATH 7237 - Graph Theory

MATH 7261 - Algebraic Theory I

MATH 7262 - Algebraic Theory II

MATH 7281 - Linear Alg For Tchrs

MATH 7282 - Algebra for Teachers

MATH 7291 - Number Theory for Tchrs

MATH 7296 - Geometry for Tchrs

MATH 7311 - Topics In Analysis

MATH 7321 - Modeling & Computation

MATH 7350 - Real Variables I

MATH 7351 - Real Variables II

MATH 7352 - Ergodic Theory

MATH 7355 - Functional Analysis I

MATH 7356 - Functional Analysis

MATH 7361 - Complex Analysis

MATH 7371 - Calculus Of Variations

MATH 7375 - Methods Math Physics I

MATH 7376 - Mthds Math Physics II

MATH 7381 - Real Analy For Tchrs I

MATH 7382 - Real Analy For Tchrs II

MATH 7383 - Concepts of Calculus 1

MATH 7384 - Concepts of Calculus 2

MATH 7385 - Concepts of Multivariable Calculus

MATH 7391 - Foundations of Differential Equations

MATH 7393 - Differl Equatns/App

MATH 7395 - Theory Diff Equatns

MATH 7411 - Point Set Topology

MATH 7501 - Nonlinear Wave Phenomena

MATH 7502 - Semigroups of Linear Operators

MATH 7503 - Semigroups Nonlinear Operators

MATH 7504 - Partial Differential Equations

MATH 7521 - ADP Stoch Optim & Control

MATH 7601 - Statistics for Tchrs

MATH 7607 - Adv Prog In Sas

MATH 7608 - Statistical Programming with R

MATH 7613 - Probability Theory

MATH 7630 - Special Topics in Statistics

MATH 7631 - Special Topics in Statistics

MATH 7632 - Special Topics in Statistics

MATH 7633 - Special Topics in Statistics

MATH 7634 - Special Topics in Statistics

MATH 7635 - Adv Stat Learning I

MATH 7636 - Adv Stat Learning II

MATH 7637 - Special Topics in Statistics

MATH 7638 - Special Topics in Statistics

MATH 7639 - Special Topics in Statistics

MATH 7641 - Analysis Of Variance

MATH 7642 - Experimental Design

MATH 7643 - Least Sq/Regr Analysis

MATH 7645 - Sampling Techniques

MATH 7647 - Non-Param Stat Meth

MATH 7651 - Linear Models

MATH 7654 - Inference Theory

MATH 7656 - Adv Tchn Statistcl Infr

MATH 7657 - Multivar Stat Meth

MATH 7660 - App Time Series Analy

MATH 7670 - App Stochastic Models

MATH 7671 - Indiv Study Statistics

MATH 7672 - Spec Prob Statistics

MATH 7680 - Bayesian Inference

MATH 7681 - Probability For Tchrs

MATH 7685 - Simulation & Computing

MATH 7691 - Sem Statistical Resch

MATH 7692 - Statistical Consulting

MATH 7695 - Bootstrap/Other Methods

MATH 7721 - Adv Numerical Analysis

MATH 7759 - Categorical Analysis

MATH 7762 - Survival Analysis

MATH 7764 - Stat Methods Biom/Envir

MATH 7765 - Adv Stochstic Mod Biom

MATH 7821 - Special Prob In Math

MATH 7921 - Spec Prob Diff Equation

MATH 7922 - Spec Prob Applied Math

MATH 7960 - GA Teaching & Academic Strateg

MATH 7995 - Project Applied Math

MATH 7996 - Thesis

MATH 8020 - Special Topics in Mathematics

MATH 8021 - Special Topics in Mathematics

MATH 8022 - Special Topics in Mathematics

MATH 8023 - Special Topics in Mathematics

MATH 8024 - Special Topics in Mathematics

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MATH 8040 - Special Topics in Mathematics

MATH 8041 - Special Topics in Mathematics

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MATH 8046 - Special Topics in Mathematics

MATH 8047 - Special Topics in Mathematics

MATH 8048 - Special Topics in Mathematics

MATH 8049 - Special Topics in Mathematics

MATH 8221 - Stat Gene Expression

MATH 8235 - Combinatorics

MATH 8236 - Probabilistic Combinatorics

MATH 8237 - Graph Theory

MATH 8311 - Topics In Analysis

MATH 8355 - Functional Analysis I

MATH 8356 - Functional Analysis

MATH 8393 - Differl Equatns/App

MATH 8395 - Theory Diff Equatns

MATH 8501 - Nonlinear Wave Phenomena

MATH 8502 - Semigroups of Linear Operators

MATH 8503 - Semigroups Nonlinear Operators

MATH 8504 - Partial Differential Equations

MATH 8521 - ADP Stoch Optim & Control

MATH 8630 - Special Topics in Statistics

MATH 8631 - Special Topics in Statistics

MATH 8632 - Special Topics in Statistics

MATH 8633 - Special Topics in Statistics

MATH 8634 - Special Topics in Statistics

MATH 8635 - Adv Stat Learning I

MATH 8636 - Adv Stat Learning II

MATH 8637 - Special Topics in Statistics

MATH 8638 - Special Topics in Statistics

MATH 8639 - Special Topics in Statistics

MATH 8642 - Experimental Design

MATH 8656 - Adv Tchn Statistcl Infr

MATH 8657 - Multivar Stat Meth

MATH 8660 - App Time Series Analy

MATH 8670 - App Stochastic Models

MATH 8671 - Indiv Study Statistics

MATH 8672 - Spec Prob Statistics

MATH 8680 - Bayesian Inference

MATH 8685 - Simulation And Computing

MATH 8691 - Sem Statistical Rsrch

MATH 8692 - Statistical Consulting

MATH 8695 - Bootstrap/Other Methods

MATH 8759 - Categorical Analysis

MATH 8762 - Survival Analysis

MATH 8764 - Stat Methods Biom/Envir

MATH 8765 - Adv Stochstic Mod Biom

MATH 8811 - Advan Sem In Math

MATH 8812 - Ind Stdy Math/Stat

MATH 8813 - Dir Rsrch Math/Stat

MATH 8821 - Spec Prob In Math

MATH 8921 - Spec Prob Diff Equation

MATH 8922 - Spec Prob Applied Math

MATH 9000 - Dissertation

MECH 6305 - Fluid Mechanics II

MECH 6309 - Gas Dynamics

MECH 6312 - Power Generation

MECH 6313 - Heat Transfer II

MECH 6315 - Principles of HVAC Systems

MECH 6320 - Mechanics of Materials II

MECH 6324 - Computer Methods in Design

MECH 6325 - Adv Mech Materials

MECH 6326 - Biomedical System Analys/Mech

MECH 6330 - Intro To Composite Mat

MECH 6331 - Turbomachinery

MECH 6333 - Aerospace Proplsn Syst

MECH 6337 - Internal Combustion Engines

MECH 6339 - Appld Computational Fluid Dyna

MECH 6340 - Manufacturing Processes

MECH 6341 - Intro to Additive Manufacturing

MECH 6342 - Intro/Packaging Engineering

MECH 6344 - Mechanical Controls

MECH 6345 - Design Of Mechanisms

MECH 6346 - Adv Mechanical Controls

MECH 6350 - Principles of Biomechanics

MECH 6360 - Selection of Engr Materials

MECH 6369 - Process Engineering

MECH 6371 - Mechanical Vibrations

MECH 6383 - Nondestructive Test I

MECH 6384 - Nondestructive Test II

MECH 6393 - Appld Finite Element Analysis

MECH 6990 - Special Topics in Mechanical Engineering

MECH 6991 - Special Topics in Mechanical Engineering

MECH 6992 - Special Topics in Mechanical Engineering

MECH 6993 - Special Topics in Mechanical Engineering

MECH 6994 - Special Topics in Mechanical Engineering

MECH 6995 - Special Topics in Mechanical Engineering

MECH 6996 - Special Topics in Mechanical Engineering

MECH 6997 - Special Topics in Mechanical Engineering

MECH 6998 - Special Topics in Mechanical Engineering

MECH 7302 - Theory Continuous Media

MECH 7303 - Advanced Dynamics

MECH 7305 - Inviscid Flow Theory

MECH 7306 - Viscous Flow

MECH 7307 - Adv Viscous Flow

MECH 7323 - Conduction Heat Transf

MECH 7324 - Radiation Heat Transf

MECH 7325 - Convective Heat Trnsfr

MECH 7332 - Prin Of Propulsion

MECH 7341 - Engineering Analys I

MECH 7342 - Engineering Analys II

MECH 7355 - Engineering Optimizatn

MECH 7361 - Mech Bhvr Of Materials

MECH 7363 - Fracture Mechanics

MECH 7365 - Corrosion

MECH 7371 - Adv Mech Vibrations

MECH 7378 - Intro Comptnl Fluid Dyn

MECH 7379 - Adv Comptnl Fluid Dyn

MECH 7381 - Finite Element Methods

MECH 7391 - Packaging Dyn/Distr Pack

MECH 7900 - Seminar

MECH 7901 - Special Topics in Mechanical Engineering

MECH 7902 - Special Topics in Mechanical Engineering

MECH 7903 - Special Topics in Mechanical Engineering

MECH 7904 - Special Topics in Mechanical Engineering

MECH 7905 - Special Topics in Mechanical Engineering

MECH 7906 - Special Topics in Mechanical Engineering

MECH 7907 - Special Topics in Mechanical Engineering

MECH 7908 - Special Topics in Mechanical Engineering

MECH 7909 - Special Topics in Mechanical Engineering

MECH 7979 - Contemp Issues In Mech

MECH 7990 - Engineering Practicum

MECH 7991 - Research Proposal

MECH 7992 - Research Project

MECH 7994 - Independent Study

MECH 7996 - Thesis

MECH 8302 - Theory Continuous Media

MECH 8303 - Advanced Dynamics

MECH 8305 - Inviscid Flow Theory

MECH 8306 - Viscous Flow

MECH 8307 - Adv Viscous Flow

MECH 8323 - Conduction Heat Transf

MECH 8324 - Radiation Heat Transf

MECH 8325 - Convective Heat Trnsfr

MECH 8332 - Prin Of Propulsion

MECH 8341 - Engineering Analys I

MECH 8342 - Engineering Analys II

MECH 8355 - Engineering Optimizatn

MECH 8361 - Mech Behvr Of Materials

MECH 8363 - Fracture Mechanics

MECH 8365 - Corrosion

MECH 8371 - Adv Mech Vibrations

MECH 8378 - Intro Comptnl Fluid Dyn

MECH 8379 - Adv Comptnl Fluid Dyn

MECH 8381 - Finite Element Methods

MECH 8391 - Packaging Dyn/Distr Pack

MECH 8901 - Special Topics in Mechanical Engineering

MECH 8902 - Special Topics in Mechanical Engineering

MECH 8903 - Special Topics in Mechanical Engineering

MECH 8904 - Special Topics in Mechanical Engineering

MECH 8905 - Special Topics in Mechanical Engineering

MECH 8906 - Special Topics in Mechanical Engineering

MECH 8907 - Special Topics in Mechanical Engineering

MECH 8908 - Special Topics in Mechanical Engineering

MECH 8909 - Special Topics in Mechanical Engineering

MECH 8979 - Contemp Issues in Mech

MECH 8990 - Engineering Practicum

MECH 8991 - Research Proposal

MECH 8994 - Independent Study

MECH 9000 - Dissertation

MUSE 6201 - Ind Study Music Educatn

MUSE 6205 - Marching Band Technique

MUSE 6208 - Band Literature

MUSE 6209 - Piano Technology for Pianists

MUSE 6211 - Vocal Diction I

MUSE 6212 - Vocal Diction II

MUSE 6215 - Jazz Ensemble Technique

MUSE 6251 - Guitar Pedagogy

MUSE 6260 - Special Topics in Music Education

MUSE 6261 - Special Topics in Music Education

MUSE 6262 - Special Topics in Music Education

MUSE 6263 - Special Topics in Music Education

MUSE 6264 - Special Topics in Music Education

MUSE 6265 - Special Topics in Music Education

MUSE 6266 - Special Topics in Music Education

MUSE 6267 - Special Topics in Music Education

MUSE 6268 - Special Topics in Music Education

MUSE 6269 - Special Topics in Music Education

MUSE 6505 - Collab Piano Technique

MUSE 6508 - Prin Of Suzuki Piano

MUSE 6514 - Brass Pedagogy

MUSE 6520 - Percussion Pedagogy

MUSE 6521 - Woodwind Pedagogy

MUSE 6802 - Level I Orff-Schulwerk

MUSE 7002 - Teaching Music in Higher Edu

MUSE 7101 - Jazz Program Admin

MUSE 7103 - Level II Orff-Schulwrk

MUSE 7104 - Level III Orff Schlwrk

MUSE 7202 - Music Early Childhood

MUSE 7203 - Choral Lit & Tech

MUSE 7204 - Inst Lit & Tech

MUSE 7207 - Measure Music Behavior

MUSE 7210 - Proj Elem Mus Curr

MUSE 7211 - Proj Sced Mus Curr

MUSE 7213 - Orchtrtn Orff Instrm

MUSE 7214 - Master Class Orff Schul

MUSE 7216 - Class Piano Pedg Proj

MUSE 7217 - Adv Collab Tech

MUSE 7219 - Concepts/Teach/Learn

MUSE 7220 - Research Music Education

MUSE 7221 - Music Spec Populations

MUSE 7222 - Rsrch Appl Music Education

MUSE 7260 - Special Topics in Music Education

MUSE 7261 - Special Topics in Music Education

MUSE 7262 - Special Topics in Music Education

MUSE 7263 - Special Topics in Music Education

MUSE 7264 - Special Topics in Music Education

MUSE 7265 - Special Topics in Music Education

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MUSE 7277 - Special Topics in Music Education

MUSE 7278 - Special Topics in Music Education

MUSE 7279 - Special Topics in Music Education

MUSE 7402 - Hist Phil Music Ed

MUSE 7403 - Survey Research Mus Ed

MUSE 7404 - Assessment in Music Classroom **

MUSE 7501 - Vocal Pedagogy 1

MUSE 7502 - Vocal Pedagogy 2

MUSE 7503 - Intro Suzuki Piano

MUSE 7504 - Suzuki Piano Lit/Tech I

MUSE 7511 - Projects Piano Pedagogy

MUSE 7513 - Piano Pedagogy I

MUSE 7514 - Piano Pedagogy II

MUSE 7515 - Class Piano Pedagogy

MUSE 7516 - Adv Prob in Singing Diction

MUSE 7520 - Jazz Pedagogy

MUSE 7600 - Experiential Learning Credit

MUSE 7601 - Suzuki String Pedag I

MUSE 7602 - Suzuki String Pedag II

MUSE 7603 - Suzuki String Pedag III

MUSE 7604 - Suzuki String Pedag IV

MUSE 7605 - Music Dev & Learning

MUSE 7606 - Desc/Exp Research Music

MUSE 7607 - Choral Rehearsal Tech **

MUSE 7608 - Instr Ens Rehearsl Tech

MUSE 7609 - Choral Conduction Techn

MUSE 7702 - Instrum/Wind Conducting

MUSE 7801 - Independent Study

MUSE 7995 - Master's Project Music Ed

MUSE 7996 - Thesis

MUSE 7998 - Orff Practicum

MUSE 8002 - Teaching Music in Higher Education

MUSE 8202 - Music Early Childhood

MUSE 8203 - Choral Lit & Tech

MUSE 8204 - Inst Lit & Tech

MUSE 8207 - Measure Music Behavior

MUSE 8210 - Proj Elem Mus Curr

MUSE 8211 - Proj Sced Mus Curr

MUSE 8213 - Orchtrtn Orff Instrm

MUSE 8217 - Adv Collab Tech

MUSE 8219 - Concepts/Teach/Learn

MUSE 8220 - Research Music Education

MUSE 8221 - Music Spec Populations

MUSE 8222 - Rsrch Appl Music Education

MUSE 8260 - Special Topics in Music Education

MUSE 8261 - Special Topics in Music Education

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MUSE 8277 - Special Topics in Music Education

MUSE 8278 - Special Topics in Music Education

MUSE 8279 - Special Topics in Music Education

MUSE 8402 - Hist Phil Music Ed

MUSE 8403 - Survey Research Mus Ed

MUSE 8404 - Assessment in Music Classroom **

MUSE 8501 - Vocal Pedagogy I

MUSE 8502 - Vocal Pedagogy II

MUSE 8506 - Ind Study Suzuki Teach

MUSE 8516 - Adv Prob in Singing Diction

MUSE 8600 - Experiential Learning Credit

MUSE 8605 - Music Dev & Learning

MUSE 8606 - Desc/Exp Research Music

MUSE 8609 - Choral Conducting Techn

MUSE 8702 - Instrum/Wind Conducting

MUSE 8801 - Independent Study

MUSE 9000 - Dissertation

MUHL 6002 - Song Repertory I

MUHL 6003 - Song Repertory II

MUHL 6005 - Histry/Literature Organ

MUHL 6008 - The Symphony

MUHL 6009 - Choral Literature I

MUHL 6010 - Choral Literature II

MUHL 6011 - String Quart Literature

MUHL 6013 - Women And Music

MUHL 6014 - Chamber Music/Piano

MUHL 6015 - Guitar Literature

MUHL 6016 - Jazz Vocal Styles

MUHL 6018 - Oratorio Literature

MUHL 6020 - Solo Brass Literature

MUHL 6021 - Amer Amateur Brass Band

MUHL 6022 - Early Chamber Music

MUHL 6030 - Percussion Repertory

MUHL 6260 - European Music Seminar

MUHL 6260 - Special Topics in Music History

MUHL 6261 - Special Topics in Music History

MUHL 6262 - Special Topics in Music History

MUHL 6263 - Oratorio Literature

MUHL 6263 - Special Topics in Music History

MUHL 6264 - Special Topics in Music History

MUHL 6265 - Special Topics in Music History

MUHL 6266 - Special Topics in Music History

MUHL 6267 - Special Topics in Music History

MUHL 6268 - Special Topics in Music History

MUHL 6269 - Special Topics in Music History

MUHL 6304 - Music History Review

MUHL 6407 - History of Opera

MUHL 6500 - String Repertory

MUHL 6800 - World Musical Styles

MUHL 6801 - Amercn Folk/Poplr Music

MUHL 6804 - Blues

MUHL 6805 - History Of Rock & Roll

MUHL 6806 - History Of Jazz

MUHL 6807 - Memphis Music

MUHL 7003 - Piano Repertory

MUHL 7260 - Special Topics in Music History

MUHL 7261 - Special Topics in Music History

MUHL 7262 - Special Topics in Music History

MUHL 7263 - Special Topics in Music History

MUHL 7264 - Special Topics in Music History

MUHL 7265 - Special Topics in Music History

MUHL 7266 - Special Topics in Music History

MUHL 7267 - Special Topics in Music History

MUHL 7268 - Special Topics in Music History

MUHL 7269 - Special Topics in Music History

MUHL 7400 - Biblio & Rsrch Methods

MUHL 7401 - Medieval Music

MUHL 7402 - Renaissance Music

MUHL 7403 - Baroque Music

MUHL 7404 - Classic Music

MUHL 7405 - Music since 1900

MUHL 7406 - Nineteenth Cent Music

MUHL 7408 - Independent Study

MUHL 7409 - Rep For Collab Pianists

MUHL 7505 - Seminar Musicology

MUHL 7506 - Composer Studies

MUHL 7507 - Advanced Studies in Art Song

MUHL 7531 - Erly Musical Notation

MUHL 7551 - Performance Practice I

MUHL 7552 - Performance Practice II

MUHL 7600 - Experiential Learning Credit

MUHL 7800 - Fld Mthd In Ethnmsclgy

MUHL 7802 - Sem Ethnomusicology

MUHL 7804 - Intnshp Sthrn Reg Music

MUHL 7995 - Master's Portfolio

MUHL 7996 - Thesis

MUHL 8260 - Special Topics in Music History

MUHL 8261 - Special Topics in Music History

MUHL 8262 - Special Topics in Music History

MUHL 8263 - Special Topics in Music History

MUHL 8264 - Special Topics in Music History

MUHL 8265 - Special Topics in Music History

MUHL 8266 - Special Topics in Music History

MUHL 8267 - Special Topics in Music History

MUHL 8268 - Special Topics in Music History

MUHL 8269 - Special Topics in Music History

MUHL 8400 - Biblio & Rsrch Methods

MUHL 8401 - Medieval Music

MUHL 8402 - Renaissance Music

MUHL 8403 - Baroque Music

MUHL 8404 - Classic Music

MUHL 8405 - Music since 1900

MUHL 8406 - Nineteenth Cent Music

MUHL 8408 - Independent Study

MUHL 8409 - Rep For Collab Pianists

MUHL 8505 - Seminar Musicology

MUHL 8506 - Composer Studies

MUHL 8507 - Advanced Studies in Art Song

MUHL 8531 - Erly Musical Notation

MUHL 8551 - Performance Practice I

MUHL 8552 - Performance Practice II

MUHL 8600 - Experiential Learning Credit

MUHL 8800 - Fld Mthd In Ethnmsclgy

MUHL 8801 - Ethnomusicology

MUHL 8802 - Sem Ethnomusicology

MUHL 8804 - Intnshp Sthrn Reg Music

MUHL 8805 - Trnscrpt/Anly Etnmsclgy

MUHL 8806 - Sem Southern Reg Music

MUHL 9000 - Dissertation

MUID 6260 - Special Topics in Commercial Music

MUID 6261 - Special Topics in Commercial Music

MUID 6262 - Special Topics in Commercial Music

MUID 6263 - Special Topics in Commercial Music

MUID 6264 - Special Topics in Commercial Music

MUID 6265 - Special Topics in Commercial Music

MUID 6266 - Special Topics in Commercial Music

MUID 6267 - Special Topics in Commercial Music

MUID 6268 - Special Topics in Commercial Music

MUID 6269 - Special Topics in Commercial Music

MUID 6603 - Copyright/Music Publish

MUID 6825 - Concerts and Touring

MUID 6840 - Entrepreneurship Comm Music

MUID 7408 - Independent Study

MUID 7699 - Media Music Prod Prac

MUID 7800 - Tech Applic In Music

MUID 8408 - Independent Study

MUID 8800 - Tech Applic In Music

MUTC 6202 - Music Theory Review

MUTC 6260 - Special Topics in Theory and Composition

MUTC 6261 - Special Topics in Theory and Composition

MUTC 6262 - Special Topics in Theory and Composition

MUTC 6263 - Special Topics in Theory and Composition

MUTC 6264 - Special Topics in Theory and Composition

MUTC 6265 - Special Topics in Theory and Composition

MUTC 6266 - Special Topics in Theory and Composition

MUTC 6267 - Special Topics in Theory and Composition

MUTC 6268 - Special Topics in Theory and Composition

MUTC 6269 - Special Topics in Theory and Composition

MUTC 6501 - Composition

MUTC 7010 - Adv Improv Pract/Mat

MUTC 7101 - Pedagogy Of Theory

MUTC 7104 - Analytic Studies Jazz

MUTC 7201 - Theory I

MUTC 7202 - Theory II

MUTC 7203 - Independent Study

MUTC 7204 - History of Music Theory

MUTC 7205 - Theory III

MUTC 7207 - Theories of Musical Meaning

MUTC 7260 - Special Topics in Theory and Composition

MUTC 7261 - Special Topics in Theory and Composition

MUTC 7262 - Special Topics in Theory and Composition

MUTC 7263 - Special Topics in Theory and Composition

MUTC 7264 - Special Topics in Theory and Composition

MUTC 7264 - Theories of Musical Meaning

MUTC 7265 - Special Topics in Theory and Composition

MUTC 7266 - Special Topics in Theory and Composition

MUTC 7267 - Special Topics in Theory and Composition

MUTC 7268 - Special Topics in Theory and Composition

MUTC 7269 - Special Topics in Theory and Composition

MUTC 7270 - Special Topics in Theory and Composition

MUTC 7271 - Special Topics in Theory and Composition

MUTC 7272 - Special Topics in Theory and Composition

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MUTC 7274 - Special Topics in Theory and Composition

MUTC 7275 - Special Topics in Theory and Composition

MUTC 7276 - Special Topics in Theory and Composition

MUTC 7277 - Special Topics in Theory and Composition

MUTC 7278 - Special Topics in Theory and Composition

MUTC 7279 - Special Topics in Theory and Composition

MUTC 7280 - Special Topics in Theory and Composition

MUTC 7281 - Special Topics in Theory and Composition

MUTC 7282 - Special Topics in Theory and Composition

MUTC 7283 - Special Topics in Theory and Composition

MUTC 7284 - Special Topics in Theory and Composition

MUTC 7285 - Special Topics in Theory and Composition

MUTC 7286 - Special Topics in Theory and Composition

MUTC 7287 - Special Topics in Theory and Composition

MUTC 7288 - Special Topics in Theory and Composition

MUTC 7289 - Special Topics in Theory and Composition

MUTC 7501 - Composition

MUTC 7502 - Elec Cmpstnl Techniques

MUTC 7505 - Seminar in Music Theory

MUTC 7599 - Composition Practicum

MUTC 7600 - Experiential Learning Credit

MUTC 7801 - Analytical Techniques

MUTC 7802 - Contemp Approach Mus Analysis

MUTC 7996 - Thesis

MUTC 8101 - Pedagogy Of Theory

MUTC 8201 - Theory I

MUTC 8202 - Theory II

MUTC 8203 - Independent Study

MUTC 8204 - History of Music Theory

MUTC 8205 - Theory III

MUTC 8207 - Theories of Musical Meaning

MUTC 8260 - Special Topics in Theory and Composition

MUTC 8261 - Special Topics in Theory and Composition

MUTC 8262 - Special Topics in Theory and Composition

MUTC 8263 - Special Topics in Theory and Composition

MUTC 8264 - Special Topics in Theory and Composition

MUTC 8264 - Theories of Musical Meaning

MUTC 8265 - Special Topics in Theory and Composition

MUTC 8266 - Special Topics in Theory and Composition

MUTC 8267 - Special Topics in Theory and Composition

MUTC 8268 - Special Topics in Theory and Composition

MUTC 8269 - Special Topics in Theory and Composition

MUTC 8270 - Special Topics in Theory and Composition

MUTC 8271 - Special Topics in Theory and Composition

MUTC 8272 - Special Topics in Theory and Composition

MUTC 8273 - Special Topics in Theory and Composition

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MUTC 8275 - Special Topics in Theory and Composition

MUTC 8276 - Special Topics in Theory and Composition

MUTC 8277 - Special Topics in Theory and Composition

MUTC 8278 - Special Topics in Theory and Composition

MUTC 8279 - Special Topics in Theory and Composition

MUTC 8280 - Special Topics in Theory and Composition

MUTC 8281 - Special Topics in Theory and Composition

MUTC 8282 - Special Topics in Theory and Composition

MUTC 8283 - Special Topics in Theory and Composition

MUTC 8284 - Special Topics in Theory and Composition

MUTC 8285 - Special Topics in Theory and Composition

MUTC 8286 - Special Topics in Theory and Composition

MUTC 8287 - Special Topics in Theory and Composition

MUTC 8288 - Special Topics in Theory and Composition

MUTC 8289 - Special Topics in Theory and Composition

MUTC 8501 - Composition

MUTC 8502 - Elec Cmpstnl Techniques

MUTC 8505 - Seminar in Music Theory

MUTC 8599 - Composition Practicum

MUTC 8600 - Experiential Learning Credit

MUTC 8801 - Analytical Techniques

MUTC 8802 - Contemp Approach Mus Analysis

MUTC 9000 - Dissertation

NURS 6110 - Rsrch/Evd Based Prctice

NURS 6120 - Contempry Issues/Trends

NURS 6317 - Population Focused Nursing/RNs

NURS 6326 - Global Perspectives on Nursing

NURS 7000 - Theoretical Foundations **

NURS 7001 - Health Care Policy **

NURS 7002 - Adv Nursing Research **

NURS 7003 - Adv Role Development **

NURS 7007 - Adv Role Dev for Nurse Execs

NURS 7008 - Global Persp Nurs/Hlth Policy

NURS 7101 - Adv Health Assessment **

NURS 7102 - Adv Health Assmt/Clinic **

NURS 7103 - Adv Pathophysiology **

NURS 7104 - Adv Pharmacology **

NURS 7110 - Independent Study

NURS 7204 - Curriculum Design & Ed Theory **

NURS 7205 - Evaluation Mthds in NursingEdu **

NURS 7207 - Clinical Focus Practicum **

NURS 7209 - Nursing Education Practicum **

NURS 7301 - Nursing Admin I **

NURS 7302 - Nursing Admin II

NURS 7303 - Health Care Finance **

NURS 7304 - Human Resources Mgmt **

NURS 7305 - Quality Management **

NURS 7307 - Nursing Management Practicum

NURS 7309 - Nursing Admin Pract **

NURS 7332 - Rsrce Alloc Nsg/Hlth Care

NURS 7400 - Intro Clncl Hlthcare Environ

NURS 7401 - Intro Healthcare Informatics

NURS 7402 - Health Care Info Sys & Tech

NURS 7403 - Proj Mgt Dec-Anlys HC Info Sys

NURS 7404 - Proj Mgt Imp & Eval HC Inf Sys **

NURS 7405 - Hlth Care Data Analysis

NURS 7406 - Hlthcare Data Anlys/Evd Bsd Pr

NURS 7407 - Informatics Applications I

NURS 7409 - Informatics Applications II

NURS 7410 - Informatics Practicum

NURS 7505 - Advanced Adult Health Nursing **

NURS 7515 - Adv Psych/Mentl Health Nursing

NURS 7525 - Ecg/Crit Care Nurses **

NURS 7545 - Adv Womens Hlth/Perinatal Nurs **

NURS 7601 - Family Nurse Practnr I **

NURS 7602 - Family Nurs Prac I/Clin **

NURS 7603 - Family Nurs Practnr II **

NURS 7604 - Family Nurs Pract II/CLN **

NURS 7605 - Family Nurs Pract III **

NURS 7606 - Family Nurs Prac III Cln **

NURS 7609 - FNP Practicum **

NURS 7633 - Pediatric Nurs II

NURS 7635 - Advanced Pediatric Nursing **

NURS 7810 - Special Topics in Nursing

NURS 7811 - Special Topics in Nursing

NURS 7812 - Special Topics in Nursing

NURS 7813 - Special Topics in Nursing

NURS 7814 - Special Topics in Nursing

NURS 7815 - Special Topics in Nursing

NURS 7816 - Special Topics in Nursing

NURS 7817 - Special Topics in Nursing

NURS 7818 - Special Topics in Nursing

NURS 7819 - Special Topics in Nursing

NURS 7820 - Special Topics in Nursing

NURS 7901 - Comm/Rel Bldg Nurse Exec

NURS 7902 - Dev Organizational Ldrshp

NURS 7903 - Accountability,Advocacy,Ethics

NURS 7904 - Fin/Hum Rsrcs Patient Care

NURS 7905 - Improving Patient Care Del

NURS 7906 - Mktg Strat/Inform Mgmt

NURS 7907 - Evidenc-Based Ldrshp Pract

NURS 7908 - Healthcare Finance Practicum

NURS 7909 - Nurse Executive Practicum

NURS 7990 - Scholarly Synthesis **

NURS 7996 - Thesis

NURS 8111 - Philosophy of Science

NURS 8112 - Middle-Range Theories in Nsg

NURS 8113 - Health Equity Research

NURS 8211 - Qualitative Methods

NURS 8213 - Quantitative Methods

NURS 8311 - Doctoral Research Seminar I

NURS 8312 - Doctoral Research Seminar II

NURS 8313 - Resp. Conduct of Research

NURS 8314 - Doctoral Research Practicum

NURS 9000 - Doctoral Dissertation

NUTR 6001 - Special Topics NUTR

NUTR 6002 - Special Topics NUTR

NUTR 6003 - Special Topics NUTR

NUTR 6004 - Special Topics NUTR

NUTR 6005 - Special Topics NUTR

NUTR 6006 - Special Topics NUTR

NUTR 6602 - Community Nutrition

NUTR 6702 - Food Production Intern

NUTR 6722 - Catering Internship

NUTR 6902 - Study Tour/Foods/Nutr

NUTR 7000 - Sport Nutrition **

NUTR 7001 - Nutraceuticals and Dietary Sup **

NUTR 7002 - Exer & Nutrition Immunology **

NUTR 7003 - Practicum in Sport Nutrition

NUTR 7100 - Intr Wet Lab Meth Hlth Studies

NUTR 7152 - Problems in NUTR

NUTR 7182 - Environmental Nutrition **

NUTR 7183 - Complementary NUTR **

NUTR 7205 - Nutrition Care Acute/Chronic I

NUTR 7206 - Lifetime Nutr & Hlth

NUTR 7212 - Appl Nutr for Health

NUTR 7305 - Nutrition Care Acute/ChronicII

NUTR 7402 - Intrnshp Htr Ed/Food

NUTR 7405 - Pharmacol Nutr Prof

NUTR 7412 - Cellular Nutrition I

NUTR 7415 - Prof Issues Nutr

NUTR 7422 - Cellular Nutrition II

NUTR 7452 - Comparative Digestion/Nutr

NUTR 7454 - Molecular Nutrition

NUTR 7481 - Clin Intern NUTR

NUTR 7482 - Clinical Residency NUTR

NUTR 7522 - Clncl Nutritn/Food Servc Mgmt

NUTR 7710 - Humanitarian Nutrition **

NUTR 7712 - Cultural Nutrition and Foods **

NUTR 7720 - Food Policy

NUTR 7722 - Sustainable Food System **

NUTR 7800 - Internship in Environ NUTR **

NUTR 7850 - Seminar in Environmental NUTR **

NUTR 7950 - Applied Project in NUTR **

NUTR 8000 - Sport Nutrition

NUTR 8001 - Nutraceuticals and Dietary Sup

NUTR 8002 - Exer & Nutrition Immunology

NUTR 8100 - Intr Wet Lab Meth Hlth Studies

NUTR 8152 - Problems in NUTR

NUTR 8412 - Cellular Nutrition I

NUTR 8422 - Cellular Nutrition II

NUTR 8452 - Comparative Digestion/NUTR

NUTR 8454 - Molecular Nutrition

PHIL 6211 - Ancient Philosophy

PHIL 6311 - Modern Philosophy

PHIL 6421 - Philosophy Of Mind

PHIL 6422 - Rec Anglo American Phil

PHIL 6441 - Recent Continentl Phil

PHIL 6551 - Social & Political Phil

PHIL 6632 - Advanced Logic

PHIL 6661 - Philosophy Of Science

PHIL 6671 - Aesthetics

PHIL 6801 - Special Topics in Philosophy

PHIL 6802 - Special Topics in Philosophy

PHIL 6803 - Special Topics in Philosophy

PHIL 6804 - Special Topics in Philosophy

PHIL 6805 - Special Topics in Philosophy

PHIL 6806 - Special Topics in Philosophy

PHIL 6807 - Special Topics in Philosophy

PHIL 6808 - Special Topics in Philosophy

PHIL 6809 - Special Topics in Philosophy

PHIL 6810 - Special Topics in Philosophy

PHIL 6811 - Special Topics in Philosophy

PHIL 6812 - Special Topics in Philosophy

PHIL 6813 - Special Topics in Philosophy

PHIL 6814 - Special Topics in Philosophy

PHIL 6815 - Special Topics in Philosophy

PHIL 6816 - Special Topics in Philosophy

PHIL 6817 - Special Topics in Philosophy

PHIL 6818 - Special Topics in Philosophy

PHIL 6819 - Special Topics in Philosophy

PHIL 6820 - Special Topics in Philosophy

PHIL 7001 - Proseminar

PHIL 7002 - Tchng Skills Grad Asst

PHIL 7020 - Seminar Major Figures

PHIL 7030 - Sem Continentl Phil

PHIL 7040 - Sem Normative Phil

PHIL 7201 - Sem Classical Phil

PHIL 7203 - Sem Contemporary Phil

PHIL 7301 - Sem Modern Phil

PHIL 7414 - Seminar In Metaphysics

PHIL 7421 - Seminar In Epistemology

PHIL 7442 - Seminar On Heidegger

PHIL 7514 - Cognitive Science Seminar

PHIL 7541 - Social/Political Phil

PHIL 7551 - Seminar Ethical Theory

PHIL 7800 - Special Topics in Philosophy

PHIL 7801 - Special Topics in Philosophy

PHIL 7802 - Special Topics in Philosophy

PHIL 7803 - Special Topics in Philosophy

PHIL 7804 - Special Topics in Philosophy

PHIL 7805 - Special Topics in Philosophy

PHIL 7806 - Special Topics in Philosophy

PHIL 7807 - Special Topics in Philosophy

PHIL 7808 - Special Topics in Philosophy

PHIL 7809 - Special Topics in Philosophy

PHIL 7810 - Special Topics in Philosophy

PHIL 7994 - Reading And Research

PHIL 7996 - Thesis

PHIL 8001 - Proseminar

PHIL 8002 - Tchng Skills Grad Asst

PHIL 8020 - Seminar Major Figures

PHIL 8030 - Sem Continentl Phil

PHIL 8040 - Sem Normative Phil

PHIL 8051 - Collo Phil Problems

PHIL 8201 - Sem Classical Phil

PHIL 8203 - Sem Contemporary Phil

PHIL 8252 - Sem On Aristotle

PHIL 8301 - Sem Modern Phil

PHIL 8414 - Seminar In Metaphysics

PHIL 8421 - Sem In Epistemology

PHIL 8442 - Seminar On Heidegger

PHIL 8514 - Cognitive Science Seminar

PHIL 8541 - Social/Political Phil

PHIL 8551 - Seminar Ethical Theory

PHIL 8800 - Special Topics in Philosophy

PHIL 8801 - Special Topics in Philosophy

PHIL 8802 - Special Topics in Philosophy

PHIL 8803 - Special Topics in Philosophy

PHIL 8804 - Special Topics in Philosophy

PHIL 8805 - Special Topics in Philosophy

PHIL 8806 - Special Topics in Philosophy

PHIL 8807 - Special Topics in Philosophy

PHIL 8808 - Special Topics in Philosophy

PHIL 8809 - Special Topics in Philosophy

PHIL 8810 - Special Topics in Philosophy

PHIL 8994 - Adv Reading & Research

PHIL 9000 - Dissertation

PETE 7001 - App Sci Prin/PETE

PETE 7002 - Curriculum in PETE

PETE 7003 - Tchng Indv/Team Sports

PETE 7004 - Learner Assessment PETE

PETE 7005 - Educational Gym&Dance

PETE 7006 - Instruction in PETE **

PETE 7007 - Advanced Clinical Pract

PETE 7008 - PETE Professional Seminar

PETE 7133 - Current Readings PETE

PETE 7142 - Seminar in PETE

PETE 7152 - Problems in PETE

PETE 7201 - Instructional Models/PETE

PETE 7202 - Curr & Instr Model in PETE

PETE 7203 - Assessment & Eval in PETE **

PETE 7204 - Instructional Supv/PETE

PETE 7205 - Issues In Urban PETE

PETE 7207 - Adaptive Technologies in PETE **

PETE 7501 - Organizatn/Analys PETE

PETE 7902 - Special Topics PETE

PETE 7903 - Special Topics PETE

PETE 7904 - Special Topics PETE

PETE 7905 - Special Topics PETE

PETE 7906 - Special Topics PETE

PETE 7907 - Special Topics PETE

PETE 7908 - Special Topics PETE

PETE 7909 - Special Topics PETE

PETE 7910 - Special Topics PETE

PETE 7911 - Special Topics PETE

PETE 7950 - Applied Project in PETE

PHYS 6000 - Special Topics in Physics

PHYS 6001 - Special Topics in Physics

PHYS 6002 - Special Topics in Physics

PHYS 6003 - Special Topics in Physics

PHYS 6004 - Special Topics in Physics

PHYS 6005 - Special Topics in Physics

PHYS 6006 - Special Topics in Physics

PHYS 6007 - Special Topics in Physics

PHYS 6008 - Special Topics in Physics

PHYS 6009 - Special Topics in Physics

PHYS 6020 - Soft Matter and Biological Physics

PHYS 6021 - Applied Radiation Physics

PHYS 6040 - Medical Physics

PHYS 6050 - Astrophysics I

PHYS 6051 - Astrophysics II

PHYS 6110 - Nuclear Physics

PHYS 6112 - Mechanics II

PHYS 6211 - Waves and Optics

PHYS 6212 - Electricity and Magnetism II

PHYS 6222 - Environmental Physics

PHYS 6230 - Electronics

PHYS 6410 - Introduction to Quantum Theory

PHYS 6420 - Introduction to Computational Physics

PHYS 6510 - Thermal and Statistical Physics

PHYS 6610 - Solid State Physics

PHYS 6620 - Device Physics and Microfabrication

PHYS 6720 - Materials Physics

PHYS 6820 - Materials Physics Laboratory

PHYS 7050 - Special Topics in Advanced Physics

PHYS 7051 - Special Topics in Advanced Physics

PHYS 7052 - Special Topics in Advanced Physics

PHYS 7053 - Special Topics in Advanced Physics

PHYS 7054 - Special Topics in Advanced Physics

PHYS 7055 - Special Topics in Advanced Physics

PHYS 7056 - Special Topics in Advanced Physics

PHYS 7057 - Special Topics in Advanced Physics

PHYS 7058 - Special Topics in Advanced Physics

PHYS 7059 - Special Topics in Advanced Physics

PHYS 7060 - Individual Study in Advanced Physics

PHYS 7080 - Teaching Skills for Graduate Assistants

PHYS 7090 - Professional Development Workshop

PHYS 7100 - Classical Mechanics

PHYS 7200 - Quantum Mechanics I

PHYS 7201 - Quantum Mechanics II

PHYS 7300 - Electrodynamics

PHYS 7375 - Methods of Mathematical Physics

PHYS 7376 - Methods of Mathematical Physics II

PHYS 7385 - Methods in Computational Physics

PHYS 7386 - Methods of Theoretical Physics

PHYS 7390 - Polymer Physics

PHYS 7520 - Statistical Mechanics

PHYS 7710 - Advanced Topics in Spectroscopy

PHYS 7995 - Seminar

PHYS 7996 - Thesis

PHYS 8100 - Classical Mechanics

PHYS 8200 - Quantum Mechanics I

PHYS 8201 - Quantum Mechanics II

PHYS 8300 - Electrodynamics

PHYS 8385 - Methods in Computational Physics

PHYS 8386 - Methods of Theoretical Physics

PHYS 8520 - Statistical Mechanics

PHYS 9000 - Dissertation

POLS 6101 - Political Statistics

POLS 6200 - Envrnmntl Law/Polcy/Reg

POLS 6211 - Const Law Natl Power

POLS 6212 - Const Law Civil Liberty

POLS 6222 - Urban Politics

POLS 6223 - Issues/Urban Politics

POLS 6230 - Legislative Interns

POLS 6315 - Revolution/Pol Violence

POLS 6317 - Democratic Transitions

POLS 6405 - Origin/Dev Am Pol Thght

POLS 6504 - International Law

POLS 6508 - Theories Intl Relations

POLS 6510 - Politics Global Econ

POLS 6511 - International Conflict

POLS 6512 - Global Environmental Politics

POLS 6710 - Special Topics in Political Science

POLS 6711 - Special Topics in Political Science

POLS 6712 - Special Topics in Political Science

POLS 6713 - Special Topics in Political Science

POLS 6714 - Special Topics in Political Science

POLS 6715 - Special Topics in Political Science

POLS 6716 - Special Topics in Political Science

POLS 6717 - Special Topics in Political Science

POLS 6718 - Special Topics in Political Science

POLS 6719 - Special Topics in Political Science

POLS 7100 - Sem Scope/Meth Pol Sci

POLS 7101 - Political Statistics

POLS 7201 - Seminar/Amer Politics

POLS 7202 - Seminar US Government

POLS 7203 - Seminar in Public Policymaking

POLS 7204 - Representation in American Pol

POLS 7205 - Public Opinion & Pol Behavior

POLS 7302 - Sem Comp Politics

POLS 7303 - Sem Political Devlpmnt

POLS 7304 - Seminar/Human Rights

POLS 7317 - Democratization

POLS 7401 - Sem Political Theory

POLS 7402 - Topics in Political Thought

POLS 7501 - Sem Interntl Relations

POLS 7502 - Sem Intnl Confl/Security

POLS 7504 - Sem Gov Western Europe

POLS 7505 - Sem Latin Amer Politics

POLS 7506 - Foreign Policy

POLS 7508 - Interntnl Reltns Theory

POLS 7510 - Politics Global Economy

POLS 7512 - Politics of Environment Change

POLS 7702 - Ind Study Pol Sci

POLS 7710 - Special Topics in Political Science

POLS 7711 - Special Topics in Political Science

POLS 7712 - Special Topics in Political Science

POLS 7713 - Special Topics in Political Science

POLS 7714 - Special Topics in Political Science

POLS 7715 - Special Topics in Political Science

POLS 7716 - Special Topics in Political Science

POLS 7717 - Special Topics in Political Science

POLS 7718 - Special Topics in Political Science

POLS 7719 - Special Topics in Political Science

POLS 7996 - Thesis

POLS 8201 - Seminar/Amer Politics

POLS 8302 - Sem Comp Politics

POLS 8501 - Sem Interntl Relations

POLS 8702 - Ind Study Pol Sci

POLS 8710 - Special Topics in Political Science

POLS 8711 - Special Topics in Political Science

POLS 8712 - Special Topics in Political Science

POLS 8713 - Special Topics in Political Science

POLS 8714 - Special Topics in Political Science

POLS 8715 - Special Topics in Political Science

POLS 8716 - Special Topics in Political Science

POLS 8717 - Special Topics in Political Science

POLS 8718 - Special Topics in Political Science

POLS 8719 - Special Topics in Political Science

PORT 6024 - Brazilian Short Story

PRST 7040 - Human Resources Mgmt **

PRST 7100 - Prof Envron/Issue/Ethic **

PRST 7105 - Project Planning & Scheduling **

PRST 7200 - Globalization/Profsns **

PRST 7300 - Research Methods **

PRST 7310 - Leadership/Organization **

PRST 7400 - Instr Dsgn Train/Develpmt **

PRST 7410 - Evaluation of Learning **

PRST 7420 - Org Needs Assessment **

PRST 7430 - Adv Instr Desgn/Train&Devel

PRST 7440 - Engage the Adult Online Learnr **

PRST 7450 - Computer-Based Instruction **

PRST 7470 - Facilitation of Learning **

PRST 7500 - Foundation/Leadership **

PRST 7600 - Statistical Analysis **

PRST 7700 - Conflict Mgmt/Negotiatn **

PRST 7770 - Comp Based Decsn Model **

PRST 7800 - Organizational Change Skills **

PRST 7910 - Employment & HR Law **

PRST 7920 - Diversity in the Workplace **

PRST 7930 - Compensation and Benefits **

PRST 7940 - Recruitment,Selection,Retentio **

PRST 7998 - Professional Project **

PSYC 6513 - Psychology of Grief/Loss

PSYC 6513 - Psychology of Grief/Loss

PSYC 7000 - History/System Psyc

PSYC 7010-29-8010-29 - Special Topics in Psychology

PSYC 7110 - Ethics And Psychology

PSYC 7203 - Behavior Analysis

PSYC 7207 - Developmental Psyc

PSYC 7208 - Psyc Of Perception

PSYC 7211 - Cognitive Processes

PSYC 7212 - Industrial Psychology

PSYC 7213 - Personnel Psychology

PSYC 7214 - Industrial Training

PSYC 7215 - Organizational Psyc

PSYC 7217 - Social Psychology

PSYC 7218 - Incr Orgnl Productivity

PSYC 7219 - Soc/Persnlty Devel

PSYC 7220 - Social Cognition

PSYC 7221 - Natural Lang Processng

PSYC 7222 - Psychology Human Memory

PSYC 7223 - Intelligent Tutoring

PSYC 7301 - Research Design & Meth

PSYC 7302 - Adv Statistics Psych I

PSYC 7303 - Adv Statistics Psych II

PSYC 7304 - Meas Th & Psychomet

PSYC 7305 - Quant Meth Review Rsch

PSYC 7306 - Linear Struct Modeling

PSYC 7307 - Models Program Eval

PSYC 7308 - Appl Multivariate Stat

PSYC 7309 - Focus Group Research

PSYC 7310 - Mixed-Model Regress Anly

PSYC 7311 - Appl Cat Data Analysis

PSYC 7312 - Qualitative Resrch/Psyc

PSYC 7313 - Computational Models Cog Sci

PSYC 7314 - Programming Computation in Psych

PSYC 7315 - Randomized Clinical Trials

PSYC 7407 - Cognition & Emotion

PSYC 7411 - Psyc Process Research

PSYC 7412 - Psychopathology

PSYC 7416 - Child Psychopathology

PSYC 7419 - Family Therapy

PSYC 7420 - Personal Construct Thry

PSYC 7428 - Foundatns Clinical Psyc

PSYC 7430 - Clin Assessment/Ability

PSYC 7432 - Clinic Asses/Case Cncpt

PSYC 7434 - Clin Psychotherapies

PSYC 7435 - Intro To Psychotherapy

PSYC 7438 - Pract Clinical Trtmt

PSYC 7439 - Clin Assessmnt/Report Wrtng

PSYC 7440 - Behavioral Medicine I

PSYC 7441 - Psyc/Medical Illness

PSYC 7506 - Sem Clinical Psyc

PSYC 7507 - Sem Industrial Psyc

PSYC 7509 - Sem School Psychology

PSYC 7510 - Sem Organztnl Psych

PSYC 7512 - Sem Develpmtal Psyc

PSYC 7514 - Sem Cognitive Science

PSYC 7515 - Sem Social Psychology

PSYC 7516 - Issues Psychothrpy Rsch

PSYC 7517 - Grant Prop Writing/Psyc

PSYC 7520 - Tchng Skills Grad Asst

PSYC 7521 - Teaching of Psychology

PSYC 7601 - Res Prac Gen Psych

PSYC 7602 - Res Prac Phys Psych

PSYC 7603 - Res Prac Exp Psych

PSYC 7604 - Res Prac Comp Psych

PSYC 7605 - Res Prac Social Psyc

PSYC 7606 - Res Prac Clinical Psyc

PSYC 7607 - Res Prac Devlpmntl Psyc

PSYC 7608 - Res Prac Neuropsyc

PSYC 7609 - Res Prac School Psych

PSYC 7610 - Field Prac Clin Psyc

PSYC 7611 - Field Prac Soc-Indust

PSYC 7614 - Prac School Psyc

PSYC 7615 - Special Problems

PSYC 7616 - Clin Prac Neuropsyc

PSYC 7618 - Res Prac Cogn Psych/Sci

PSYC 7619 - Child/Family Practicum

PSYC 7619 - Child/Family Practicum

PSYC 7621 - Research Practicum

PSYC 7622 - Res Prac: Behav Med

PSYC 7701 - Behavioral Neuroscience

PSYC 7705 - Neuropsychopharmacology

PSYC 7800 - Intro School Psychology

PSYC 7802 - Child Disability/Family

PSYC 7803 - Psych Ed Assessmnt I

PSYC 7804 - Psych Ed Assessmnt II

PSYC 7805 - Psych Consultation

PSYC 7806 - Sch Psych Interventions

PSYC 7807 - Academic Interventions

PSYC 7808 - Psychoed Assessmnt III

PSYC 7809 - Adv Sch Psych Practicum

PSYC 7812 - Intern: School Psyc

PSYC 7900 - Psychology of Gender

PSYC 7996 - Thesis

PSYC 7997 - Specialty Review Paper (MSGP)

PSYC 8000 - History/System Psyc

PSYC 8110 - Ethics And Psychology

PSYC 8203 - Behavior Analysis

PSYC 8207 - Developmental Psyc

PSYC 8208 - Psyc Of Perception

PSYC 8211 - Cognitive Processes

PSYC 8212 - Industrial Psychology

PSYC 8213 - Personnel Psychology

PSYC 8214 - Industrial Training

PSYC 8215 - Organizational Psyc

PSYC 8217 - Social Psychology

PSYC 8218 - Incr Orgnl Productivity

PSYC 8219 - Soc/Persnlty Devel

PSYC 8220 - Social Cognition

PSYC 8221 - Natural Lang Processng

PSYC 8222 - Psychology Human Memory

PSYC 8223 - Intelligent Tutoring

PSYC 8301 - Research Design & Meth

PSYC 8302 - Adv Statistics Psych I

PSYC 8303 - Adv Statistics Psych II

PSYC 8304 - Meas Th & Psychomet

PSYC 8305 - Quant Meth Review Rsch

PSYC 8306 - Linear Struct Modeling

PSYC 8307 - Models Program Eval

PSYC 8308 - Appl Multivariate Stat

PSYC 8309 - Focus Group Research

PSYC 8310 - Mixed-Model Regress Anly

PSYC 8311 - Appl Cat Data Analysis

PSYC 8312 - Qualitative Resrch/Psyc

PSYC 8313 - Computational Models Cog Sci

PSYC 8314 - Programming Computation in Psych

PSYC 8315 - Randomized Clinical Trials

PSYC 8407 - Cognition & Emotion

PSYC 8411 - Psyc Process Research

PSYC 8412 - Psychopathology

PSYC 8416 - Child Psychopathology

PSYC 8419 - Family Therapy

PSYC 8420 - Personal Construct Thry

PSYC 8428 - Foundatns Clinical Psyc

PSYC 8430 - Clin Assessment/Ability

PSYC 8432 - Clinic Asses/Case Cncpt

PSYC 8434 - Clin Psychotherapies

PSYC 8435 - Intro To Psychotherapy

PSYC 8438 - Pract Clinical Trtmt

PSYC 8439 - Clin Assessmnt/Report Wrtng

PSYC 8440 - Behavioral Medicine I

PSYC 8441 - Psyc/Medical Illness

PSYC 8506 - Sem Clinical Psyc

PSYC 8507 - Sem Industrial Psyc

PSYC 8509 - Sem School Psychology

PSYC 8510 - Sem Organztnl Psych

PSYC 8512 - Sem Develpmtal Psyc

PSYC 8514 - Sem Cognitive Science

PSYC 8515 - Sem Social Psychology

PSYC 8516 - Issues Psychothrpy Rsch

PSYC 8517 - Grant Prop Writing/Psyc

PSYC 8520 - Tchng Skills Grad Asst

PSYC 8521 - Teaching of Psychology

PSYC 8601 - Res Prac Gen Psych

PSYC 8602 - Res Pract Phys Psyc

PSYC 8603 - Res Prac Exp Psyc

PSYC 8604 - Res Prac Comp Psych

PSYC 8605 - Res Prac Social Psych

PSYC 8606 - Res Prac Clinical Psyc

PSYC 8607 - Res Prac Devlpmntl Psyc

PSYC 8608 - Res Prac Neuropsych

PSYC 8609 - Res Prac School Psych

PSYC 8610 - Field Prac Clin Psyc

PSYC 8611 - Fld Prac Soc-Indust

PSYC 8614 - Prac School Psyc

PSYC 8615 - Special Problems

PSYC 8616 - Clin Pract Neuropsyc

PSYC 8618 - Res Prac Cogn Psych/Sci

PSYC 8619 - Child/Family Practicum

PSYC 8620 - Major Area Paper

PSYC 8621 - Research Practicum

PSYC 8622 - Res Prac: Behav Med

PSYC 8701 - Behavioral Neuroscience

PSYC 8705 - Neuropsychopharmacology

PSYC 8707 - Professional Issues

PSYC 8800 - Intro School Psychology

PSYC 8802 - Child Disability/Family

PSYC 8803 - Psych Ed Assessmnt I

PSYC 8804 - Psych Ed Assessmnt II

PSYC 8805 - Psych Consultation

PSYC 8806 - Sch Psych Interventions

PSYC 8807 - Academic Interventions

PSYC 8808 - Psychoed Assessment III

PSYC 8809 - Adv Sch Psych Practicum

PSYC 8812 - Intern: School Psyc

PSYC 8900 - Psychology of Gender

PSYC 8999 - Predoctoral Internship

PSYC 9000 - Dissertation

PADM 6101 - Political Statistics

PADM 6207 - Health Politics/Policy

PADM 6221 - Issues/Urban Admin

PADM 6225 - Application/Urban Admin

PADM 6228 - Grant Development/Management

PADM 6401 - Comparative Public Adm

PADM 6412 - Neigh Dev/Social Entrep

PADM 6710 - Special Topics in Public Administration

PADM 6711 - Special Topics in Public Administration

PADM 6712 - Special Topics in Public Administration

PADM 6713 - Special Topics in Public Administration

PADM 6714 - Special Topics in Public Administration

PADM 6715 - Special Topics in Public Administration

PADM 6716 - Special Topics in Public Administration

PADM 6717 - Special Topics in Public Administration

PADM 6718 - Special Topics in Public Administration

PADM 6719 - Special Topics in Public Administration

PADM 7213 - Sem Publ Pol Analysis

PADM 7224 - Sem Urban Problems

PADM 7235 - The Memphis Economy

PADM 7600 - Sem Adm Theory & Ethics

PADM 7601 - Research Methods

PADM 7602 - Public Bdgt Adm/Fin **

PADM 7603 - Pblc/Nonprofit Contr

PADM 7604 - Social Science In Law

PADM 7605 - Human Resources Admin **

PADM 7606 - Sem Administrative Law

PADM 7607 - Public Mgmt Leadership

PADM 7608 - Public Mgmt Inf Sys

PADM 7609 - Sem Administratv Ethics

PADM 7610 - Internship Public Admin

PADM 7611 - Practicum

PADM 7612 - Program/Policy Evaltn

PADM 7614 - Interagency Collab/Adm

PADM 7635 - Issues Pub Human Resour

PADM 7641 - Thry/Prac Nonprofit Adm **

PADM 7642 - Res Dev Nonprofit Org **

PADM 7643 - Semn Nonprofit Adm&Philanth **

PADM 7661 - Contemp Persp PA

PADM 7662 - Application/Public Serv

PADM 7663 - Issue Public Mgmt Polcy

PADM 7702 - Independent Study

PADM 7710 - Special Topics in PA

PADM 7710 - Special Topics in Public Administration

PADM 7711 - Special Topics in Public Administration

PADM 7712 - Special Topics in Public Administration

PADM 7713 - Special Topics in Public Administration

PADM 7714 - Special Topics in Public Administration

PADM 7715 - Special Topics in Public Administration

PADM 7716 - Special Topics in Public Administration

PADM 7717 - Special Topics in Public Administration

PADM 7718 - Special Topics in Public Administration

PADM 7719 - Special Topics in Public Administration

PADM 7720 - Social Entrepreneurship

PADM 7721 - Performance Measurement

PADM 7996 - Thesis

PADM 8213 - Sem Publ Pol Analysis

PADM 8224 - Sem Urban Problems

PADM 8600 - Sem Adm Theory & Ethics

PADM 8601 - Research Methods

PADM 8602 - Public Bdgt Adm/Fin

PADM 8603 - Pblc/Nonprofit Contr

PADM 8605 - Human Resources Admin

PADM 8606 - Sem Administrative Law

PADM 8607 - Public Mgmt Leadership

PADM 8608 - Public Mgmt Ing Sys

PADM 8609 - Sem Administratv Ethics

PADM 8612 - Program/Policy Evaltn

PADM 8614 - Interagency Collab/Adm

PADM 8634 - Training/Dev Human Res

PADM 8635 - Issues Pub Human Resour

PADM 8641 - Thry/Prac Nonprofit Adm

PADM 8642 - Res Dev Nonprofit Org

PADM 8643 - Semn Nonprofit Adm&Philanth

PADM 8662 - Application/Public Serv

PADM 8663 - Issue Public Mgmt Polcy

PADM 8702 - Independent Study

PADM 8710 - Special Topics in Public Administration

PADM 8711 - Special Topics in Public Administration

PADM 8712 - Special Topics in Public Administration

PADM 8713 - Special Topics in Public Administration

PADM 8714 - Special Topics in Public Administration

PADM 8715 - Special Topics in Public Administration

PADM 8716 - Special Topics in Public Administration

PADM 8717 - Special Topics in Public Administration

PADM 8718 - Special Topics in Public Administration

PADM 8719 - Special Topics in Public Administration

PUBH 7001 - Health Care Policy

PUBH 7002 - Comm Hlth Assessmt & Prog Plan

PUBH 7004 - Interdis Approach PH Challenge

PUBH 7006 - Data Mining Hlthcare Analytics

PUBH 7014 - Public Health Communication

PUBH 7104 - Large Data Sets/PUBH Research

PUBH 7120 - Environmental Health I **

PUBH 7122 - Environmental Health II

PUBH 7124 - Environmental Toxicology

PUBH 7125 - Environmental Health Microbiol

PUBH 7126 - Prin Exposure/Risk Assessmnt

PUBH 7128 - Envrnmnt Policy/DecisionMaking

PUBH 7129 - Envrnmntl Sampling & Analysis **

PUBH 7130 - Social Determinants of Health

PUBH 7131 - Social/Behavioral Policy Devel

PUBH 7132 - Health Program Evaluation **

PUBH 7135 - Social Ntwrk Concepts in PUBH

PUBH 7140 - Epidemiology Chronic Disease

PUBH 7141 - Epidemiologic Survey Method **

PUBH 7150 - Biostatistical Methods I **

PUBH 7152 - Biostatistical Methods II **

PUBH 7153 - Biostat. in Bioinformatics

PUBH 7155 - IBM SPSS & Data Management

PUBH 7160 - Soc/Behav Science Principles **

PUBH 7161 - Health Behavior Theories

PUBH 7165 - PUBH Approaches to HIV/AIDS

PUBH 7170 - Epidemiology in PUBH **

PUBH 7172 - Epidemiology PUBH II **

PUBH 7174 - Epidemiology PUBH III

PUBH 7175 - Lab Tech in Molecular Epi

PUBH 7180 - Foundations of PUBH **

PUBH 7190 - Adv SAS for PUBH Prof 1

PUBH 7191 - Adv SAS for PUBH Prof II

PUBH 7192 - Intro to Human Disease for PH

PUBH 7300 - Spatial Anlys/Sim for UrbnHlth

PUBH 7305 - Quant Meth Review Rsch

PUBH 7306 - Linear Struct Modeling

PUBH 7307 - App Struct Equ Modeling in PH

PUBH 7308 - Appl Multivariate Stat

PUBH 7309 - Appl Surv Analys in Pub Hlth

PUBH 7310 - Mixed Model Regression Analys

PUBH 7311 - Appl Categorical Data Analys

PUBH 7333 - Addictive Behaviors

PUBH 7334 - Comm Based Part Resrch Mthds

PUBH 7335 - Struct/Environ Iss/Urban Comm

PUBH 7336 - Women's Health

PUBH 7337 - Public Health Nutrition

PUBH 7338 - Critical Issues in Global Hlth **

PUBH 7339 - Transl Rsrch Meth Pop Hlth

PUBH 7340 - Behavioral Intervention Develp **

PUBH 7341 - Physical Activity/Public Hlth

PUBH 7342 - Epidemiology Min/Ethnic Pop

PUBH 7343 - Tobacco Use:Cause,Conseq,Ctrl

PUBH 7345 - Health Literacy

PUBH 7346 - Public Mental Health

PUBH 7347 - Qualitative Mtds Hlth Research

PUBH 7348 - Hlth Equity,Cult Comp,Soc Just

PUBH 7400 - Special Problems

PUBH 7401 - Applied Field Epidemiology

PUBH 7442 - Cancer Epidemiology

PUBH 7443 - Infectious Disease Epidemiolgy **

PUBH 7444 - PUBH Surveillance Fundamentals

PUBH 7445 - Genetic Epidemiology

PUBH 7447 - Public Health Genomics

PUBH 7450 - Randomized Clinical Trials

PUBH 7501 - Health Systems Organizations

PUBH 7502 - Hlth Policy, Theory & Methods

PUBH 7503 - Health Systems Decision-Making

PUBH 7504 - IT & Organizational Change

PUBH 7505 - Aging, Pub Hlth, & Hlth Svs

PUBH 7601 - PUBH Preparedness & Response

PUBH 7603 - PUBH Emergency Response Ldrshp

PUBH 7604 - Res Methods in Soc/Behav Sci

PUBH 7605 - Built Environment and PH

PUBH 7623 - Spatial Health Inequalities

PUBH 7710 - HealthCare Economics

PUBH 7880 - Leadership Skills for GA

PUBH 7985 - Practicum/Field Experience **

PUBH 7992 - Master's Project Seminar **

PUBH 7996 - Thesis

PUBH 8006 - Data Mining Hlthcare Analytics

PUBH 8014 - Public Health Communication

PUBH 8104 - Large Data Sets/PUBH Research

PUBH 8120 - Environmental Health I

PUBH 8122 - Environmental Health II

PUBH 8124 - Environmental Toxicology

PUBH 8125 - Environmental Health Microbiol

PUBH 8126 - Prin Exposure/Risk Assessmnt

PUBH 8128 - Envrnmnt Policy/DecisionMaking

PUBH 8129 - Envrnmntl Sampling & Analysis

PUBH 8130 - Social Determinants of Health

PUBH 8131 - Social/Behavioral Policy Devel

PUBH 8132 - Health Program Evaluation

PUBH 8135 - Social Ntwrk Concepts in PUBH

PUBH 8140 - Epidemiology Chronic Disease

PUBH 8141 - Epidemiologic Survey Method

PUBH 8150 - Biostatistical Methods I

PUBH 8152 - Biostatistical Methods II

PUBH 8153 - Biostat. in Bioinformatics

PUBH 8155 - SPSS for Health Research

PUBH 8156 - SAS for Health Research

PUBH 8160 - Soc/Behav Science Principles

PUBH 8161 - Health Behavior Theories

PUBH 8165 - PUBH Approaches to HIV/AIDS

PUBH 8170 - Epidemiology in PUBH

PUBH 8172 - Epidemiology PUBH II

PUBH 8174 - Epidemiology PUBH III

PUBH 8175 - Lab Tech in Molecular Epi

PUBH 8180 - Foundations of Public Health

PUBH 8190 - Adv SAS for PUBH Prof 1

PUBH 8191 - Adv SAS for PUBH Prof II

PUBH 8192 - Intro to Human Disease for PH

PUBH 8300 - Spatial Anlys/Sim for UrbnHlth

PUBH 8305 - Quant Meth Review Rsch

PUBH 8306 - Linear Struct Modeling

PUBH 8307 - App Struct Equ Modeling in PH

PUBH 8308 - Appl Multivariate Stat

PUBH 8309 - Appl Surv Analys in Pub Hlth

PUBH 8310 - Mixed Model Regression Analys

PUBH 8311 - Appl Categorical Data Analys

PUBH 8333 - Addictive Behaviors

PUBH 8334 - Comm Based Part Resrch Mthds

PUBH 8335 - Struct/Environ Iss/Urban Comm

PUBH 8336 - Women's Health

PUBH 8337 - Public Health Nutrition

PUBH 8338 - Critical Issues in Global Hlth

PUBH 8339 - Transl Rsrch Meth Pop Hlth

PUBH 8340 - Behavioral Intervention Develp

PUBH 8341 - Physical Activity/Public Hlth

PUBH 8342 - Epidemiology Min/Ethnic Pop

PUBH 8343 - Tobacco Use:Cause,Conseq,Ctrl

PUBH 8345 - Health Literacy

PUBH 8346 - Public Mental Health

PUBH 8347 - Qualitative Mtds Hlth Research

PUBH 8348 - Hlth Equity,Cult Comp,Soc Just

PUBH 8400 - Special Problems

PUBH 8442 - Cancer Epidemiology

PUBH 8443 - Infectious Disease Epidemiolgy

PUBH 8444 - PUBH Surveillance Fundamentals

PUBH 8445 - Genetic Epidemiology

PUBH 8447 - Public Health Genomics

PUBH 8450 - Randomized Clinical Trials

PUBH 8501 - Health Systems Organizations

PUBH 8502 - Hlth Policy, Theory & Methods

PUBH 8503 - Health Systems Decision-Making

PUBH 8504 - IT & Organizational Change

PUBH 8505 - Aging, Pub Hlth, & Hlth Svs

PUBH 8505 - Aging, Pub Hlth, & Hlth Svs

PUBH 8601 - PUBH Preparedness & Response

PUBH 8603 - PUBH Emergency Response Ldrshp

PUBH 8604 - Res Methods in Soc/Behav Sci

PUBH 8605 - Built Environment and PH

PUBH 8623 - Spatial Health Inequalities

PUBH 8710 - HealthCare Economics

PUBH 8720 - Grant Writing in HealthScience

PUBH 8800 - Guided Research in PUBH

PUBH 8900 - Adv Concepts in PUBH I

PUBH 8901 - Doctoral Professional Dev Sem

PUBH 9000 - Dissertation

QM 7770 - Comp Based Decsn Model

LITL 7000 - Literacy/English Lang Learners **

LITL 7304 - Writing Theory and Practice **

LITL 7540 - Lit Inst in the Elem Schl

LITL 7541 - Lit Assess and Intervtn **

LITL 7542 - Alt Proced Reading Prob

LITL 7543 - Adv Lit Instr/Sp Lrnr

LITL 7544 - Adolscnt Lit Instruc

LITL 7545 - Tchg Lit Subject Areas **

LITL 7546 - Computr Appl/Lit Instr

LITL 7547 - Literacy Clinic

LITL 7548 - Adv Sem Reading Resrch

LITL 7549 - Foundtns Lang/Lit Dev

LITL 7550 - Sem in Analyzing Lit Res

LITL 7553 - Literacy Dev K-4

LITL 7554 - Literacy Dev 5-8

LITL 7560 - Literacy Leader and Coach **

LITL 7561 - Literacy Coach Practicum

LITL 7809 - Literacy Research Practicum

LITL 8000 - Literacy/English Lang Learners **

LITL 8155 - Hist Literacy Instruction

LITL 8304 - Writing Theory and Practice

LITL 8540 - Lit Inst in the Elem Schl

LITL 8541 - Lit Assess and Intervtn

LITL 8542 - Alt Proced Reading Prob

LITL 8543 - Adv Lit Instr/Sp Lrnr

LITL 8544 - Adolscnt Lit Instruc

LITL 8546 - Computr Appl/Lit Instr

LITL 8547 - Literacy Clinic

LITL 8548 - Adv Sem Reading Resrch

LITL 8549 - Theoretical Models Read

LITL 8550 - Sem in Analyzing Lit Res

LITL 8551 - Directed Readings Lit

LITL 8552 - Research In Literacy

LITL 8560 - Literacy Leader and Coach

LITL 8561 - Literacy Coach Practicum

LITL 8580 - Comp:Theory/Practice

LITL 8585 - Issues in Urban Literacy

LITL 8590 - Thry/Prac Fam Lit Home Sch

LITL 8809 - Literacy Research Practicum

LITL 8854 - Lang Inqry Lit Res/Tchg

MUSA 6260 - Special Topics in Sacred Music

MUSA 6261 - Special Topics in Sacred Music

MUSA 6262 - Special Topics in Sacred Music

MUSA 6263 - Special Topics in Sacred Music

MUSA 6264 - Special Topics in Sacred Music

MUSA 6265 - Special Topics in Sacred Music

MUSA 6266 - Special Topics in Sacred Music

MUSA 6267 - Special Topics in Sacred Music

MUSA 6268 - Special Topics in Sacred Music

MUSA 6269 - Special Topics in Sacred Music

SWRK 6060 - Social Work Integrated Health

SWRK 6061 - Substance Abuse Treatment

SWRK 6934 - Child Welfare Policy/Services

SWRK 6935 - Child Welfare II

SWRK 6937 - School of Social Work

SWRK 6944 - Encountering Poverty

SWRK 6945 - Social Work in Paris

SWRK 7001 - Skills Prof Pract SWRK

SWRK 7002 - Individuals and Families

SWRK 7003 - Groups

SWRK 7004 - Cognitive Behavioral Intervent

SWRK 7005 - Assessmnt,Diag,Psychopath

SWRK 7006 - Dual Diagnosis

SWRK 7010 - Violence and the Family

SWRK 7011 - Mental Health and Disabilities

SWRK 7013 - Treatment of Trauma

SWRK 7014 - Brief Intervention

SWRK 7016 - Adv. Individual Child/Youth

SWRK 7017 - Adv. Family Child/Youth

SWRK 7018 - Adv. Individual Adults

SWRK 7019 - Adv. Family Adults

SWRK 7020 - Research & Policy Ad. Standing

SWRK 7021 - SW Across the Lifespan

SWRK 7022 - Organizations and Communities

SWRK 7025 - Scientific Methods

SWRK 7026 - Evaluative Research

SWRK 7030 - Social Welfare Policy/Services

SWRK 7031 - Rural/Urban Poverty

SWRK 7032 - Adv. Community Child/Youth

SWRK 7033 - Adv. Community Adults

SWRK 7040 - Advanced Social Work Theory

SWRK 7041 - Play Therapy

SWRK 7050 - Advanced Standing Field

SWRK 7051 - Field Placement I

SWRK 7052 - Field Placement II

SWRK 7053 - Field Placement III

SWRK 7054 - Field Placement IV

SWRK 7055 - Integrative Field Seminar I

SWRK 7056 - Integrative Field Seminar II

SWRK 7060 - Special Topics in Social Work

SWRK 7061 - Special Topics in Social Work

SWRK 7062 - Play Therapy Methods

SWRK 7062 - Special Topics in Social Work

SWRK 7063 - Introduction to Infant Mental Health

SWRK 7064 - Special Topics in Social Work

SWRK 7065 - Special Topics in Social Work

SWRK 7070 - Independent Study

SWRK 7996 - Thesis

SWRK 8020 - Quantitative SW Research

SWRK 8040 - Advanced SW Theory

SWRK 8045 - Leading Public Discourse SW

SWRK 8050 - Writing for Publication

SWRK 8055 - Informatics & Data Driven

SWRK 8060 - Developing Fundable Proposals

SWRK 8065 - Pedagogy in SW

SWRK 8070 - Managing SW Practice I

SWRK 8075 - Reflective Supervision

SWRK 8080 - Managing SW Practice II

SWRK 8085 - Innovations in SW Practice

SWRK 9000 - Banded Dissertation

SOCI 6210 - Rise of Sociological Theory

SOCI 6211 - Contemp Soc Theory

SOCI 6312 - Intermed Soc Stat

SOCI 6425 - Environmental Sociology

SOCI 6842 - Soci Of Occup & Prof

SOCI 6900 - Special Topics in Sociology

SOCI 6901 - Special Topics in Sociology

SOCI 6902 - Special Topics in Sociology

SOCI 6903 - Special Topics in Sociology

SOCI 6904 - Special Topics in Sociology

SOCI 6905 - Special Topics in Sociology

SOCI 6906 - Special Topics in Sociology

SOCI 6907 - Special Topics in Sociology

SOCI 6908 - Special Topics in Sociology

SOCI 6909 - Special Topics in Sociology

SOCI 7210 - Theory Seminar

SOCI 7212 - Mult Racial Femnst Thry

SOCI 7320 - Sem Meth Soc Res

SOCI 7322 - Sem Quant Data Analysis

SOCI 7325 - Sem Qualitative Resrch

SOCI 7410 - Sociology Of Gender

SOCI 7411 - Social Stratification

SOCI 7421 - Racial & Social Inequal

SOCI 7442 - Sociology Of Poverty

SOCI 7450 - Seminar On Aging

SOCI 7460 - Sociology of Sexualities

SOCI 7511 - Theories Of Deviance

SOCI 7631 - Urban Theory Seminar

SOCI 7655 - Socio Found Cmmty Stds

SOCI 7711 - Sem Globlztn/Soc Chng

SOCI 7721 - Sem Social Movements

SOCI 7751 - Sem Socio Social Psyc

SOCI 7811 - Sociology of Organizations

SOCI 7820 - Sem Soci Of Education

SOCI 7830 - Seminar In Family

SOCI 7851 - Medical Sociology

SOCI 7852 - Soci Mental Illness

SOCI 7853 - Gender And Health

SOCI 7860 - Sem Soci Of Religion

SOCI 7901 - Sociology of Media

SOCI 7901 - Special Topics in Sociology

SOCI 7902 - Special Topics in Sociology

SOCI 7903 - Special Topics in Sociology

SOCI 7904 - Special Topics in Sociology

SOCI 7905 - Special Topics in Sociology

SOCI 7906 - Special Topics in Sociology

SOCI 7907 - Special Topics in Sociology

SOCI 7908 - Special Topics in Sociology

SOCI 7909 - Special Topics in Sociology

SOCI 7912 - Directed Indiv Study

SOCI 7914 - Wrkshp For Grad Assts

SOCI 7996 - Thesis

SOCI 8210 - Theory Seminar

SOCI 8212 - Mult Racial Femnst Thry

SOCI 8320 - Sem Meth Soc Res

SOCI 8325 - Sem Qualitative Resrch

SOCI 8410 - Sociology Of Gender

SOCI 8411 - Social Stratification

SOCI 8422 - Race/Class/Gender

SOCI 8442 - Sociology Of Poverty

SOCI 8460 - Sociology of Sexualities

SOCI 8511 - Theories Of Deviance

SOCI 8655 - Socio Found Cmmty Stds

SOCI 8711 - Sem Globlztn/Soc Chng

SOCI 8721 - Sem Social Movements

SOCI 8751 - Sem Socio Social Psyc

SOCI 8811 - Sociology of Organizations

SOCI 8830 - Seminar In Family

SOCI 8851 - Medical Sociology

SOCI 8852 - Soci Mental Illness

SOCI 8860 - Sem Soci Of Religion

SOCI 8901 - Special Topics in Sociology

SOCI 8902 - Special Topics in Sociology

SOCI 8903 - Special Topics in Sociology

SOCI 8904 - Special Topics in Sociology

SOCI 8905 - Special Topics in Sociology

SOCI 8906 - Special Topics in Sociology

SOCI 8907 - Special Topics in Sociology

SOCI 8908 - Special Topics in Sociology

SOCI 8909 - Special Topics in Sociology

SOCI 8912 - Directed Indiv Study

SPAN 6306 - Applied Span Linguistcs

SPAN 6307 - Adv Grammar/Writing

SPAN 6308 - Adv Grammar/Speech

SPAN 6410 - Spanish Lit/Civiztn

SPAN 6510 - Spanish Amer Lit/Civiz

SPAN 6563 - Hispanic Literature Genres

SPAN 7101 - Intro Hispnc Cltr/Bus

SPAN 7102 - Comm Hispanic World

SPAN 7103 - Span Comm/Corresp Doc I

SPAN 7201 - Wkshp Spanish Language

SPAN 7301 - Spanish Phonology

SPAN 7302 - Span Syntax & Semantics

SPAN 7304 - Evolution Of Spanish

SPAN 7305 - Span Dialectolog

SPAN 7306 - Spanish in the U.S.

SPAN 7420 - Medieval Span Lit

SPAN 7421 - The Golden Age

SPAN 7430 - 18th/19th Cent Span Lit

SPAN 7431 - 20th Cent Peninslr Lit

SPAN 7451 - Studies Spanish Culture

SPAN 7452 - 19th-20th Cent Hisp Cult/Lit

SPAN 7453 - Studies Latn Am Culture

SPAN 7532 - Span American Drama

SPAN 7561 - Pre-Cntmp Sp Am Prose

SPAN 7562 - Cntmp Sp Am Prose Fctn

SPAN 7591 - Seminar Sp Amer Lit

SPAN 7691 - Rsrch Hispanic Studies

SPAN 7692 - Research in Lit and Culture

SPAN 7693 - Hispanic Cinema

SPAN 7790-7799 - Special Topics in Hispanic Literature and Linguistics

SPAN 7895 - Teaching SPAN for Spec Purpos

SPED 6000 - Meth/Mat Modrt/Sevr Dis

SPED 6111 - Intro/Applied Behav Analysis

SPED 6112 - Assess/Measure/Appl Behav Anly

SPED 6113 - Appl Behav Intervent/Strategi

SPED 6114 - Practitioner Issues/ABA

SPED 6513 - Asst Tech/Trans Instruc

SPED 6601 - Student Phys/Health Dis

SPED 6900 - Consultn Schl/Fmly/Cmty

SPED 7000 - Intro Excptional Learnr **

SPED 7001 - Test Meas Excp Chl/Adul **

SPED 7002 - Indep Stdy Spec Educ

SPED 7010 - Ethical Issues in ABA

SPED 7025 - Microcomputers In Sped

SPED 7042 - Fld Exp/Comprehen Sped

SPED 7050 - Teach Exceptnl Learner

SPED 7060 - Special Topics in Special Education

SPED 7061 - Special Topics in Special Education

SPED 7062 - Special Topics in Special Education

SPED 7063 - Special Topics in Special Education

SPED 7064 - Special Topics in Special Education

SPED 7065 - Special Topics in Special Education

SPED 7066 - Special Topics in Special Education

SPED 7067 - Special Topics in Special Education

SPED 7068 - Special Topics in Special Education

SPED 7069 - Special Topics in Special Education

SPED 7101 - Foundations E Chld Sped

SPED 7105 - Lang/Comm Inclusive Classrm

SPED 7106 - Prof/Eth Prac Inclusive Class

SPED 7121 - Ed Prog Presc Ed/Disbl

SPED 7141 - Field Exper Early Child

SPED 7201 - Edu Prog for Stud Learn Disab

SPED 7203 - Ed Prog for Stud Emot BehavDis

SPED 7205 - Prin/Thry Inclusive Education

SPED 7206 - Special Education Law **

SPED 7207 - Ldrshp/Facil Inclusion/Edu Set

SPED 7211 - Academic Instruct Sped **

SPED 7212 - Content Methods in Special Edu **

SPED 7221 - Behavior Mgmt Spec Ed **

SPED 7222 - Meth Tech Tchg Eml Dstb

SPED 7224 - Tchng Childrn Deaf/Hh

SPED 7225 - Tchng Spch/Lang Deaf/Hh

SPED 7226 - Manual Communication

SPED 7227 - Tchng Read Chld Deaf/Hh

SPED 7241 - Superv Practicm In Sped

SPED 7401 - Psyc Soc Aspct Lrn Dsab

SPED 7411 - Meth Teach Learng Disab

SPED 7511 - Intellectual Disabilities

SPED 7513 - Scndry Schl Transition

SPED 7514 - Intro/Appl Behav Anlys

SPED 7516 - Adv Prin/Conc Appl Behv

SPED 7517 - Func Anlys/Treat Prob Behv

SPED 7518 - Evidence-Based Prac in ABA

SPED 7519 - Prac/Appld Behav Anlys

SPED 7520 - Behaviorism Seminar

SPED 7521 - Facil General/Maint of Lrng

SPED 7522 - Tiered Interventions

SPED 7523 - SPED Research/Dissem

SPED 7600 - Intro to Aut Spec Dis

SPED 7601 - ASD: Class Mgmt and Design

SPED 7602 - ASD: Instruct Methods I

SPED 7603 - ASD: Instruct Methods II

SPED 7900 - Advanced Practicum/Capstone

SPED 8001 - Test Meas Excp Chl/Adul

SPED 8002 - Indep Stdy Spec Educ

SPED 8010 - Ethical Issues in ABA

SPED 8041 - Fld Exp/Modified Sped

SPED 8042 - Fld Exp/Comprehen Sped

SPED 8060 - Special Topics in Special Education

SPED 8061 - Special Topics in Special Education

SPED 8062 - Special Topics in Special Education

SPED 8063 - Special Topics in Special Education

SPED 8064 - Special Topics in Special Education

SPED 8065 - Special Topics in Special Education

SPED 8066 - Special Topics in Special Education

SPED 8067 - Special Topics in Special Education

SPED 8068 - Special Topics in Special Education

SPED 8069 - Special Topics in Special Education

SPED 8101 - Foundations E Chld Sped

SPED 8121 - Ed Prog Presc Ed/Disbl

SPED 8141 - Field Exper Early Child

SPED 8201 - Edu Prog for Stud Learn Disab

SPED 8203 - Ed Prog for Stud Emot BehavDis

SPED 8205 - Prin/Thry Inclusive Education

SPED 8206 - Special Education Law

SPED 8207 - Ldrshp/Facil Inclusion/Edu Set

SPED 8211 - Academic Instruct Sped

SPED 8212 - Content Methods in Special Edu

SPED 8221 - Behavior Mgmt Spec Ed

SPED 8222 - Meth Tech Tchg Eml Dstb

SPED 8401 - Psyc Soc Aspct Lrn Dsab

SPED 8411 - Meth Teach Learng Disab

SPED 8511 - Intellectual Disabilities

SPED 8513 - Scndry Schl Transition

SPED 8514 - Intro/Appl Behav Anlys

SPED 8516 - Adv Prin/Conc Appl Behv

SPED 8517 - Func Anlys/Treat Prob Behv

SPED 8518 - Evidence-Based Prac in ABA

SPED 8519 - Prac/Appld Behav Anlys

SPED 8520 - Behaviorism Seminar

SPED 8521 - Facil General/Maint of Lrng

SPED 8522 - Tiered Interventions

SPED 8523 - SPED Research/Dissem

SPED 8524 - Adv Seminar In SPED Res

SPED 8600 - Intro to Aut Spec Dis

SPED 8601 - ASD: Class Mgmt and Design

SPED 8602 - ASD: Instruct Methods I

SPED 8603 - ASD: Instruct Methods II

SPED 8622 - Readings In SPED

SPED 8623 - Supervised Research SPED

SPED 8900 - Advanced Practicum/Capstone

SLC 6001 - Sprt Sales/Rev Prod I

SLC 6002 - Sprt Sales/Rev Prod II

SLC 6102 - Workshops in SLC

SLC 6103 - Workshops in SLC

SLC 6104 - Workshops in SLC

SLC 6105 - Workshops in SLC

SLC 6106 - Workshops in SLC

SLC 6107 - Workshops in SLC

SLC 6108 - Workshops in SLC

SLC 6109 - Workshops in SLC

SLC 6110 - Workshops in SLC

SLC 6111 - Workshops in SLC

SLC 6622 - Fan Behavior/Rivalry

SLC 6800 - Adv Computer Apps in SPRT **

SLC 6902 - Special Topics SLC

SLC 6903 - Special Topics SLC

SLC 6904 - Special Topics SLC

SLC 6905 - Special Topics SLC

SLC 6906 - Special Topics SLC

SLC 6907 - Special Topics SLC

SLC 6908 - Special Topics SLC

SLC 6909 - Special Topics SLC

SLC 6910 - Special Topics SLC

SLC 6911 - Special Topics SLC

SLS 6141 - Seminar/Chronology of Sport

SPRT 7010 - Research&Data Analysis in SHM **

SPRT 7031 - Sport Finance

SPRT 7102 - Special Topics SPRT

SPRT 7103 - Special Topics SPRT

SPRT 7104 - Special Topics SPRT

SPRT 7105 - Special Topics SPRT

SPRT 7106 - Special Topics SPRT

SPRT 7107 - Special Topics SPRT

SPRT 7108 - Special Topics SPRT

SPRT 7109 - Special Topics SPRT

SPRT 7110 - Special Topics SPRT

SPRT 7111 - Special Topics SPRT

SPRT 7141 - Experiential Learning Credit

SPRT 7142 - Seminar in SPRT **

SPRT 7152 - Spec Problems in SPRT

SPRT 7165 - Adv Pers SC Global City

SPRT 7175 - Adv Mgmt Sprt Org Int Per

SPRT 7321 - Theoretical Foundations **

SPRT 7331 - SPRT Promotional Culture

SPRT 7341 - Commrcl Rec/Travl Toursm

SPRT 7351 - Gender/Sexuality in SPRT

SPRT 7361 - Race & Ethnicity in SPRT

SPRT 7371 - Sprt Comrce in Global Mrkt

SPRT 7410 - Athletic Team Management

SPRT 7420 - Sport Marketing **

SPRT 7440 - Promotions in Sport Commerce **

SPRT 7503 - Strat Mgmt Sprt Cmrce Org

SPRT 7600 - Readings in SPRT

SPRT 7603 - Admin of Athletics

SPRT 7605 - Practicum in SPRT **

SPRT 7650 - Legal Issues in Sport Commerce **

SPRT 7651 - Policy and Governance in Sport

SPRT 7653 - Sport Areas & Facilities Mgmt

SPRT 7741 - Occupational Devp SPRT **

SPRT 7800 - Adv Computer Apps in SPRT

SPRT 7950 - Applied Project in SPRT

SCMS 6510 - Operations Planning & Control

SCMS 6620 - Logistics Management

SCMS 6650 - Supply Management

SCMS 7110 - Intro to Business Analytics **

SCMS 7120 - Mgmt Science/Decsn Tech

SCMS 7170 - Intnl Prodctn Oper Mgmt

SCMS 7201 - Pharm Supply Chain Mgmt

SCMS 7310 - Sem Prod Operatns Mgt

SCMS 7311 - Seminar in SCM

SCMS 7312 - Sem Val Chain Res Mgmt

SCMS 7313 - Global Operations Mgmt **

SCMS 7315 - Dsgn/Mgmt Sup Chns Biom Ind

SCMS 7425 - Determ Model Mgmt Sci

SCMS 7430 - Adv Quan Tpcs Bus Dec

SCMS 7431 - Applied Modeling

SCMS 7450 - Intg SCM And Tech

SCMS 7921 - Sem SCMS Research

SCMS 8310 - Sem Prod Operatns Mgt

SCMS 8311 - Seminar in SCM

SCMS 8312 - Sem Val Chain Res Mgmt

SCMS 8313 - Global Operations Mgmt

SCMS 8425 - Determ Model Mgmt Sci

SCMS 8430 - Adv Quan Tpcs Bus Dec

SCMS 8431 - Applied Modeling

SCMS 8450 - Intg SCM And Tech

SCMS 8530 - Stat Tech Business Rsch

SCMS 8540 - Multv Analys/Bus Rsch

SCMS 8921 - Sem SCMS Research

TEAE 6020 - Read Write Learn Methods ESL

TEAE 6260 - Teach ESL w/Internet Tech

TEAE 6300 - Multicultural Education

TEAE 6437 - Assessment for ESL

TEAE 6500 - Linguistics

TEAE 6501 - Modern English Grammar

TEAE 6550 - Latin Amer/Country/Peop

TELC 7001 - Adolescent Development **

TELC 7002 - Assessment/Evaluation **

TELC 7003 - Managing Learning Environment **

TELC 7004 - Survey Exceptnl Chldrn **

TELC 7005 - Teaching and Learning w/Tech **

TELC 7006 - Teacher/Agent Of Change **

TEAS 6001 - Col Prac/Trnd/Issue/Char Sp Ed

TEAS 6003 - Assess Procedure in Special Ed

TEAS 6004 - Appl Behavior Interven/Supp

TEAS 6005 - Read Methods Across Curriculum

TEAS 6006 - Assistive Technology

TEAS 6007 - Math Method Across Curr

TEAS 6008 - Teach Mild/Moderate

TEAS 6009 - Adaptive PE in Special Educ

TEAS 6010 - Methods Instruct/Teach Compre

TEAS 6011 - Assess Infant/Toddlers

TEAS 6012 - Instruction: Early Child/Sp Ed

THEA 6209 - Advanced Scenic Production

THEA 6210 - Special Topics in Theatre

THEA 6211 - Special Topics in Theatre

THEA 6212 - Special Topics in Theatre

THEA 6213 - Special Topics in Theatre

THEA 6214 - Special Topics in Theatre

THEA 6215 - Special Topics in Theatre

THEA 6216 - Special Topics in Theatre

THEA 6217 - Special Topics in Theatre

THEA 6218 - Special Topics in Theatre

THEA 6219 - Special Topics in Theatre

THEA 6220 - Acting Through Song I

THEA 6221 - Stage Dialects

THEA 6222 - Asian Theatre

THEA 6223 - Acting Through Song II

THEA 6224 - Principle/Music Theory/Theatre

THEA 6455 - Directing Narrative Theatre

THEA 6457 - Vocal Style/Performance

THEA 6501 - Adv Movement Styles

THEA 6503 - Creative Dramatics

THEA 6511 - Automation & Mechanization

THEA 6512 - Digital Rendering

THEA 6513 - Digital Fabrication

THEA 6516 - Technical Direction

THEA 6517 - Scenic Painting II

THEA 6531 - Acting Styles

THEA 6532 - Mask Performance

THEA 6539 - Contemporary Theatre History

THEA 6544 - Gay and Lesbian Dramatic Literature

THEA 6548 - Musical Theatre History

THEA 6549 - Theatre History

THEA 6555 - Scenic Technology

THEA 6556 - Lighting and Sound Technolgy

THEA 6557 - Costume Technology I

THEA 6559 - Thea/African Diaspora

THEA 6571 - Playwriting

THEA 6573 - Costume Technology II

THEA 6592 - Thtr Arch/Facilty Plan

THEA 6631 - Acting For Film And TV

THEA 7210 - Special Topics in Theatre

THEA 7211 - Special Topics in Theatre

THEA 7212 - Special Topics in Theatre

THEA 7212 - THEA Mechanization/Automation

THEA 7213 - Special Topics in Theatre

THEA 7214 - Special Topics in Theatre

THEA 7215 - Special Topics in Theatre

THEA 7216 - Special Topics in Theatre

THEA 7217 - Special Topics in Theatre

THEA 7218 - Special Topics in Theatre

THEA 7219 - Special Topics in Theatre

THEA 7312 - Rigging Studio

THEA 7313 - Graduate Design Seminar

THEA 7314 - Collaborative Models for Theatre Professionals

THEA 7315 - Prof Tech Manage Prac

THEA 7316 - CAD for Theatre

Thea 7317 - Production Seminar

THEA 7440 - Sem Critial Studies

THEA 7521 - Stage Direction

THEA 7526 - Directing Studio

THEA 7546 - Visual History I

THEA 7547 - Visual History II

THEA 7553 - Styles Of Directing

THEA 7554 - Seminar In Directing

THEA 7560 - Studies Dsgn/Tech Prod

THEA 7561 - Scenic Design I

THEA 7562 - Lighting Design I

THEA 7563 - Costume Design I

THEA 7564 - Thea Collab & Style

THEA 7565 - Costume Design II

THEA 7566 - Sound Design I

THEA 7567 - Scenic Design II

THEA 7569 - Lighting Design II

THEA 7571 - Advanced Playwriting

THEA 7574 - Projection Design and Control

THEA 7576 - Sound Design II

THEA 7581 - Sem Drama Theory/Crit

THEA 7582 - Analysis Dramatic Lit

THEA 7592 - Professional Theatre Practice

THEA 7600 - Internship

THEA 7993 - Special Problems

THEA 7995 - Production Practicum

THEA 8210-8219 - Special Topics in Theatre

THEA 8211 - Special Topics in Theatre

THEA 8212 - Special Topics in Theatre

THEA 8213 - Special Topics in Theatre

THEA 8214 - Special Topics in Theatre

THEA 8215 - Special Topics in Theatre

THEA 8216 - Special Topics in Theatre

THEA 8217 - Special Topics in Theatre

THEA 8218 - Special Topics in Theatre

THES 7996 - Thesis Complete

SUAP 7100 - Public Policy Statistic

SUAP 8100 - Public Policy Statistic

UAPP 8010 - Exploration of Urban Research Theory

UAPP 8011 - Scope/Methods in Urban Affairs Research

UAPP 8012 - Collaborative Urban Problem Solving I

UAPP 8013 - Collaborative Urban Problem Solving II

WMST 7320 - Women&Multi-Cultrl Exp

WMST 7340 - Independent Study

WMST 8380 - Public Presntn Research

Admission Regulations

Admission to the Graduate School is open to anyone holding a bachelor's, master's, or doctoral degree from an accredited college or university. In cases, where a program's accrediting body allows alternate admissions standards, exceptions may be made. Applicants should have completed undergraduate or graduate work of sufficient quality and scope to enable them to successfully pursue graduate study. The University of Memphis offers equal educational opportunity to all persons, without regard to race, religion, sex, age, creed, color, national origin, or physical handicap.

Students are admitted to the University of Memphis through a cooperative effort of the Graduate School and the departments, colleges, and schools of the University. When the Graduate School receives the student's application material, an official file is established and reviewed. The department then reviews the application file and makes a recommendation to the Graduate School. The Graduate School notifies applicants as soon as a decision has been reached.

Applicants are required to meet admissions criteria established by the Graduate School in order to enroll in graduate courses. In order to be admitted to a degree program in any academic unit, applicants are also required to meet any additional standards set by the unit or college. Applicants are selected on a competitive basis and, therefore, admission is not granted to all applicants who meet only the minimum requirements. Past behavior and classroom performance can be considered in admissions decisions. Some academic programs have individual application forms and additional requirements such as portfolios, proficiency examinations, auditions, etc.

Individual program requirements described in the University of Memphis Graduate Bulletin 2019-2020, are subject to change. Please contact the academic department or the Graduate School for changes. Domestic graduate admission applications will only be accepted through Self-Service Banner. The Office of Admissions no longer accepts hard-copy (paper) applications. Please visit the Graduate School web site for program addresses, deadlines, and additional information. Deadlines and requirements may differ for each program.

Prospective students should check with the appropriate program for specific deadlines and admissions requirements. For admission to a degree program, applicants should allow approximately three to six weeks from date of receipt of complete application for the necessary credentials to be processed by the appropriate degree program and the Graduate School. Applicants are urged to apply early to ensure full consideration. Late domestic applicants may be admitted as graduate non-degree students and as such are not guaranteed placement in specific programs; some classes may be closed to non-degree students. International applicants should allow at least four months for the application process; International students matriculated into degree programs at other educational institutions in the United States may be eligible for admission as non-degree students into the University of Memphis. International students who are using an I-20 from the University of Memphis to obtain their F1 visa, however, cannot be admitted as non-degree students.

All applications must be accompanied by a non-refundable application fee ($35.00 for domestic applicants; $60.00 for international applicants), unless previously paid. Applications received without the application fee will not be processed.

The University of Memphis requires all applicants born after January 1957 to have had the measles (MMR) vaccination after January 1, 1980, in order to be admitted. See "Miscellaneous Information" for additional information.

Return completed applications and required credentials to Graduate Admissions, FedEx Institute of Technology Building, Suite 201, Memphis, Tennessee 38152. The applicant is advised to have all credentials on file well in advance (preferable six weeks) of the beginning of the term for which application is made.

See "Admission of International Students" for details about additional requirements for international applicants.

All credentials become the property of the University and will not be forwarded or returned. If the applicant does not enroll, credentials will be maintained in active files for 12 months, after which they will be destroyed. After that time, candidates must reapply for admission and submit a new set of credentials if they wish to be admitted to the Graduate School. Students who do not enroll for a Fall or Spring semester must apply for readmission.

Residency Classification

All determinations concerning the classification of students as in-state or out-of-state for fee purposes are made in the Admissions Office. The determinations are based on regulations and guidelines of the Tennessee Board of Regents (see below). If, for any reason, there is a question about a student's state residency classification for fee payment purposes, the student is responsible for requesting a review of his/her residency status before classes begin. Requests for review should be made to the Admissions Office.

Intent

The public institutions of higher education in the State of Tennessee shall apply uniform rules, as described in these regulations, in determining whether students shall be classified "in-state" or "out-of-state" for fees and tuition purposes and for admission purposes.

Definitions

1. "Public higher educational institution" shall mean a university or community college supported by appropriations made by the Legislature of this State.
2. "Residence" shall mean continuous physical presence and maintenance of a dwelling within this State, provided that absence from the State for short periods of time shall not affect the establishment of a residence.
3. "Domicile" shall mean a person's true, fixed, and permanent home and place of habitation; it is the place where he or she intends to remain, and to which he or she expects to return when he or she leaves without intending to establish a new domicile elsewhere.
4. "Emancipated person" shall mean a person who has attained the age of eighteen years, and whose parents have entirely surrendered the right to the care, custody, and earnings of such person and who no longer are under any legal obligation to support or maintain such deemed "emancipated" person.
5. "Parent" shall mean a person's father or mother. If there is a non-parental guardian or legal custodian of an unemancipated person, "parent" shall mean such guardian or legal custodian; provided, that there are not circumstances indicating that such guardianship or custodianship was created primarily for the purpose of conferring the status of an in-state student on such unemancipated person.
6. "Continuous enrollment" shall mean enrollment at a public higher educational institution or institutions of this State as a full-time student, as such term is defined by the governing body of said public higher educational institution or institutions, for a normal academic year or years of the appropriate portion or portions thereof since the beginning of the period for which continuous enrollment is claimed. Such person need not enroll in summer sessions or other such inter-sessions beyond the normal academic year for his or her enrollment to be deemed "continuous." Enrollment shall be deemed continuous notwithstanding lapses in enrollment occasioned solely by the scheduling of commencement and/or termination of the academic years, or appropriate portion thereof, of the public higher educational institutions in which such person enrolls.

Rules for Determination of Status

1. Every person having his or her domicile in this State shall be classified "in-state" for fee and tuition purposes and for admission purposes.
2. Every person not having his or her domicile in this State shall be classified "out-of-state" for said purposes.
3. The domicile of an unemancipated person is that of his or her parent. Unemancipated students of divorced parents shall be classified "in-state" when one parent, regardless of custodial status, is domiciled in Tennessee.
4. The spouse of a student classified "in-state" shall also be classified as "in-state."

Out-of-State Students Who Are Not Required to Pay Out-of-State Tuition

1. An unemancipated, currently enrolled student shall be reclassified out-of-state should his or her parent, having theretofore been domiciled in the State, remove from the State. However, such student shall not be required to pay out-of-state tuition nor be treated as an out-of-state student for admission purposes so long as his or her enrollment at a public higher educational institution or institutions is continuous.
2. An unemancipated person whose parent is not domiciled in this State but is a member of the armed forces and stationed in this State or at Fort Campbell pursuant to military orders shall be classified out-of-state, but shall not be required to pay out-of-state tuition. Such a person, while in continuous attendance toward the degree for which he or she is currently enrolled, is not required to pay out-of-state tuition if his or her parent thereafter is transferred on military orders.
3. A person whose domicile is in a county of another state lying immediately adjacent to Montgomery County, or whose place of residence is within thirty (30) miles of Austin Peay State University shall be classified out-of-state but shall not be required to pay out-of-state tuition at Austin Peay State University. Provided,

however, that there be no teacher college or normal school within the non-resident's bona fide place of residence.

4. A person whose domicile is in Mississippi County, Arkansas, or either Dunlin County or Pemiscot County, Missouri, and who is admitted to Dyersburg State Community College shall not be required to pay out-of-state tuition.
5. A person, who is not domiciled in Tennessee, but has a bona fide place of residence in a county which is adjacent to the Tennessee state line and which is also within a 30-mile radius (as determined by THEC) of a city containing a tw0-year TBR institution, shall be classified out-of-state, but admitted without tuition. The two-year institution may admit only up to three percent (3%) of the full-time equivalent attendance of the institution without tuition. (THEC may adjust the number of the non-residents admitted pursuant to this section every three (3) years.) (See TCA 49-8-102.)
6. Part-time students who are not domiciled in this State but who are employed full-time in the State, or who are stationed at Fort Campbell pursuant to military orders, shall be classified out-of-state but shall not be required to pay out-of-state tuition. This shall apply to part-time students who are employed in the State by more than one employer, resulting in the equivalent of full-time employment. These students must supply proper documentation of employment each semester.
7. Military personnel and their spouses stationed in the State of Tennessee who would be classified out-of-state in accordance with other provisions of these regulations will be classified out-of-state but shall not be required to pay out-of-state tuition. This provision shall not apply to military personnel and their spouses who are stationed in this State primarily for educational purposes.
8. Dependent children who qualify and are selected to receive a scholarship under the Dependent Children Scholarship Art (TCA 49-4-704) because their parent is a law enforcement officer, fireman, or emergency medical service technician who was killed or totally and permanently disabled while performing duties within the scope of their employment shall not be required to pay out-of-state tuition.
9. Active-duty military personnel who begin working on a college degree at a TBR institution while stationed in Tennessee or at Fort Campbell, Kentucky, and who are transferred or deployed prior to completing their degrees, can continue to completion of the degrees at that same institution without being required to pay out-of-state tuition, as long as he/she completes at least one (1) course for credit each twelve (12) month period after the transfer or deployment. Exceptions may be made in cases where the service member is deployed to an area of armed conflict for periods exceeding twelve (12) months.
10. Students who participate in a study abroad program, when the course/courses in the study abroad program is/are the only course/courses for which the student is registered during that term, shall not be required to pay out-of-state tuition.
11. Students who are awarded tuition waiver scholarships for participation in bona fife campus performance-based programs, according to established guidelines, shall not be required to pay out-of-state tuition.

Presumption

Unless the contrary appears from clear and convincing evidence, it shall be presumed that an emancipated person does not acquire domicile in this State while enrolled as a full-time student at any public or private higher educational institution is this State, as such status is defined by such institution.

Evidence to be Considered for Establishment of Domicile

If a person asserts that he or she has established domicile in this State he or she has the burden of proving that he or she has done so. Such a person is entitled to provide to the public higher educational institution by which he or she seeks to be classified or reclassified in-state, any and all evidence that he or she believes will sustain his or her burden of proof. Said institution will consider any and all evidence provided to it concerning such claim of domicile but will not treat any particular type or item of such evidence as conclusive evidence that domicile has or has not been established.

Appeal

The classification officer of each public higher educational institution shall be responsible for initially classifying students "in-state" or "out-of-state." Appropriate procedures shall be established by each such institution by which a student may appeal his or her initial classification.

If, for any reason, there is a question about a student's residency classification for fee paying purposes, it is his or her responsibility to check with the Graduate Admissions Office. Application for residency reclassification must be made to the classification officer **on or before the last day of regular registration of that semester.**

Effective Date for Reclassification

If a student classified out-of-state applies for in-state classification and is subsequently so classified, his or her in-state classification shall be effective as of the date on which reclassification was sought. However, out-of-state tuition will be charged for any semester during which reclassification is sought and obtained unless application for reclassification is made to the classification officer **on or before the last day of regular registration of that semester.**

Admission to Masters Degree Programs

The following Graduate School admissions requirements are minimum standards that identify the pool of master's level applicants from which each academic unit makes its selection. International applicants should consult "Admission of International Students" for further requirements.

1. **Baccalaureate Degree:** The applicant must provide an official transcript showing that a bachelor's degree was awarded by an accredited college or university. In cases, where a program's accrediting body allows alternate admissions standards, exceptions may be made. If you are a UofM undergraduate student applying to Graduate School at UofM, you do not need to request that an official transcript be sent to Graduate Admissions. This office has access to your transcript. The applicant must have earned an acceptable grade point average. In addition, transcripts from any other college or university attended may be requested. Only transcripts received directly from an issuing institution are considered official. For domestic students, signed and sealed transcripts that have been in the applicant's possession can be used for admission purposes; however, official transcripts may later be requested. Personal copies are not acceptable as official documents.
2. **Entrance Examinations:** New applicants may be required by the individual program to have taken an appropriate entrance examination within five years of the application date. Contact the appropriate program for information on which test(s) and what score(s) are acceptable. Scores on MAT exams written in less than two-month intervals are not acceptable. Test scores must be sent directly to Graduate Admissions from the testing agency. The University of Memphis institution code number for reporting ETS scores is R-1459. See program descriptions for more information on requirements. Some programs may waive the entrance examination requirement for applicants with exceptional credentials, extensive professional experience, or a prior graduate degree from an accredited institution. These waivers are at the discretion of the academic program. See individual program descriptions for details.
3. **Program Requirements:** Many academic units have separate departmental applications and/or additional requirements for admission. See program descriptions for more information on requirements.

Admission to Doctoral Degree Programs

The following Graduate School admissions requirements are minimum standards that identify the pool of doctoral level applicants from which each academic unit makes its selection. International applicants should consult "Admission of International Students" below for further requirements.

1. **A Baccalaureate or Master's Degree as specified by the program:** The applicant must provide an official transcript showing an earned bachelor's or master's degree, depending on program requirements. In cases, where a program's accrediting body allows alternate admissions standards, exceptions may be made. If you are a UofM undergraduate student applying to Graduate School at UofM, you do not need to request that an official transcript be sent to Graduate Admissions. This office has access to your transcript. The degree must have been awarded by an accredited college or university. Only transcripts received directly from an issuing institution are considered official. For domestic students, signed and sealed transcripts that have been in the applicant's possession can be used for admission purposes; however, official transcripts may later be requested. Personal copies are not acceptable as official documents.
2. **Entrance Examinations:** New applicants may be required by the individual program to have taken an appropriate entrance examination within five years of the application date. Contact your program for information on which tests and what score(s) are acceptable. Test scores must be sent directly to Graduate Admissions by the testing agency. The University of Memphis institution code number for reporting ETS scores is R-1459. Some programs may waive the entrance examination requirement for applicants with exceptional credentials, extensive professional experience, or a prior doctoral degree from an accredited institution. See individual program descriptions for details.
3. **Program Requirements:** Some academic units may have separate departmental applications and/or additional requirements, such as portfolios, proficiency examinations, auditions, etc. Refer to the appropriate program description in this Bulletin for details.

Admission to Education Specialist Program

The Education Specialist degree is designed for the educator-practitioner who desires post-master's training but who does not wish to earn a doctorate. This program is administered by the College of Education; please refer to the appropriate section of this Catalog for a more complete description or contact the dean's office in the College of Education for additional details.

Admission of International Students

The University of Memphis believes that the presence of international students on campus enriches the educational environment for all. The University of Memphis is authorized under Federal law to enroll non-immigrant alien students on the F-1 student visa. **We accept only students with the equivalent of a U.S. bachelor's degree--16 years of formal schooling.**

Prospective students must apply to the Graduate School and the respective department (only if the department requires an additional application). Individual departments may have different admission requirements and application deadlines. It is essential that you familiarize yourself with departmental information.

Applications are available for on-line submission at banssbprod.memphis.edu/pls/PROD/bwskalog.P_DispLoginNon. A non-refundable application and processing fee of sixty dollars U.S. (U.S. $60.00) is required of every international applicant, unless previously paid. Payment of the application fee is by credit card.

For admission to a degree program, international applicants should allow **at least four months** for necessary documents to be processed by the appropriate degree program and the Graduate Admissions office. All test scores and credential evaluations must be on file in the Graduate Admissions (FedEx Institute of Technology Building, Suite 201) at least four months before the desired enrollment date. Applicants are urged to apply early to ensure full consideration.

Applicants will be selected on a competitive basis and, therefore, admission will not be granted to all applicants who meet only the minimum requirements. Some departments require higher standards or additional items such as portfolios, proficiency examinations, auditions, etc.

When Graduate Admissions receives your application materials, an official file is established and reviewed. Your requested department then reviews your application and makes a recommendation to Graduate Admissions. You will be notified as soon as a decision has been reached.

Letters of Recommendation: If the program to which you are applying requires letters of recommendation, have them sent directly to the department. Some departments also require other material such a a statement of professional goals. Be sure to check with them.

Readmission into the University: International students who wish to apply for readmission to the University must meet the deadlines set for regular admissions.

English Conditional Admission: International students are required to demonstrate a strong grasp of the English language before admission into graduate programs. Conditional admission may be granted depending on individual academic departmental policy. If English conditional admission is offered, students will need to register for English skills assessment and take instructional sessions (if required as a result of that assessment) through the University's Intensive English for Internationals (IEI) program (www.memphis.edu/iei). Upon successful completion of the requisite sessions, as determined by IEI, the student's English skills will be considered up to standard and the TOEFL/IELTS requirement may be waived depending on specific academic department policy. The student can then proceed into their graduate academic program. Please note that in order to have a complete application packet, students seeking English conditional admission will need to simultaneously apply for the IEI program through the link above, to the Graduate School by clicking here, and to their academic program by visiting the department website. Please note that a student cannot be a graduate assistant (GA) until they have been fully admitted and have begun their graduate academic program. Please review your academic program department's website and graduate catalog entries to determine if English conditional admission is offered. Questions can be directed to the program's graduate coordinator. Students will pay IEI fees until they meet the language criterion. If courses are taken outside of IEI, the student will be charged additional tuition at the regular rate.

Please contact James Kierulff in the Graduate School for more information.

Additional Admission Requirements

In addition to general admissions requirements, international students must provide the following items:

- **TOEFL Scores:** All applicants who will be attending the University on a student visa and who are not native speakers of English and are not graduates of The University of Memphis must supply a minimum score of 550 on the paper, a 210 on the computer-based, or 79 on the internet based Test of English as a Foreign Language (TOEFL). Some degree programs require a higher TOEFL score; check department listings for specific requirements. Testing locations and other information can be obtained from www.toefl.org or by writing to TOEFL, Educational Testing Service, Princeton, New Jersey, 08540, U.S.A. All test scores must be sent directly from the testing agency to The University of Memphis (institution code R-1459). Graduate Admissions will accept scores on the International English Language Testing System (IELTS) in lieu of the TOEFL. The minimum acceptable IELTS score is 6.0.The University is pleased to offer English Conditional Admission for qualified students. Students who are unable, or do not feel prepared, to take the TOEFL or IELTS can request conditional admission based on completing an English skills assessment, any required English skill building sessions (www.memphis.edu/iei) and, if required, a TOEFL/IELTS exam while you are in the USA. For questions or guidance through the English conditional admission process, please contact James Kierulff (jkerulff@memphis.edu). Conditional admission may not be offered by all departments. Please check departmental graduate catalog webpages for program specific information.
- **Evaluation of Credentials:** Applicants whose highest degree is from a foreign university may be required to have their credentials evaluated by any credentialing agency listed on the National Association of Credential Evaluation Services web site (www.naces.org). Please check the website of the specific program to determine if this evaluation is required.

- **Health Certificate:** Within 30 days from the first day of classes, each international student must submit a certificate from a licensed U.S. physician or other qualified U.S. medical authority verifying freedom from tuberculosis. Failure to do so shall result in denial of enrollment. In the event that a student either has tuberculosis or has potential tuberculosis requiring medical treatment, continued enrollment will be conditional upon the determination by a licensed U.S. physician that such enrollment does not present a risk to others and upon the student's compliance with any medical treatment program.
- **Health Insurance:** All international students must purchase health insurance before they are allowed to enroll. Click here for more information.
- **Affidavit of Support and Financial Statement:** An applicant who holds or will require an "F-1" student visa must supply, on the form provided by the University, sufficient evidence of financial support for the applicant and all members of his/her family who will accompany the applicant to Memphis. This requires that the applicant certify that his/her intent is to attend the University full-time and that no employment, other than assistantships, will be required. An affidavit of support and financial statement are not required for admission; however, international students (F-1) requiring issuance of Form I-20 must supply sufficient evidence of financial support for the applicant and all members of his/her family requiring issuance of dependent Form I-20.

Please contact academic departments for information on additional requirements and graduate assistantships.

Advisors for graduate students are typically department based. Often, departments will assign advisors to students upon admission based on areas of interest. After students have matriculated and enrolled in coursework under various faculty members, students may select a different advisor. To inquire about your academic advisor, please contact the graduate coordinator or department chair for your program.

Master's Degree Programs

The following admissions requirements are minimum standards that identify the pool of master's level applicants from which each academic unit makes its selection. Prospective students should check with the appropriate degree program for specific deadlines. For admission to a degree program, applicants should allow a reasonable amount of time for necessary documents to be processed by the appropriate department and Graduate Admissions.

- **Baccalaureate Degree:** The applicant must provide an official transcript showing that a bachelor's degree was awarded by an accredited college or university. In cases, where a program's accrediting body allows alternate admissions standards, exceptions may be made. The applicant must have earned an acceptable grade point average. In addition, transcripts from any other college or university attended must be requested. (Students who received bachelor's degrees from The University of Memphis may disregard this requirement.) Only transcripts received directly from an issuing institution are considered official. Signed and sealed transcripts that have been in the applicant's possession can be used for admission purposes; however, official transcripts must later be requested. Personal copies are not acceptable as official documents.
- **Entrance Examinations:** New applicants may be required by the individual program to have taken an appropriate entrance examination within five years of the application date. Contact the appropriate program for information on which tests and what scores are acceptable. Scores on MAT exams written in less than 2 month intervals are not acceptable. Test scores must be sent directly to Graduate Admissions from the testing agency. The University of Memphis institution code number for reporting ETS scores is R-1459. See program descriptions for more information on requirements. Some programs may waive the entrance examination requirement for applicants with exceptional credentials, extensive professional experience, or a prior graduate degree from an accredited institution. These waivers are at the discretion of the academic program. Check individual program descriptions for details.
- **Program Requirements:** Many academic units have separate departmental applications and/or additional requirements for admission. Check program descriptions for more information on requirements.

Education Specialist (ED.S.) Program

The Education Specialist degree is designed for the educator-practitioner who desires post-masters training but who does not wish to earn a doctorate. This program is administered by the College of Education; please refer to the College of Education section of the Graduate Catalog for a more complete description or contact the dean's office in the College of Education for additional details.

Doctoral Degree Programs

The following Graduate School admissions requirements are minimum standards that identify the pool of doctoral level applicants from which each academic area make their selections.

- **A Baccalaureate or Master's Degree as specified by the program:** The applicant must provide an official transcript showing an earned bachelor's or master's degree, depending on program requirements. The degree must have been awarded by an accredited college or university. In cases, where a program's accrediting body allows alternate admissions standards, exceptions may be made. Only transcripts received directly from an issuing institution are considered official. Personal copies are not acceptable as official documents.
- **Entrance Examinations:** New applicants may be required by the individual program to submit an appropriate entrance examination test score that is not more than five years old. Contact your program for information on which tests and what scores are acceptable. Test scores must be sent directly to Graduate Admissions by the testing agency.The University of Memphis institution code number for reporting ETS scores is R-1459. Some programs may waive the entrance examination requirement for applicants with exceptional credentials, extensive professional experience, or a prior doctoral degree from an accredited institution. See individual program descriptions for details.
- **Program Requirements:** Some academic units may have separate departmental applications and/or additional requirements, such as portfolios, proficiency examinations, auditions, etc. Refer to the appropriate program description in the Graduate Catalog for details.

Readmission

Once accepted into a degree program, a student is expected to enroll every semester thereafter (excluding summer sessions) and make satisfactory progress toward the degree. A student who does not enroll for a fall or spring semester must apply for readmission. Submission of a readmission application does not ensure acceptance. An application for readmission may be rejected or additional requirements may be imposed on the student. A readmitted student must follow the rules, prerequisites, and degree requirements listed in the Graduate Catalog.

Students writing a thesis or dissertation or engaged in a culminating project must enroll on a continuous basis (fall and spring) until the thesis, dissertation, or project is complete. If, however, a student completes a thesis, dissertation, or project during a summer session, they must be enrolled in the applicable credit during the summer.

Other Admission Regulations

Once accepted into a degree program, a student is expected to enroll every semester thereafter (excluding summer sessions) and make satisfactory progress toward the degree. A student who does not enroll for one Fall or Spring semester must apply for readmission. Submission of an application for readmission does not ensure acceptance. An application for readmission may be rejected or additional requirements may be imposed on the student. A readmitted student must follow the rules, prerequisites, and degree requirements listed in the most current Graduate Bulletin.

Continuous Enrollment

Students writing a thesis or dissertation or engaged in a culminating or capstone project must enroll on a continuous basis (Fall and Spring) until the thesis, dissertation, or project is complete. Most programs require at least one culminating experience course; see specific program requirements for details. A student must be enrolled for at least 1 hour each Fall and Spring semester until the thesis, dissertation, or project is complete. A student must be enrolled in the Summer semester if the thesis, dissertation, or project will be completed then. Failure to so register will result in the student being charged tuition for each semester he or she did not enroll.

The only exception to this policy is if the student's major professor is on leave or otherwise unavailable. In such cases the approval of the appropriate college director and the Dean of the Graduate School is required. In the case of serious medical circumstances, students may request a leave of absence, subject to the approval of the program graduate coordinator, the college director of graduate studies, and the Dean of the Graduate School. Retroactive approval will not be granted. A leave of absence does not extend time limit to degree.

Admission to Non-Degree Status

Combination Senior: An undergraduate senior student may earn up to 12 hours of graduate credit while enrolled on a Combination Senior/Graduate Non-Degree basis. The student must have a total cumulative GPA of at least 3.25 and must have filed with his or her Graduate School Academic Advisor a plan for completing the bachelor's degree within two semesters. Eligible students may enroll concurrently in undergraduate and select graduate courses. Approval to register for graduate credit does not imply approval for admission into a graduate program at the University or that the credit earned will be accepted towards a graduate degree. After the bachelor's degree is awarded, a Combination Senior/Graduate Non-Degree student must make formal application in order to be admitted to a graduate degree program. Courses taken for graduate credit may not be used for both the baccalaureate and graduate degree. Combination seniors are not eligible for graduate assistantships.

Graduate Non-Degree: This classification is for domestic students who wish to enroll in graduate courses but who do not wish to pursue a graduate degree at the University or whose applications are incomplete. Graduate non-degree applicants must show proof of having earned a baccalaureate degree at the time of application. At the end of the first semester of course work, the Graduate Non-Degree student may be required to furnish an official transcript showing at minimum a bachelor's degree from an accredited college or university.

Academic units may restrict non-degree students to designated courses. Graduate Non-Degree students who decide to matriculate for a degree must make application to the Graduate School and must meet all admissions requirements. Master's students in programs requiring 36 credit hours or fewer are limited to 12 credit hours while in non-degree status. Students in degree programs requiring more than 36 hours must take at least 2/3 of the credit hours after acceptance into the program. Students should note that some academic units count coursework toward a degree only after admission or have more restrictive policies regarding the number of non-degree hours that count toward the degree.

Before registering for a second semester of graduate level coursework, the non-degree student is required to sign a release agreeing that additional coursework will not apply to degree programs.

Non-degree students must maintain a 3.00 GPA in graduate courses in order to re-enroll and are not eligible for graduate assistantships.

Miscellaneous Admissions Information

Hepatitis Vaccination

The General Assembly of the State of Tennessee mandates that each public or private post-secondary institution in the state provide information concerning Hepatitis B infection to all students entering the institution for the first time.

Those students who will be living on campus must also receive information about the risk of meningococcal meningitis infection.

After reading this information and prior to registering for classes, you must complete and sign the waiver form to indicate that you have received the information and have chosen to have the vaccination, plan to have the vaccination, or chosen not to have the vaccination. The waiver form is on-line at: http://saweb.memphis.edu/health/.

Measles Vaccination

The University of Memphis requires all students born after January 1957 to have had the measles (MMR) vaccination after January 1, 1980, in order to register. The vaccination is available in the University Health Center for a nominal fee.

Health Services

Limited medical services are available in the University Health Center upon presentation of a valid student identification card. Outpatient medical services, including general clinical evaluation, diagnosis, and treatment; laboratory and X-ray; family planning; and a dispensary are available. Students are charged only for lab tests sent off-campus to a reference lab, for medicines (over-the-counter or prescribed by the center) purchased at the dispensary, and for family planning.

Entrance Examination Information

The GRE, PRAXIS I (PPST), and TOEFL can be taken on campus by computer. Call the University of Memphis ETS Computer-Based Testing Center (John W. Brister Hall 112) at 901-678-1457 to make an appointment.

Graduate Record Examination (GRE): Registration packets for the GRE may be obtained from the Testing Center (JWB 112).

Graduate Management Admissions Test (GMAT): Arrangements for taking the GMAT can be made by writing to GMAT, Educational Testing Service, Princeton, New Jersey 08540, by calling 1-800-462-8669, or by using www.gmac.com.

Miller Analogies Test (MAT): Students who wish to arrange for the MAT should contact the Testing Center, JWB 112.

Residency Classification

Determinations concerning the classification of graduate students as in-state or out-of-state for fee purposes are made in Graduate Admissions. See "Expenses" for further information. The residency guidelines differ from and are independent of guidelines used to determine residency for other purposes, such as tax liability, driver's licenses, voting, etc. If, for any reason, there is a question about a student's residency classification for fee paying purposes, it is his or her responsibility to check with Graduate Admissions. Application for reclassification must be made to the classification officer on or before the last day of regular registration of that semester.

Veterans Services

Mission: The Office of Veterans Services, 003 Wilder Tower, provides assistance for eligible National Guard/Reserves, veterans, and/or dependents who enroll at the University of Memphis and who make application for programs of education or training, and VA tutorial services. Other assistance includes: liaison with Veterans Administration Regional Office, counseling, and counseling referral for personal, family, career, financial, and educational problems.

Application for VA benefits: Those who will be using VA educational assistance while enrolled at the University of Memphis should contact the Office of Veterans Services. They should also be prepared to furnish the following items as applicable:

1. The number 4 original or copy of the DD214 or other armed forces separation papers.
2. Copy of Delayed Enlistment Contract.
3. Copies of marriage licenses and children's birth certificates.
4. Copy of final divorce decree if either veteran or spouse has been previously married.
5. VA file number if different from social security number.

Advance Pay: Advance payment is available for eligible veterans and dependents who plan to enroll on at least a half-time basis. Applications will be accepted in the Veterans Services Office as early as 120 days before the term begins but no later than 45 days before the beginning entry. Generally, the advance pay deadline for the fall semester is around July 15, while spring semester deadline is around November 15. Advance pay checks include an allowance for the month or fraction thereof in which the course begins and the allowance for the following month. Advance pay checks are mailed to the school for delivery to the student at registration. Initial applicants who do not apply for advance pay may expect their check to be mailed to their home within six to eight weeks after registration.

Enrollment Status: For VA benefits during the regular terms (Fall and Spring), 12 semester hours constitute a full-time load for undergraduate students; 9 hours is full-time for graduate students. However, training time for summer session at the undergraduate and graduate level is based on the number of semester hours attempted per term. The Veterans Administration places restrictions on those who receive veterans educational benefits. Some of these restrictions include: (1) regular class attendance, (2) satisfactory academic progress, and (3) adherence to a specific degree plan.

Degree Plan: Only courses that are required for the degree and major may be certified for VA pay. VA will not pay for repeat courses if the grade already earned is accepted by the U of M and will fulfill graduation requirements toward the declared degree and major (even if the course was taken at another institution with or without use of the GI Bill). VA will not pay for elective courses in excess of those needed to meet graduation requirements.

Although advisors are provided for veterans, this assistance does not relieve students of the responsibility for fulfilling all VA and University requirements.

Certification: Enrollment certifications are mailed and/or electronically submitted to the appropriate VA Regional Office upon receipt of the Veterans Request for Certification Form. Students are required to submit this form to the Veteran Services Office at the University of Memphis each semester. Students will be certified on a term-by-term basis. Pre-certification will be done only when a request for advance pay is made.

Termination of Benefits: VA benefits and Title IV funds for enrollment fees are subject to cancellation and immediate repayment if the recipient stops attending, whether or not he/she has withdrawn or dropped a course. The instructor will report the last known date of attendance as the student's "unofficial withdrawal date." Students who stop attending will be assigned a grade of "F" in courses that do not reflect an official withdrawal.

ROTC Programs

Graduate students are eligible to earn a commission as a second lieutenant in the US Air Force by completing 12 semester hours of the AFROTC advanced program in conjunction with their graduate studies. Applications are accepted during January and February for Fall semester entries.

Graduate students are also eligible to earn a commission as a second lieutenant in the US Army by completing 16 semester hours of the ROTC advanced program in conjunction with their graduate studies.

Academic Regulations

Graduate and prospective graduate students are responsible for being thoroughly familiar with the rules, regulations, and degree requirements of the Graduate School and of the academic departments, as well as with the Code of Student Conduct.

The Fogelman College of Business and Economics, the College of Education, and the Herff College of Engineering have additional college degree requirements. Please see Degree Programs for individual program requirements.

Course Numbering System

Only non-degree and fully admitted graduate students may enroll in and receive graduate credit for courses numbered according to the following system:

6000-6999: Courses equivalent to 4000 level senior courses for which a limited amount of graduate credit may be earned. Students will be expected to do more work, such as an additional paper or additional higher level readings, to receive graduate credit.

- Students may not receive credit for a 6000 level course if they have credit at the 4000 level.
- 6000 level courses must be taught by members of the Graduate Faculty.
- No more than 15 post-baccalaureate hours of 6000 level courses may be applied to a doctoral degree.

7000-7999: Courses open primarily to master's students and taught by members of the Graduate Faculty

8000-8999: Courses open primarily to post-master's students and taught by members of the Graduate Faculty

9000: Dissertation, directed by a full member of the Graduate Faculty

Course Load Limitations

Fifteen semester hours of coursework is the maximum load for students devoting full time to graduate study during regular sessions. The maximum total number of hours of graduate course work for which a graduate student may enroll during the Summer Session is 9. Those who register for 9 or more hours per semester in the academic year will be considered full-time students.

Requests for overloads must be approved by the director of graduate studies in the student's college or school. Students in the School of Communication Sciences and Disorders must obtain the approval of the director of graduate studies in that school.

Audit Courses

Students who are admitted to the University of Memphis may register to audit a course with the prior approval of the instructor and the head of the academic unit or designate. Students enrolling on an audit basis do not receive academic credit for that course. Particularly in high-demand courses, academic units should make sure that students who need these courses for degree credit can be accommodated before they issue permits for audits. Audits should not be used simply as a vehicle for obtaining access to laboratory or studio facilities.

Auditors are not required to take examinations and do not receive a regular letter grade. The student and the instructor should reach a precise agreement as to the extent and nature of the students participation in the course, including class discussion, projects, and readings. Students auditing a course will receive "audit" (AU) on the transcript only if they have attended regularly and participated according to the prior agreement with the instructor.

A student may not change from a grade point basis to audit or from audit to a grade point basis after the last day to add classes for that session. Any questions concerning this policy should be referred to the colleges.

Fees for audits will be assessed on the same basis as fees for credit courses.

Attendance Policy

Requirements for attendance in any graduate course will be determined by the instructor and will be communicated in writing to students in the first class meeting.

Change of Major or Advancing from a Master's to a Doctoral Program

Graduate students who have previously declared a major but desire to make a change or who wish to advance from a master's program to a doctoral program should apply to Graduate Admissions to begin the process by completing a Change of Status form.

A Change of Major/Program is considered the equivalent of reapplying for admission. All admission requirements of the new major or program must be satisfied before a change can be granted; admission to the new program is never automatic.

Adding and Dropping Classes

Courses may be added or dropped after initial registration for a limited time only. Refer to the Student Calendar at www.memphis.edu/registrar/calendars/semester for appropriate deadlines. Courses may be added late only upon approval of the instructor and the director of graduate studies in the student's college. Students in the School of Communication Sciences and Disorders or College of Professional and Liberal Studies must obtain the approval of the director of graduate studies in those units.

Courses may be dropped after the drop date only when circumstances beyond the student's control make it impossible to complete the semester. Late drops must be approved by the director of graduate studies in the student's college. Students enrolled on a non-degree basis must obtain the approval of the Dean of the Graduate School or designee. VA benefits and Title IV funds for enrollment fees are subject to cancellation and immediate repayment if the recipient stops attending, whether or not he/she has dropped a course.

Withdrawal from Graduate School

A graduate student may withdraw from the University after the specified drop date only when circumstances beyond the student's control make it impossible to complete the semester. Late withdrawals must be approved by the Director of Graduate Studies in the student's college and submitted to the Graduate School.

Students enrolled on a non-degree basis must obtain the approval of the Dean of the Graduate School or approved designee. VA benefits and Title IV funds for enrollment fees are subject to cancellation and immediate repayment if the recipient stops attending, whether or not he/she has withdrawn.

Leave of Absence

In rare circumstances a student may need to petition for a leave of absence when, due to hardships beyond their control, they cannot be continuously enrolled. Such circumstances can be related to military duty, medical or sudden job relocation. A petition form, with instructions, can be found here.

Grading System

The table below shows the grades that may be awarded with their quality points:

Plus/Minus Grading Scale

GRADE	QUALITY POINTS	GRADE	QUALITY POINTS
A+	4.00	C+	2.33
A	4.00	C	2.00
A-	3.84	C-	1.67
B+	3.33	D+	1.33
B	3.00	D	1.00
B-	2.67	F	0.00

Grades used to postpone or suspend course completion include "I" (incomplete), "IP" (in progress), and "W" (withdrawn).

Independent studies or problems courses, directed readings, student teaching, workshops, practica, internships, theses, and dissertations should be graded "A-F, IP" or "S","U", IP." A grade of "S,""U," or "IP," does not carry any quality points and is not included in computing GPA.

Incomplete: The grade "I" (Incomplete) may be assigned by the faculty member in any course other than those with "IP" grading in which the student is unable to complete the work due to extraordinary events beyond the individual's control that are acceptable to the faculty member. The "I" may not be used to extend the term for students who complete the course with an unsatisfactory grade. Unless the student completes the requirements for removal of the "I" within 90 days from the end of the semester or summer session in which it was received (see University Calendar), the "I" will change to an "F," whether or not the student is enrolled. The faculty member may grant up to a 45-day extension if sufficient extenuating circumstances exist. At the end of the extension period, the "I" grade will automatically revert to "F" if the student has not completed the requirements. The student will be certified for graduation only when all requirements are met, including the removal of "I" grades. If a student has an "I" in a course

necessary to fulfill degree requirements in the semester in which he or she expects to graduate, the certification process and graduation will automatically be deferred to the next term.

In Progress: In some courses with "IP" (In Progress) grading, faculty members may assign "IP" to extend the time permitted for the completion of research or course requirements. A student awarded an "IP" grade must re-enroll in the course for the *same* number of hours to complete the work. Students must continuously re-enroll in thesis or dissertation courses but the hours may vary. The final grade will be submitted by the faculty member at the end of the term in which the work is completed.

Thesis/Dissertation Grading: The use of S, U, IP grading for theses and dissertations is different from its use for other courses. The grade of "S" is ONLY awarded when the student successfully defends the thesis or dissertation; the grade of "U" is awarded ONLY when the student fails to defend successfully. Otherwise, the grade of "IP" is awarded to indicate that the student is progressing in a timely manner. Students must enroll for at least 1 thesis or dissertation hour for each semester (except for summer sessions) that they are working on the thesis or dissertation.

Grade Point Average: Graduate students must maintain a minimum of a 3.0 GPA ("B"). Grades of "D" and "F" will not apply toward any graduate degree, but will be computed in the GPA. No more than 7 hours of "C-," "C" or "C+" will be applied towards meeting degree requirements. Grades earned at another university will not be computed in the cumulative GPA. Grades in courses that are older than the time limitation set for completion of a given degree will be shown on the transcript. With permission of the academic department, however, these grades will not be included in the computation of the GPA used for graduation. Only courses that have been validated will count toward the degree (see below for validation policy). The overall GPA required for graduation, computed on all graduate level courses completed whether or not they are listed on the candidacy form, must also be a minimum of 3.0.

Repetition of Courses: A graduate student may repeat a course to earn a higher grade only if the earned grade was a "U" or lower than a "B" (3.0). **No course may be repeated more than once to improve the grade.** Only the grade earned in the second attempt will be included in the computation of the cumulative grade point average. A maximum of two courses may be repeated during the student's total graduate career to improve a grade. However, if a student advances to a doctoral program and wishes to repeat a third course at the doctoral level, the student must seek approval from the college director of graduate studies. Students should always check with their advisors before enrolling in a course a second time.

Grade Changes: Grades properly issued in a course by the faculty member of record will not be altered except when an error was made in computation or reporting or as a result of a formal grade appeal. A grade other than "I" or "IP" may not be changed as a result of additional work after a grade has been submitted to the Office of the Registrar.

Credit by Exam

In cases where a student has current knowledge but has not earned credit for an appropriate course, an academic department may offer a student graduate credit by examination, subject to the following regulations. The Credit by Exam form can be opened through this link.

The following regulations govern the granting of credit by examination:

- Students must be currently enrolled in a degree program (full-time or part-time) and must be in good academic standing.
- Only courses with "fixed content" areas are eligible for credit by examination. (Independent study, individual directed research, special topics, workshops and individual project classes are not eligible).
- Total credit-by-examination applied to a student's degree program may not exceed nine (9) semester hours.

The student must follow these steps to obtain credit by examination:

- Complete the electronic form noted above, which will trigger approval requests to respective academic department administration. Once approval is obtained, an exam payment portal will be created for the student to complete payment. Afterward, the student will be contacted by the academic department to schedule taking the exam.

- When the exam is successfully taken as indicated by the student's academic department chair, the Dean of the Graduate School (or designee) will authorize the posting of the credit to the student's record.

- The form of the examination, the method of administering it, and the time of examination are left to the discretion of colleges and academic units.

- Instructions and explanations are embedded throughout the Credit by Exam system to guide student and academic department interaction within the Credit by Exam system.

- To receive credit, the student's examination grade should be equivalent to at least a "B" (3.0). Credit is indicated on the student's record as "S" but is not figured in the GPA.

The only remedy to an unsuccessful credit-by-examination grade is to enroll in and complete the course.

Maximum Combined Credit Hours to Fulfill Degree Requirements

For Master's students, the maximum amount of combined hours of transfer credit, credit by examination, course validation and experiential learning credit that can be used to fulfill degree requirements is two-thirds the number of hours required for the degree.

A maximum of 15 credits may be transferred from certificate programs to non-related graduate degrees, subject to approval of the graduate program. Moreover, all credits from a certificate program may be transferred to a relevant graduate degree where the entire content of a given certificate could satisfy some of the requirements of a graduate degree. Students should consult the degree program department in advance to determine which of the certificate program credits are appropriate for transfer.

For doctoral students, the maximum amount of combined hours of transfer credit, credit-by-examination, course validation and experiential learning credit that can be used to fulfill degree requirements two-thirds the number of hours required for the degree.

The Graduate School sets minimum standards to which all the diverse graduate programs across the university must adhere. Individual colleges, schools, and graduate programs are encouraged to set more stringent requirements as necessary to meet their accreditation and student needs.

For additional information about credit by examination procedures, contact the Graduate School Graduation Analyst or the Graduate School Office at 901.678.4212.

Course Validation

The University sets time limits on students to ensure that they have reasonably current knowledge in those courses that comprise the graduate program and for which a graduate degree is awarded. When coursework taken at the University of Memphis is too old to be included in a graduate program, the academic unit may allow the student to validate that coursework by examination, subject to the following regulations. The electronic Course Validation form can be opened through this link. The process to obtain Course Validation credit is nearly the same as Credit by Exam above. The

primary difference is that the student must indicate whether they are attempting Credit by Exam or Course Validation on the electronic form where noted.

- Only students fully admitted to graduate programs and who are in good standing are eligible.
- Not more than 9 hours of the total credits in a master's program may be validated. Not more than one-third of the total credits in a doctoral program may be validated.
- Only courses with fixed content are eligible for validation. (Independent study, research, special topics courses, and workshops are ineligible.)
- Only those courses still being taught are eligible for validation.

Maximum Combined Credit Hours to Fulfill Degree Requirements

For Master's students, the maximum amount of combined hours of transfer credit, credit by examination, course validation and experiential learning that can be used to fulfill degree requirements is no more than two-thirds the number of hours required for the degree.

A maximum of 15 credits may be transferred from certificate programs to non-related graduate degrees, subject to approval of the graduate program. Moreover, all credits from a certificate program may be transferred to a relevant graduate degree where the entire content of a given certificate could satisfy some of the requirements of a graduate degree. Students should consult the degree program department in advance to determine which of the certificate program credits are appropriate for transfer.

For doctoral students, the maximum amount of combined hours of transfer credit, credit-by-examination, course validation and experiential learning that can be used to fulfill degree requirements is no more than two-thirds the number of hours required for the degree.

The Graduate School sets minimum standards to which all the diverse graduate programs across the university must adhere. Individual colleges, schools, and graduate programs are encouraged to set more stringent requirements as necessary to meet their accreditation and student needs.

The student must follow these steps to validate a course by examination:

- Fill out the top of the form and obtain the signatures of the major advisor, department chair, and college director of graduate studies.
- Pay the fee and attach the receipt to the form.
- Take the form to the department chair, who will sign it after the exam has been taken and a satisfactory grade earned.
- When the department chair returns the completed form to the Graduate School, the Dean of the Graduate School or designee will authorize the posting of the credit to the student's record.
- The form of the examination, the method of administering it, and the time of examination are left to the discretion of colleges and academic units.
- To receive credit, the student's validation grade should be equivalent to at least a "B" (3.0). Credit is indicated on the student's record as "S" but is not figured in the GPA.

The only remedy of an unsuccessful validation is to repeat the course.

For additional information about course validation procedures, contact the Graduate School Graduate Analyst or the Graduate School Office at 901.678.4212.

Transfer Credit

Credit towards a graduate degree does not transfer automatically. In general, however, graduate work completed at another institution in a program accredited at the graduate level may be accepted in a graduate degree program at the University, with the following provisions. (1) They relate to the content of the graduate program and/or are comparable to those offered at the University. (2) They do not exceed time limitations set for master's and doctoral programs.

Credit previously earned at another institution must be presented for evaluation no later than the end of the student's second semester of enrollment. Forms are available on-line or from the Graduate School Graduation Analyst. Only transcripts received directly from an issuing institution are considered official.

Approved transfer credit may be accepted for one-half the number of semester hours of course credit toward a master's or doctoral degree. Individual academic units may set more stringent limitations. For students completing a graduate certificate program, only six hours may be accepted for transfer.

Credit will be transferred to apply toward a doctoral program upon approval of the student's advisory committee.

Courses proposed for transfer credit must meet the following two requirements. (1) The University of Memphis Board of Trustees requires a minimum of 750 contact minutes for each semester credit (2250 for a 3-hour course). (2) The Tennessee Conference of Graduate Schools requires a minimum of 3 hours of class work per week for 3 hours of credit.

Grades earned at another institution will not be computed in the University cumulative grade point average, nor will they be accepted for transfer, unless they are "B" (3.0) or better. No credit will be transferred unless it meets with the approval of the major advisor or program graduate coordinator.

If the student is transferring credit from a completed degree, up to 15 credit hours may be transferred.

Maximum Combined Credit Hours to Fulfill Degree Requirements

For Master's students, the maximum amount of combined hours of transfer credit, credit by examination, course validation and experiential learning that can be used to fulfill degree requirements is two-thirds the number of hours required for the degree.

A maximum of 15 credits may be transferred from certificate programs to non-related graduate degrees, subject to approval of the graduate program. Moreover, all credits from a certificate program may be transferred to a relevant graduate degree where the entire content of a given certificate could satisfy some of the requirements of a graduate degree. Students should consult the degree program department in advance to determine which of the certificate program credits are appropriate for transfer.

For doctoral students, the maximum amount of combined hours of transfer credit, credit-by-examination, course validation and experiential learning that can be used to fulfill degree requirements is two-thirds the number of hours required for the degree.

The Graduate School sets minimum standards to which all the diverse graduate programs across the university must adhere. Individual colleges, schools, and graduate programs are encouraged to set more stringent requirements as necessary to meet their accreditation and student needs.

Appeals Procedures

Any graduate student has the right to appeal decisions made by University officials in the implementation of University policy. If a student feels that individual circumstances warrant an appeal, the request for appeal must be filed in the University office responsible for the administration of that policy or the office specified in the policy statement.

NOTES:

1. "Class days" excludes Saturday, Sunday, and holidays.
2. The summer sessions are considered as one term for appeal purposes
3. The Graduate Appeals Committee shall be composed of a chair, seven members, and three alternates constituted as follows:

A chair designated by the Dean of the Graduate School and selected from the graduate faculty; a graduate faculty member and alternate designated by the Dean of the Graduate School; two graduate faculty members and two alternates elected by the University Council for Graduate Studies; three students and one alternate selected by the Dean of the Graduate School.

Grade Appeals

This appeal procedure provides any graduate student at The University of Memphis with a clearly defined avenue for appealing the assignment of a course grade that the student believes was based on prejudice, discrimination, arbitrary or capricious action, or some other reason not related to academic performance. **In all cases the complaining student shall have the burden of proof with respect to the allegations in the appeal and in the request for a hearing.**

The student must institute the appeal process within 20 class days after the start of the following semester. If the instructor, chair, and dean or designee (individual or committee) fail to respond to the student's appeal within the time limits, the Graduate Appeals Committee shall act on the student's appeal. The procedure is terminated if the student and the instructor agree on the grade. If neither the student nor the instructor appeals a decision within the appropriate time limit, the disposition of the appeal made in the previous step shall be final.

A written record of all decisions shall be kept with the file at all steps in the process. Copies of all correspondence and records shall be retained in the office in which the appeal is finally resolved. The original documents shall be forwarded to the Graduate School for filing.

All parties must carefully adhere to the following procedure, observing the deadlines.

Step 1

Time Limitation: Early enough to meet the deadline in Step 2.

The student shall first consult with the instructor in an effort to provide a satisfactory resolution of the appeal. If for any reason the instructor is unresponsive or unavailable, proceed to Step 2. If agreement is reached between the student and instructor, the appeal process ends.

Step 2

Time Limitation: Twenty class days into the following semester.

If the appeal is not resolved in Step 1, the student must complete a Graduate Appeal Form (available in PDF format on the Graduate School's homepage or in the Graduate School). This form, accompanied by a written statement detailing the factual basis of the appeal along with the instructor's written rebuttal, shall be taken by the student to the chair of the department in which the course was taken. The written appeal must be received by the chair within 20 class days from the start of the following semester. The department chair shall then address the appeal in consultation with the instructor and the student within 20 class days of the date of submission of the written appeal. If the instructor is unavailable, the chair should proceed with the appeal. The department chair may utilize any resources available to resolve the grade conflict. The chair must provide a written rationale for any decision made, which shall become part of the file.

If the department chair was the instructor of the course involved in the appeal, or if for any reason the chair disqualifies him/herself, the student may proceed to Step 3.

The chair is empowered to change the grade if he/she finds that the original grade was based on prejudice, discrimination, arbitrary or capricious action, or some other reason not related to academic performance. The chair shall notify both the student and the instructor in writing of the action taken. Either the student or the instructor may appeal the chair's decision within five (5) class days of decision notification by filing a written request for a hearing before the dean of the college (or their designee).

Step 3

Time limitation: Within five (5) class days after Step 2.

If the appeal cannot be resolved at the level of Step 2 within the prescribed 20 class days, the student or the instructor has five (5) class days of decision notification to request in writing (with a copy to the Graduate School) that the chair forward the appeal to the dean of the college (or their designee). The chair shall provide the dean or designee with the Graduate Appeal Form, the chair's written rebuttal, a copy of all correspondence and decisions, along with other records pertaining to the appeal.

The dean or designee may utilize any resources available to resolve the grade conflict within 20 class days. If the dean or designee finds that the request lacks merit, he or she shall notify the student, the instructor, and the chair in writing; the grade shall remain as recorded. The dean is empowered to change the grade if he/she finds that the original grade was based on prejudice, discrimination, arbitrary or capricious action, or some other reason not related to academic performance. Otherwise the grade shall remain as recorded. The dean must provide a written rationale for any decision made, which shall become part of the file.

Either the student or the instructor may appeal the dean's decision within five (5) class days of decision notification by filing a written request for a hearing before the Graduate Appeals Committee with the Dean of the Graduate School or designee. This request must be accompanied by the Graduate Grade Appeal Form, a copy of all correspondence, including the dean's written recommendation, and other records pertaining to the appeal.

Step 4

Time limitation: Within five (5) class days after Step 3.

The written request for a hearing before the Graduate Appeals Committee should state the factual basis for the appeal of the results of Step 3. All supporting documents, including the Graduate Grade Appeal Form, should be included at the time of submission.

The Dean of the Graduate School (or their designee) shall forward the request to the chair of the Graduate Appeals Committee. The chair shall subsequently distribute copies of the request to the members of the committee for consideration. If the Committee finds the student's or the instructor's request merits a hearing, the Committee shall notify the student, the instructor, the chair, and the college dean of the date, time, and the location of the hearing. If the Committee finds that the request does not merit a hearing, the student, the instructor, the chair, and the dean shall be so notified in writing. The hearing may be attended remotely using available technology.

The Graduate Appeals Committee may utilize any available resources to resolve the conflict within twenty (20) class days. To hold a hearing, the seven (7) members of the Committee (or appropriate alternates) must be present. The instructor and student will present their cases at the hearing in each other's presence. If a majority of the Committee agrees that the grade should be changed because it was based on prejudice, discrimination, arbitrary or capricious action, or some other reason not related to academic performance, the Committee shall notify the Dean of the Graduate School, who shall be empowered to change the grade without the consent of the instructor, the chair, or the college

dean. Otherwise, the grade shall remain as recorded. The decision of the Committee shall be communicated to all parties in writing. The decision of the Graduate Appeals Committee shall be final.

The appeals procedure is not complete until all appropriate records are forwarded to the Graduate School Office. At this time, the Dean of the Graduate School shall notify the Office of the Registrar, Corrections, of any grade change. A copy of the Graduate Appeals Form shall become a part of the student's file. A permanent record of all grade appeals reviewed by the Appeals Committee shall be maintained in the Graduate School.

Although the primary responsibility of the committee is to review appeals, the committee shall report any obvious discriminatory or capricious conduct on the part of either the student or the instructor to the Dean of the Graduate School for consideration and action.

Retention Appeals

Any action that results in a student being terminated may be appealed under the following procedures. These actions may include a second failure on comprehensive examinations, failure on a thesis or dissertation oral, a second semester on academic probation, or an action of a program retention committee. Appeals are to be presented and hearings on appeals convened only during periods in which the academic units of the University are in session.

Step 1

1. **Time Limitation:** 20 class days following the date the termination was received.
   The student must submit a written request to the department chair for a hearing to appeal termination from the program. The request should state the factual basis for the appeal.
2. **Time Limitation:** 20 class days **into the next semester** following receipt of the appeal.
   In consultation with the student, the department chair will render a decision on the appeal. The student will be notified in writing of the department chair's decision and reasons supporting the decision. If the academic unit has no departments, the student proceeds immediately to Step 2.

Step 2*

1. **Time Limitation:** Five (5) class days **following Step 1.**
   The student may appeal the decision made in Step 1 by filing, with the director of graduate studies in the student's college, a written request for a hearing before the college's council for graduate studies (or its equivalent). The request should state the factual basis for the appeal of the chair's decision and include a copy of the chair's decision. The college's council for graduate studies may be convened if the college director of graduate studies finds merit in the student's appeal.
2. **Time Limitation:** Twenty (20) class days following the receipt of the written request.
   The college council for graduate studies will notify the student and chair of the date, time, and location of the retention appeals hearing. If the college council agrees that the student should be reinstated, the council shall be empowered to reinstate the student. The student and chair will be notified in writing of the college council's decision and reasons supporting the decision.

***In the case of programs that are not represented on a college council, Step 2 will be omitted, and the appeal will be forwarded to the dean or designee of the department involved.**

Step 3

1. **Time Limitation:** Five (5) class days following Step 2.
   If the appeal cannot be resolved at the level of Step 2, the student may appeal the decision by filing, with the Dean of the Graduate School or designee, a request for a hearing before the university Graduate Appeals

Committee. The written request for a hearing must state the factual basis for the appeal and include a copy of all documents from Step 1 and Step 2.

2. **Time Limitation:** Twenty (20) class days following the receipt of the college's decision.
   The Dean of the Graduate School or designee shall forward the request to the chair of the Graduate Appeals Committee. The chair shall distribute copies of the student appeal as well as decision letters from the department chair and/or college director to the members of the committee for consideration.

If the Committee finds the appeal merits a hearing, the Committee shall notify the Dean of the Graduate School or designee. The Dean of the Graduate School or designee will then notify the student, department chair, and college graduate director. A hearing will be scheduled in which the student, department chair (or designee), and college graduate director (or designee) are invited to present their cases before the Graduate Appeals Committee. The Graduate Appeals Committee will report their decision to the Dean of the Graduate School who will notify the student, department chair, and college graduate director in writing. The hearing may be attended remotely using available technology

If the Graduate Appeals Committee finds that the appeal does not merit a hearing, the student's appeal is denied, and all concerned parties shall be notified by the Dean of the Graduate School or designee.

If the Graduate Appeals Committee finds that the student should be reinstated, it shall be empowered to reinstate the student. The Dean of the Graduate School or designee will notify all concerned parties, including the student, their department, and the University Council for Graduate Studies in writing of the decision and reasons supporting the decision

The decision of the Graduate Appeals Committee shall be final.

Academic Misconduct

Graduate students at the University of Memphis are expected to observe the regulations and policies that govern the behavior of students as members of this academic community. These regulations and policies are published in the Student Handbook. In particular, graduate students should become familiar with the University's policies on plagiarism in its various forms. Furthermore, term papers may not be used to meet the requirements of more than one course unless approved in advance by both instructors.

The University of Memphis Code of Student Conduct defines academic misconduct as all acts of cheating, plagiarism, forgery, and falsification.

The term "cheating" includes, but is not limited to:

- Using any unauthorized assistance in taking quizzes or tests
- Using sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments
- Acquiring tests or other academic material before such material is revealed or distributed by the instructor
- Misrepresenting papers, reports, assignments or other materials as the product of a student's sole independent effort
- Failing to abide by the instructions of the proctor concerning test-taking procedures
- Influencing, or attempting to influence, any University employee in order to affect a student's grade or evaluation
- Any forgery, alteration, unauthorized possession, or misuse of University documents

The term plagiarism includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full or clear acknowledgement. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

Academic misconduct also includes furnishing false information to a University official, faculty member, or office; or the forgery, alteration, or misuse of any University document, record, or instrument of identification.The Academic

Discipline Committee, a standing University committee appointed by the President, addresses allegations of academic misconduct.

Academic Probation

A graduate student whose cumulative grade point average drops below 3.00 will be placed on probation. A second consecutive semester on probation can result in suspension. Conditions under which continuation in the Graduate School beyond two consecutive semesters on probation will be granted must be recommended by the academic unit and approved by the director of graduate studies in the student's college and the Vice Provost for Graduate Programs.

If, in the opinion of the director of graduate studies, the academic unit, and the Graduate School, a degree-seeking student is not making satisfactory progress toward degree completion, the student will be dismissed from the degree program. If, in the opinion of the director of graduate studies, the academic unit in which the student is enrolled in coursework, and the Graduate School, a non-degree-seeking student is not making satisfactory progress toward licensure, certification, or program admission, the student will be dismissed from the University.

Termination Procedures

Graduate Students may be terminated from a program for a second failure on comprehensive examination, unsuccessful defense of thesis or dissertation, a second consecutive semester on academic probation, or an action of a program retention committee.

Procedures for notifying students of termination:

1. The Advisor informs the student of intended recommendation to terminate.
2. The student's Advisor consults the Graduate Coordinator of the program.
3. The Advisor, Graduate Coordinator, and/or Department Chair review the recommendation. If approved the Advisor, Graduate coordinator, and/or Department Chair sign and submit the termination form for review to the Associate Dean for Graduate Studies for the student's College or School. The Associate Dean will consult all relevant parties.
4. If approved, the Associate Dean for Graduate Studies signs and submits termination form to the Graduate School.
5. The Dean of the Graduate School reviews the recommended request for termination. If the request is approved, the Dean sends a letter of termination to the student and copies all parties.

The appeals process for termination is articulated in the Graduate Catalog, located here: www.memphis.edu/gradcatalog/academic_regulations/ret_appeal.

The Termination Form can be found on the Graduate School's website, located here: http://www.memphis.edu/gradschool/resources/forms_index.php

Graduate Faculty

The University of Memphis maintains five levels of graduate faculty: full, associate, affiliate, adjunct, and teaching adjunct. Only full graduate faculty members may chair doctoral committees. Full or associate graduate faculty may chair master's committees. Full members of the Graduate Faculty may direct dissertations and associate members may direct theses in an academic unit other than their own at the discretion of the graduate coordinator and/or the chair of that department. Affiliate or adjunct graduate faculty may be members of doctoral and master's committees in their areas of expertise, but may not chair them.

In extraordinary circumstances, a qualified scholar from another institution may apply for Graduate Faculty status as an Adjunct Research Co-Mentor in order to co-chair a student's committee. No more than one adjunct or affiliate graduate faculty member may serve as a voting member of a student's committee. Teaching adjuncts may not serve on graduate committees. Membership in the Graduate faculty is required in order to teach 6000 level graduate courses or above. An emeritus faculty member continues to serve as a dissertation chairman under the condition that the supervised dissertation has passed a proposal defense before the emeritus faculty member retires.

The Southern Association of Colleges and Schools requires that faculty teaching graduate and post-baccalaureate course work have an earned a doctoral or terminal degree in the teaching discipline or a related discipline. All departmental graduate coordinators should be members of the Graduate Faculty.

Additional information pertaining to application for graduate faculty status, including the Guidelines and Procedures for Graduate Faculty Status, is available on-line or can be obtained from the Graduate School.

Regulatory Issues

Human Subjects: All University of Memphis faculty, staff, or students who propose to engage in any research activity involving the use of human subjects must have prior approval from the Institutional Review Board (IRB). The IRB is responsible for safeguarding rights and welfare of all persons participating in research projects, whether funded or non-funded. Human subjects means a living individual about whom an investigator (whether professional or student) conducting research obtains: (1) data through intervention or interaction with the individual, or (2) identifiable private information. Research means a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge. For further information, contact the IRB coordinator in the Office of Research Support Services.

Vertebrate Animals: All uses of vertebrate animals must receive prior approval from the Institutional Animal Care and Use Committee (IACUC).

Biohazards: Research involving recombinant DNA, radioisotopes, or other hazardous material must receive prior approval by the Institutional Biosafety Committee.

Privacy Rights of Parents and Students

The University complies fully with the Family Educational Rights and Privacy Act (FERPA) of 1974. This act is designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also have the right to file complaints with the FERPA Office concerning alleged failures by the institution to comply with the Act.

Schools may disclose, without consent, "directory" information such as a student's name, address, telephone number, date and place of birth, honors and awards, and dates of attendance. However, schools must tell parents and eligible students about directory information and allow parents and eligible students a reasonable amount of time to request that the school not disclose directory information about them. Schools must notify parents and eligible students annually of their rights under FERPA. The actual means of notification (special letter, inclusion in a PTA bulletin, student handbook, or newspaper article) is left to the discretion of each school.

For additional information, you may call 1-800-USA-LEARN (1-800-872-5327) (voice). Individuals who use TDD may call 1-800-437-0833.

Or you may contact us at the following address:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-8520

The provisions for the release of information about students and the rights of students and others to have access to the University of Memphis education records are published each semester in the online class listing. A copy of the Act and the University of Memphis Procedure may be reviewed in the offices of the Registrar or University Counsel.

Academic Services

- Academic Common Market
- Academic Personnel Services
- Cecil C. Humphreys
- Disability Resources for Students
- Extended Programs
- International Students Services in the Center for International Education Services
- Mid South ACT
- Minority Affairs
- Oakridge Associated Universities
- Psychological Services Center

Academic Common Market

Participation in the Academic Common Market allows qualified students from southern states to pay in-state tuition while pursuing certain degree programs at The University of Memphis. This arrangement is available only for students whose home states do not offer the designated program. The state in which the student resides determines which of the programs offered by The University of Memphis it will make available to its students.

The Academic Common Market is sponsored by the Southern Regional Education Board (SREB). Participating states are Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia (Florida and Texas grant access for graduate level programs only). Current SREB common market guidelines and requirements may be found on the web at www.sreb.org/programs/acm/acmindex.asp.

Students may request through their home state coordinators that additional programs be made accessible. A list of the state coordinators with their addresses and telephone numbers may be obtained from the Office of Curriculum Planning or from the Academic Common Market web site at www.sreb.org/programs/acm/acmindex.asp.

In addition to certification requirements that the student's state of residence may specify, the following pertain: (1) students must be fully admitted to a degree program that has been approved as an Academic Common Market program (non-degree students are ineligible); (2) students must obtain a letter certifying residency, term of entry, and approval for the particular University of Memphis program from their state's Academic Common Market coordinator.

NOTE: After enrollment, students remain eligible for in-state tuition only so long as they are continuously enrolled—consecutive fall and spring terms—in the same major for which they were originally certified. If students change major, they must process a Change of Major through their advisor and notify the Office of Admissions to change the Academic Common Market residency code on their records. Failure to process the Change of Major and to notify the Office of Admissions may subject the student to out-of-state fees for all subsequent terms of enrollment in classes for a major other than the one for which the student received ACM certification. Missing a fall or spring term of enrollment

or a change of major requires that the student be recertified through the ACM coordinator in the student's state of residence.

Academic Personnel Services

The Office of Academic Personnel Services conducts The University of Memphis' program for student evaluation of instruction. The Student Instructional Rating Systems (SIRS) uses a comprehensive approach for collecting, analyzing, and reporting student reactions to certain aspects of classroom instruction. All teaching faculty are required to participate in the student evaluation program. SIRS are not to be administered during the week of final exams. Faculty receive the completed forms and a computer generated summary at the beginning of the following semester. These documents, which are an important part of the dossier prepared for tenure and promotion, also provide useful information to individual faculty members for course development and/or improvement of instruction.

Cecil C. Humphreys

The Cecil C. Humphreys School of Law offers a program of instruction leading to the degree of Juris Doctor.

Admission to the Cecil C. Humphreys School of Law is on a selective basis. To be eligible for admission, a student must have received a bachelor's degree from an accredited college or university and must have made a satisfactory score on the Law School Admission Test. Questions concerning additional admissions requirements should be addressed to the Assistant Dean for Admissions, Recruitment, and Scholarships at lawadmissions@mail.law.memphis.edu.

The regulations and policies of the School of Law are set out in greater detail in the Law School Bulletin. Additional information can be obtained by contacting Law Admissions, 3715 Central Avenue, Memphis, TN 38152, or visit the Cecil C. Humphreys School of Law home page at www.law.memphis.edu.

Disability Resources for Students

The Disability Resources for Students Office provides, arranges, and coordinates academic accommodations and support services to qualified students with disabilities to enable them to fully access the educational opportunities at The University of Memphis. To establish eligibility for disability accommodations and services, students are required to register with the Disability Resources for Students Office and provide current medical or psycho-educational documentation of the disability from a professional who is appropriately qualified to diagnose the particular disability.

Disability information is strictly confidential, is not released without written consent, and does not appear on transcripts or any permanent record of the University.

Students must follow established university procedures for obtaining accommodations and services. Specific accommodations and services are determined on an individual basis and are based on documented functional limitations resulting from the disability. Services available include orientation to disability services, assessment of disability related needs, academic accommodation plans each semester, test accommodations, books on tape, note-takers, readers, scribes, interpreters, Braille, enlarged print, loan of adaptive aids and special equipment, adaptive computer lab, guidance and counseling, adapted campus housing, accessible parking, and limited campus shuttle service.

Since some services require advance notice, applicants are requested to provide sufficient notice to Disability Resources for Students of anticipated needs and expected date of enrollment. For more detailed information, please contact the Director of Disability Resources for Students at 901.678.2880.

Extended Programs

Extended Programs provides credit and non-credit educational opportunities, both on and off-campus, and through innovative educational methods, such as video-assisted courses and online courses. Extended Programs also provides support for Tennessee Public Service activities.

The Office of Public Services is a prime contact for individuals and organizations outside the University. Through this office, access may be gained to University facilities and resources.

Professional and Contract Training features Custom Corporate Training, Online Sales & Marketing Certification, Business & Career Development, The Global Marketplace, Human Resources Training, Corporate Technology, Small Business Development, Foreign Languages, On-Line Courses, Real Estate & Real Estate Appraisal, National Safety Council Defensive Driving Course, Regents Online Continuing Education, and MidSouth Training Program.

Jackson Center is located on the campus of Jackson State Community College, offers a wide variety of graduate and undergraduate courses and degree programs to students living in the Jackson area. In addition, the Jackson Center houses the Office of Extended Programs, which coordinates course and program delivery at various locations in West Tennessee.

The Keep Tennessee Beautiful program, established in 1983, serves as the state Keep America Beautiful agency and state resource center for litter prevention and proper solid waste management education. Keep Tennessee Beautiful is funded by Tennessee Department of Transportation.

For more information, please contact Extended Programs at 901.678.2991 or visit their website at: www.memphis.edu/extended/.

International Students Services in the Center for International Education Services

International Student Services (ISS), at the Center for International Education Services (CIES) advises international students, faculty, staff, visiting scholars, and researchers regarding federal regulations from the Department of Homeland Security, Immigration and Customs Enforcement; health insurance matters; and employment issues. In addition, the Center prepares federal documents necessary for internationals in certain visa categories, as well as meeting the SEVIS requirements set by the U.S. Department of Homeland Security.

ISS produces the federally mandated orientation for F-1 and J-1 visa holders new to campus. ISS also frequently provides this information for in-country dependent family members of students, faculty, and researchers on campus, as well as to international applicants to the University and area colleges and University staff.

ISS advises the International Students Association and several other international student clubs. Annual events include International Night, International Education Week, Diwali, and India Fest among various other cultural events.

Currently, ISS consists of Rebecca Laumann, Executive Director, CIES; Clar Nunis, ISS Intermin Assistant Director, ISS; Gail Warren, and Brenda Cowans. For more information, please visit the website at: www.memphis.edu/cies/iss.

Mid South ACT

Mid-South ACT provides services for individuals of all ages with disabilities in the areas of assistive technology and augmentative alternative communication in West Tennessee, East Arkansas, and North Mississippi. These technologies allow all individuals with special needs access to the world. The Center provides services and information to teachers,

students, consumers, and caregivers regarding assistive technology. This is a "hands-on" center set up for the purposes of hardware and software preview and assistive technology evaluation.

Minority Affairs

The Office of Minority Affairs houses such registered student organizations as the Black Student Association, Black Scholars Unlimited, the Hispanic Student Association, NAACP, and the Minority Association of Pre-Health Students. The office provides a venue where student groups as well as individuals can go to study, use office equipment, and interact with their peers and the office staff. In addition, the office deals with academic, social, and personal concerns that the students may need to address.

The Office of Minority Affairs also serves as a resource for students, providing information on scholarships, internships, employment opportunities, and community resources available to them. The office also works in conjunction with various other campus departments as well as community agencies to provide students with services that may assist them in academic and professional endeavors.

For more information, call 901.678.2054.

Oak Ridge Associated Universities

Since 1971, students and faculty of the University of Memphis have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 91 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education (ORISE), the DOE facility that ORAU operates, undergraduates, graduates, postgraduates, as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found at www.orau.gov/orise/educ.htm or by calling either of the contacts below.

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scholars Program, consortium research funding initiatives, faculty research and support programs, as well as services to chief research officers.

For more information about ORAU and its programs, contact Dr. Andrew W. Meyers, Vice Provost for Research, ORAU Councilor for The University of Memphis, at 901.678.2590; Monnie E. Champion, ORAU Corporate Secretary, at 865.576.3306; or the ORAU Home Page at www.orau.org.

Psychological Services Center

The Psychological Services Center offers psychotherapy and psychological evaluation services to children and adults. The clinic is open to the general public, as well as the University community. Fees are reduced for university students,

staff, and faculty. The Center is located in room 126 of the Psychology Building. For appointments or information, contact the Center at 901.678.2147.

Graduate School Expenses

- Application Fee
- Registration (Enrollment) Fee
- Refund of Registration (Enrollment) Fees
- Other Registration (Enrollment) Fees
- Eligibility for Deferment of Payment and Tuition
- Student Housing
- Miscellaneous Fees
- Appeal Procedures (Fees and Refunds)
- University ID Cards
- Tiger Funds

Application Fee Information

Domestic applicants submitting an application for admission to the Graduate School must pay, at the time of submitting his or her first application, a one-time, non-refundable fee of $35.00. International applicants must pay a one-time, non-refundable application fee of $60.00.

Registration (Enrollment) Fee Information

Registration (enrollment) fees are subject to change. Visit the Bursar's website, www.memphis.edu/bursar/fees/otherfees.php, for the most up-to-date fee schedule.

Fogelman College of Business Course Fee: Students taking Fogelman College of Business graduate level courses (courses beginning with 3 or above) will be charged an additional $35 per credit hour.

Architecture Course Fee: Student taking a graduate level architecture course will be charged an additional $30 per credit hour.

Engineering Course Fee: Student taking a graduate level engineering course will be charged an additional $45 per credit hour.

Summer Session: The summer session consists of a PreSession term, two separate terms of approximately five weeks each, plus an extended term for specified courses. Registration (enrollment) fees for the summer sessions are determined solely on a credit hour basis.

Courses offered between terms, for concentrated periods during a term, or at specific locations may be subject to fees on a per-hour basis only.

Maintenance Fee: Maintenance fees are assessed based on the course level and the number of hours enrolled. The maximum fee amount will be the graduate maximum if a student is enrolled for any graduate level courses. Maintenance fee amounts quoted in the Fee Schedule above include the Debt Service and General Access Fee components.

Tuition: Students classified as out-of-state residents by the Office of Admissions pay the additional out-of-state tuition indicated in the Fee Schedule above. **Residency Classifications May Be Changed Only By the Admissions Office.**

Student Activity Fee: All students enrolled for one to five credit hours pay a student activity fee of $6.00 per credit hour. All students enrolled for six or more credit hours pay a full-time student activity fee of $44.00. Students paying the full-time fee are entitled to admission to home athletic events as well as certain health services, concerts, plays, and other student-sponsored activities and social events.

Applied Music Fee: Certain music courses require an additional applied music fee of $160.00 per half-hour private lesson per week. This fee is not included in the Fee Schedule.

Materials Fee: Certain courses, such as Art, Biology, Music, may require an additional materials fee of up to $150 per semester. This fee is not included in the Fee Schedule.

TN eCampus: Cost for in-state graduate students will be $313 per credit hour. Please note that these fees do not max at 12 hours. Cost for out-of-state graduate students will be $677 per credit hour. Fees for these courses are in addition to fees in the Registration Fee Schedule.

International Master of Business Administration Program: All students enrolled in the International MBA major are required to pay a matriculation fee of $3,000 per year. This fee is not included in the fee schedule above. The IMBA fees are subject to change. For further details contact the International MBA Program Office at the Fogelman Executive Center (901.678.3499).

Master of Business Administration Program (Executive Concentration): The Executive MBA class of 2005-2007 charges a total fee of $42,000 for Tennessee residents for the 21-month program. Out-of-state residents are charged the current out-of-state tuition rates in addition to the program fee. This program fee covers maintenance fees, tuition, and other expenses of the EMBA concentration. The EMBA fees are subject to change. For further details contact the Executive MBA Office at the Fogelman College of Business and Economics (901.678.4866).

Late Registration Fee: A late registration fee of $100 will be assessed to each student who does not complete registration prior to the first day of classes in that semester. This fee is not included in the Fee Schedule above.

Late Payment Fee: A late payment fee of $100 will be assessed to each student who does not satisfy at least the initial installment amount of enrollment fees (50% of fees after all financial aid, scholarships, and/or sponsorships have been applied for the fall or spring semesters; 100% of fees for summer sessions) by the appropriate deadline date as shown at www.memphis.edu/bursar/calendars.php.

Auditing Classes: Fees for auditing classes are assessed on the same basis as fees for credit courses.

All questions regarding fees, fee payments, refunds, and appeals should be directed to the Bursar's Office, Room 115 Wilder Tower, 901.678.5579.

Refund of Registration (Enrollment) Fee Information

The University adheres to state of Tennessee policy on the refund of student enrollment fees. As such, the following refund percentages of enrollment fees (Maintenance, Out-of-State Tuition, Applied Music, Laboratory Materials, and Student Activity) apply to students who withdraw from the University or who drop to an hourly load below full time:

- **100% Refund:** A full (100%) refund of these fees will be provided (1) until the semester's first day of classes, (2) for courses cancelled by the University, and (3) in the case of the death of the student during the semester.

- **75% Refund:** A 75% refund will be provided beginning with the semester's first day of classes and extending for a period of time as noted in the term calendar on the Bursar's website at http://bf.memphis.edu/finance/bursar/fee.php for each semester.
- **25% Refund:** A 25% refund will be provided beginning at the expiration of the 75% refund period and extending for a period of time as noted in the term calendar on the Bursar's website (http://bf.memphis.edu/finance/bursar/fee.php) each semester.
- **No Refund:** At the conclusion of the 25% refund period, there will be no refund of these fees.
- **Title IV:** Students who receive federal Title IV funds and who withdraw during their first semester of attendance at the University may be eligible for a refund of enrollment fees based on the federal pro-rata refund calculation.

Please note that the specific dates for these refund periods are found in the term calendar for each semester at www.memphis.edu/bursar/calendars.php. The refund period ends earlier than the final deadline for dropping a course or withdrawing.

The University's refund policy is based entirely upon the official date of withdrawal or change of course that would result in a refund. Refunds beyond the specified dates or percentages will not be made for reasons such as employment conflicts, relocating out-of-town, or other reasons that are beyond the University's control or responsibility.

Registration fee refunds will be processed and mailed to students beginning approximately ten (10) days after classes begin and should usually be completed within four weeks. The University will offset against proposed refunds any amount owed by the student to the University.

Other Registration (Enrollment) Fee

Payment of University Fees and Charges: Registration (enrollment) fees may be paid by cash, check, money order, Visa/Mastercard/Discover, Financial Aid/Scholarship Award(s), or University Tiger Fund$ account. Fees may be paid as soon as the student registers for classes; however, all registration fees and outstanding debts to the University are due by the fee payment deadline date noted in the Fee Payment Section of the Bursar's website at www.memphis.edu/bursar/index.php. The University offers a deferred (installment) payment plan to assist students with the payment of enrollment fees for the Fall and Spring semesters (not available for Summer terms). Please refer to the website above for complete information.

Returned Checks/Charge Card Drafts: It is expected that any check or credit card draft given to the University for any reason will be honored by the bank on which it is drawn. Any check or draft dishonored by the bank on which it is drawn may be presented a second time at the discretion of the University. A $20.00 returned item fee will be assessed for any check/draft returned.

The privilege of making payments to the University by personal check and check cashing privileges will be revoked for any student who has had more than one returned check/draft within a twelve-month period. The suspension of this privilege will be for a period of one year from the date the last item is redeemed.

A student will not be permitted to satisfy registration fees by check if ANY previous check in payment of registration (enrollment) fees has been returned unpaid. Any check or credit card draft presented to the University in payment of enrollment fees that is subsequently dishonored by the bank on which it is drawn will be assessed the Late Payment Fee of $100.00. Students on a "NO CHECKS" status must be prepared to satisfy registration fees with cash, cashier's check, or by authorized credit card draft.

Indebtedness to the University: Policy of the University of Memphis Board of Trustees prohibits the enrollment of any person who owes the University any amount of money. All outstanding financial obligations to the University must be satisfied before a student will be allowed to register for courses. Tennessee law also prohibits the release of grades, transcripts, or diplomas of any person who has outstanding financial obligations to the University.

Academic Common Market: Participation in the Academic Common Market provides qualified students from various southern states with the opportunity to pay in-state enrollment fees while pursuing certain degree programs at the University of Memphis.

Totally Disabled Persons and Persons over 60 Years of Age: Persons who are domiciled in Tennessee and (1) have a permanent disability that totally incapacitates them from the potential to work at an occupation that brings them an income or (2) will become 60 years of age or older during the academic semester in which they begin classes may AUDIT courses at the University of Memphis without paying maintenance fees, tuition charges, student activity fees, access fees, or registration fees. Admission to AUDIT courses will be limited according to space availability on an individual classroom basis.

Persons who are totally disabled and those who will become 65 years of age or older during the academic semester in which they begin classes and who are domiciled in Tennessee may enroll for credit courses at the cost of one-half (1/2) the normal per credit hour fee, not to exceed a maximum of $70.00 per semester. University Health Services shall examine certification of permanent disability (not the applicant) and determine the eligibility of the applicant under this legislation.

Inquiries concerning these programs may be addressed to Student Information Services, 003 Wilder Tower.

Eligibility for Deferment of Payment and Tuition

Certain Eligible Students Receiving U.S. Department of Veterans Affairs or Other Governmentally Funded Educational Assistance Benefits may be Eligible for Deferment of Payment of Tuition and Fees.

Service members, veterans, and dependents of veterans who are eligible beneficiaries of US Department of Veterans Affairs education benefits or other governmentally funded educational assistance, subject to the conditions and guidelines set forth in Tennessee Code Annotated 49-7-104 as amended, may elect, upon formal application, to defer payment of required tuition and fees until the final day of the term for which the deferment has been requested. Application for the deferment must be made no later than 14 days after the beginning of the term, and the amount of the deferment shall not exceed the total monetary benefits to be received for the term. Students who have been granted deferments are expected to make timely payments on their outstanding tuition and fees balance once education benefits are being delivered, and eligibility for such deferment shall terminate if the student fails to abide by any applicable rule or regulation, or to act in good faith in making timely payments. This notice is published pursuant to Public Chapter 279, Acts of 2003, effective July 1, 2003.

Student Housing

Residence Halls: For information concerning application for rooms and current residence hall rates, contact the Office of Residence Life 901.678.2295 or visit their web site, www.memphis.edu/reslife.

Application Procedures: Applications for residence hall space may be obtained from the Office of Residence Life, University of Memphis, Memphis, TN 38152, or from their web site. Because spaces are allocated by date of receipt and home address, completed applications accompanied by the required $100 application/reservation deposit should be returned to the Office of Residence Life as soon as possible. Checks or money orders should be made out to the University of Memphis. Please do not send cash.

Receipt by the Office of Residence Life of the housing application and $100 check or money order, however, does not guarantee admission to the University or to a residence hall. The Director of Residence Life reserves the right to refuse any housing application, to change or cancel any assignment, or to terminate a resident's occupancy for justifiable cause.

Contract Period and Conditions: Fall assignment/contracts are for the full academic year (fall and spring semesters). Fall residents wishing to petition for release from their contract for the spring semester must do so in writing by November 1. Residents who cancel after this date, but prior to claiming their key for the spring semester, will forfeit 50% of their application/reservation deposit. Residents who fail to cancel by the close of the check-in period will forfeit the entire $100 deposit. The application/reservation deposit, once submitted with the application, covers the initial term of occupancy and all subsequent terms of occupancy and continues until such time as it is cancelled in writing. There will be no penalty if written cancellation is received prior to the published deadline for any specific contract period.

Residents claim and vacate their rooms according to directions issued by the Department of Residence Life. Returning and new residents will have claimed their spaces if any or all of the following procedures have occurred: (1) receiving the room key during the check-in period, (2) paying residence hall rent in full or in part by the end of the check-in period, (3) returning the signed contract with the rental payment.

Cancellation Policy: Full deposit and pre-payment of rent will be refunded if: (1) the institution is notified by the following cancellation deadlines for the first semester in which the contract is in force: July 1 for fall residents; December 1 for new spring residents; May 1 for summer residents; (2) the student is prevented from entering the University because of personal medical reasons confirmed in writing by a licensed physician; (3) residence hall space is not available; (4) if the applicant has not been assigned to a room at the time written cancellation is received by Residence Life; or (5) the student is denied admittance or re-admittance to the University. Full refund will be made in the case of death. Fall residents wishing to petition for release from their contract for the spring semester must do so in writing by November 1. No refunds will be made for other than the above conditions.

Assigned applicants who fail to cancel by the deadline referred to in (1) above but cancel before the close of the check-in period will forfeit 50% of their deposit. Assigned residents who fail to cancel by the close of the check-in period will forfeit their entire deposit. (This is applicable to both the Fall and Spring semesters.)

Refund of Residence Hall Rent: Refunds of residence hall rent after registration will be prorated on a weekly calendar basis when the student is forced to withdraw from the residence halls: (1) because of personal medical reasons confirmed in writing by a licensed physician, or (2) at the request of the institution for other than disciplinary reasons. Full refund will be made in the case of death.

For reasons other than those stated above, the following procedure shall apply: 75% of fees will be refunded for withdrawal from the residence halls for a period of approximately 14 calendar days beginning with and inclusive of the first official day of classes or within an equivalent period for a short-term course. Twenty-five percent (25%) of fees will be refunded following expiration of the 75% period, for a period of time extending approximately 25% of the time covered by the term. The periods during which refunds of 75% or 25% will be made are exactly the same as the periods during which the same refund percentages are made for maintenance fees. No refunds will be made for other than the above conditions.

STUDENT FAMILY HOUSING

Student Family Housing is located on the South Campus approximately one mile from the main campus. Phase One consists of 56 one-bedroom townhouse apartments, 62 two-bedroom townhouse apartments, and 8 two-bedroom flats. All apartments are equipped with stove, refrigerator, garbage disposal, living room carpet, and venetian blinds. Electric central heat and air are also provided. Each apartment has an enclosed private patio at the rear. The new Phase Two consists of 24 two-bedroom flats. These apartments are equipped with stove, frost-free refrigerator, garbage disposal, dishwasher, venetian blinds, thermal pane windows, hook-ups for stackable washers and dryers, and carpet for living room and bedrooms. Gas central heat and air are also provided. Each apartment has a patio/balcony with locking storage area. Four apartments are specifically designed for physically disabled students. Application forms may be obtained from the Office of Residence Life in Room 011, Richardson Towers or from their web site, www.memphis.edu/reslife. A $100 application/ reservation deposit is required when the application is submitted.

Miscellaneous Fees

Automobile Registration: Every vehicle parked on campus property must have a university parking permit (hangtag) properly displayed. A permanent parking permit, which provides access to the University's general parking areas, is issued to students upon their initial enrollment at the University. There is no additional charge to students for their initial general parking permit (or general parking permit validation sticker issued each subsequent semester the student enrolls and satisfies registration fees). Students will be charged a $10.00 fee for the replacement of their permanent parking permit. Students may also request access to university reserved, resident, or priority (gate access) parking areas, which require payment of an additional parking fee, depending on the level of parking desired.

Credit By Examination: The fee for taking an examination for credit is $60.00 minimum and an additional $15.00 for each hour over three (3) per course. These fees are non-refundable and must be paid prior to the examination.

Doctoral Dissertation: A student completing the doctorate will be required to pay the $7.50 fee for binding each copy of the dissertation and a fee of 75.00 to defray the cost of microfilming the dissertation and publishing the abstract. The student will be required to present a receipt from the Bursar's Office to the Graduate School showing that these fees have been paid.

Music Locker/Instrument Rental: Music students are required to have a locker for storage of university-owned musical instruments or equipment. Personal instruments may also be stored in these lockers. A music instrument rental fee of $25.00 is required. Students will be expected to pay for any damages. A fee of $5.00 per semester is assessed for the locker rental.

Master's Thesis: Students will be required to present a receipt from the Bursar's Office to the Graduate School showing that a fee of $7.50 has been paid for each thesis to be bound, if any are required by department. Students should consult with the department chair and/or thesis adviser as to the number of copies required.

Appeal Procedures

Any individual may appeal the assessment, application, calculation, collection, or interpretation of any university fee, charge, deposit, or refund. The University has developed the following processes for an appeal:

Traffic Fines/Citations: Traffic fines and citations may be appealed through a separate process on forms available from the Parking Office, Office of Student Conduct, or the Student Government Association Office.

Residence Life: Appeals related to Residence Life financial matters should be filed first with the Office of Residence Life for review within their process. Decisions of the Office of Residence Life may be appealed in writing to the Office of the Assistant Vice President for Finance.

All Other University Fees/Charges, Refunds, etc.: A written appeal of all other financial matters should be filed first on forms available in the Bursar's Office, 115 Wilder Tower. Decisions of the Bursar's Office may be appealed in writing to the Office of the Assistant Vice President for Finance. The Bursar's Office will forward any appeals that they cannot address to the Office of the Assistant Vice President.

The Office of the Assistant Vice President for Finance will provide a decision in writing of those matters appealed to that office. This decision may be appealed to the University Fee/Refund Appeals Committee. The recommendation of the Committee will be forwarded to the Vice President for Business and Finance for a final decision, which will conclude the University's appeal process.

Minimum Degree Requirements for Graduate Academic Programs

Graduate students are expected to be aware of and to comply with the general requirements for the degrees they are pursuing as outlined in the Graduate School Bulletin. In addition to the general requirements, students are expected to conform to any additional requirements set by the student's college or academic unit. The Fogelman College of Business and Economics, the College of Education, and the Herff College of Engineering have additional college degree requirements. Please see Degree Programs for individual program requirements.

A wide variety of graduate programs of study are offered in The Graduate School at The University of Memphis. Candidates for a degree must design a plan in consultation with their major advisor and then obtain the appropriate approvals.

The University of Memphis offers Master's degrees, Education Specialist degree, Doctoral degrees and graduate certificates.

Minimum Requirements for Master's Degrees

A master's degree program shall generally include 30-36 semester hours of course work, although some programs require substantially more. Refer to the appropriate program description for specific requirements. The student's program must be approved by the major academic unit. A student may be required to take courses beyond the minimum to ensure balance and depth in the discipline.

A minimum of 70% of the total required hours must be provided by 7000 level courses. No more than 12 hours of workshop courses and independent study courses may be applied to a master's degree. Individual academic departments may allow fewer workshop or independent study hours in their programs.

The maximum amount of combined hours of transfer credit, credit by examination, course validation and experiential learning that can be used to fulfill degree requirements is two-thirds of the number of hours required for the degree. The Graduate School sets minimum standards to which all the diverse graduate programs across the university must adhere. Individual colleges, schools, and graduate programs are encouraged to set more stringent requirements as necessary to meet their accreditation and student needs.

Additional Program Requirements

Each graduate program listed in this catalog has minimum degree requirements. In consultation with the faculty, the graduate coordinator of each program may specify any additional requirements, such as prerequisites, a reading knowledge of a foreign language, a working knowledge of statistics, or specific courses related to graduate or teaching assistantships.

Foreign Language Proficiency

A reading knowledge of at least one foreign language is required in several graduate programs. This requirement may be met in one of the following ways

- achieving a grade of B ("3.0") or better in a fourth-semester language course (e.g. FREN/GERM/ITAL/SPAN 2020),

- achieving a grade of B ("3.0") or better in a graduate reading course (FREN 7000 and GERM 7000 are the only two courses available for this option. They are usually offered in the summer)
- achieving a grade of B ("3.0") or better in upper-division courses at the 3000- or 4000-levels (e.g. FREN 3302/GERM 3790/ITAL 3311/PORT 3301/SPAN3303),
- achieving a grade of B ("3.0") or better in graduate courses taught in the target language at the 6000- or 7000 levels (e.g. FREN 6302/PORT 6024/SPAN 6307),
- students who provide evidence of knowledge of a foreign language other than that of the concentration equivalent to a fourth-semester language course or superior may arrange with the section head of the specific language for a written test to prove competency.

Time Limitation

All requirements for the degree must be completed in eight years. Courses older than these limits will not be allowed as credit toward the master's degree, although the grades will be calculated in the cumulative GPA. Grades earned in courses that are older than program time limits will be shown on the transcript and will be calculated in the cumulative GPA, but will not be accepted for graduation purposes unless a request for expired course grade removal has been granted (see Admission to Candidacy section below).

There are no exceptions to program time limits. However, students may request the option of validating old courses as described in the Academic Regulations section of the Graduate Catalog.

Comprehensive Examination

Before being recommended for graduation, every candidate for the master's degree who does not write a thesis is required to pass a final comprehensive examination. Many programs also require a comprehensive examination for those students writing a thesis. Some professional programs require a culminating experience instead of a comprehensive examination. Please see specific program requirements.

Some programs give the comprehensive examination within a short time period during or near the last semester of coursework or after all coursework is completed. In some professional programs the comprehensive examination is given during the calendar year in which the student expects to graduate. Other programs give a series of exams over several semesters. In all cases, comprehensive exams should be completed late enough in the student's program to ensure full coverage of content areas represented by required coursework.

In programs that do not require comprehensive examination for thesis writers, the thesis defense will include broad questions covering the breadth of coursework as well as the thesis content and will be used to satisfy the comprehensive examination requirement.

Comprehensive examinations are administered only to students in good standing and may be oral, written, or both. The result of the exam (positive or negative) must be communicated to the Graduate School on the Comprehensive Results Form within the same semester the exam was taken or by the specified deadline in this catalog.

Protocols and procedures for administration of comprehensive examinations can be obtained at the departmental level. It is the student's responsibility to confer with the appropriate academic department regarding the time and place of the examination.

A student who does not perform satisfactorily on the first comprehensive examination will be given an opportunity to take a second examination at the next regularly scheduled examination period. For serial examinations, given over several semesters, see the specific program repeat policies. The academic department may recommend appropriate coursework, which the student will take in preparation for retaking the exam.

Results of comprehensive examinations are not graded in the way that courses are and so cannot be appealed, nor can they be changed after the form has been filed with the Graduate School . A second failure results in termination, which can be appealed. The retention appeals process is formalized and must be followed in all cases. See the section on "Retention Appeals."

Admission to Candidacy

Before an applicant will be officially admitted to candidacy for a master's degree, the student must have satisfied the following requirements:

1. The "Master's Degree Candidacy Form" for the Master's Degree and a graduation application (Apply to Graduate - available in MyMemphis) must be filed by the deadline published in the Graduate Catalog, posted on academic department bulletin boards on campus, and available on the Graduate School web site. No exceptions will be made if both the graduation application and degree candidacy forms are not submitted by the stated deadlines.
2. If a student is writing a thesis, an approved Thesis/Dissertation Proposal Form must be filed with all necessary human or animal subjects approvals before any research is undertaken. See the section on "Regulatory Issues."
3. The student must have a cumulative GPA of 3.0 on all graduate work undertaken at The University of Memphis whether or not the courses are listed on the candidacy form. Grades of "D" or "F" are not accepted for any graduate degree credit, but these grades will be computed in the GPA. No more than seven (7) hours of "C+," "C," or "C-" will be counted toward degree requirements.
4. The student must have at least a 3.0 average in all graduate work at the time the graduation application in My Memphis is filed.
5. Expired course grades can be removed from the calculation of a given student's cumulative GPA. Expired courses will, however, still appear on the student's transcript. A student deemed eligible for expired course grade removal by their academic department must have a written plan for degree completion, developed with their academic advisor, in place before the student grade record can be updated. (Grades for these expired courses will have an "X" assigned with the letter grade.) Advisors can fill out a grade expiration form found here: http://www.memphis.edu/gradschool/resources/forms_index.php.
6. The program must include a minimum of 70% of the total required hours as 7000 level courses.
7. All requirements of the Graduate School, the student's college, and the academic department must be met.
8. If a student wishes to substitute a course for a required course, the substitution must be approved by the student's advisor or the program coordinator on the Course Substitution Form. The form must accompany the candidacy form.
9. The student's graduate work up to this point must be acceptable in quality and quantity to the major advisor, department chair and/or director of graduate studies in the student's college, and the Dean of the Graduate School.

Enrollment Requirements

Students must be enrolled during the semester in which they defend the thesis. Colleges and departments may require enrollment during the semester in which comprehensive exams are taken; check with your program for details.

Thesis Requirements

Most academic departments provide students both a thesis and a non-thesis option (see department descriptions). A thesis of 3 to 6 semester hours may be presented as partial completion of degree requirements. Students must enroll for thesis credit each academic semester until the thesis is completed, regardless of how many hours the program will accept.

Students electing to write a thesis should familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write. An approved Thesis/Dissertation Proposal Form must be filed with any necessary human or animal subjects approvals before any research is undertaken. See the section on "Regulatory Issues" for more information.

Thesis Committee

The student will select a thesis committee (minimum of three members) made up of graduate faculty approved by the head of the academic unit and/or the college director. The chair of the thesis committee must hold full or associate graduate faculty status. Only one affiliate or adjunct graduate faculty member may serve as a voting member of a thesis committee. If the thesis committee differs from the advisory committee, a new committee form must be filed with the Graduate School.

Continuous Enrollment Policy

The continuous enrollment policy applies to thesis, capstone projects, and all other culminating experiences. Most programs require at least one culminating experience course; see specific program requirements for details. A student must be enrolled for at least 1 hour each Fall and Spring semester until the thesis or project is complete. A student must be enrolled in the Summer semester if the thesis will be completed then. Failure to so register will result in the student being charged tuition for each semester he or she did not enroll.

The only exception to this policy is if the student's major professor is on leave or otherwise unavailable. In such cases the approval of the appropriate college director and the Dean of the Graduate School is required. In case of serious medical circumstances, students may request a leave of absence, subject to the approval of the program graduate coordinator, the college director of graduate studies, and the Vice Provost for Graduate Programs. Retroactive approval will not be granted. A leave of absence does not extend time limit to degree.

Defense of the Thesis

Students must be enrolled in the semester during which they defend the thesis. Upon completion of the thesis, the student must successfully complete an oral defense administered by the student's advisory committee and the results reported to the Graduate School. All committee members must be present at the examination and the results are determined by a unanimous vote of the committee. Only one adjunct or affiliate graduate faculty member may serve as a voting member on a master's committee.

If the oral exam encompasses both the comprehensive and the defense, the results should be reported separately on the forms provided. In this case, the thesis defense will include broad questions covering the extent of coursework as well as the thesis content.

The final draft of the thesis must be approved by all members of the student's committee. After the successful defense, a copy of the defended and corrected thesis must be submitted to the Graduate School along with the committee approval form. This copy must contain all corrections which may have been given to the student during the final defense.

After the Graduate School has reviewed the final draft, the student must make all additional corrections. At such time, the student will convert the final corrected document into a PDF version and upload to the Electronic Thesis/Dissertation (ETD) archival system. See the Graduate School Thesis/Dissertation Preparation Guide for instructions on how to upload to the ETD system.

Students who unsuccessfully defend their thesis will be assigned a "U" (unsatisfactory). The Graduate School will then send a letter of termination from the program.

Thesis Credit

Credit will be posted upon completion and acceptance of the thesis. No more than six (6) hours will be allowed for a master's thesis, even though the student may have been required to register for additional hours in order to maintain continuous enrollment. If a student elects not to complete the thesis, a retroactive drop (or withdrawal) must be processed for the last term of enrollment in thesis credit to reflect the change of program on the student's transcript.

Second Master's Degree

Students who hold or are enrolled in a master's degree from The University of Memphis may pursue a second master's degree with a different major or degree if the academic unit accepts them. Up to 20% of the total combined credit hours for the two degree programs or fifteen credit hours (whichever is greater) may be shared. Shared credit hours must be approved by the advisor and graduate coordinator for each degree program. Two degrees may be pursued simultaneously or sequentially. Each degree must be completed within the eight year time limit.

Students may initiate a dual degree program to meet their educational and career goals. Student initiated programs require admission to both master's/professional programs and a plan of study approved by both graduate coordinators and the Graduate Coordinators and the Graduate School. The plan of study will show all the credit hours that will be earned in the two degrees.

Education Specialist

The Education Specialist degree is designed for the educator-practitioner who desires post-master's training but who does not wish to earn a doctorate. For additional information, please refer to the College of Education.

Minimum Requirements for Doctoral Degrees

Doctoral degrees require at least 72 credit hours beyond the bachelor's degree; however, many programs require additional hours. Specific requirements for the doctoral degree vary with the academic department; see the appropriate section in this Bulletin. The student's program must be approved by the major academic department. A student may be required to take courses beyond the minimum to ensure balance and depth in the discipline.

No more than 15 post-baccalaureate hours of 6000 level courses may be applied to a doctoral degree.The last 30 hours of credit must be earned at the University of Memphis. Of the final 30 hours, no more than the maximum allowed by the program may be dissertation hours. A minimum of 6 hours of dissertation credit is required.

The maximum amount of combined hours of transfer credit, credit-by-examination, course validation and experiential learning that can be used to fulfill degree requirements is no more than two-thirds the number of hours required for the degree. The Graduate School sets minimum standards to which all the diverse graduate programs across the university must adhere. Individual colleges, schools, and graduate programs are encouraged to set more stringent requirements as necessary to meet their accreditation and student needs.

Additional Program Requirements

Each graduate program listed in this catalog has minimum degree requirements. In consultation with the faculty, the coordinator of each graduate program may specify any additional requirements, such as prerequisites, a reading knowledge of a foreign language, a working knowledge of statistics, or specific courses related to graduate or teaching assistantships.

Foreign Language Proficiency

A reading knowledge of at least one foreign language is required in several graduate programs. This requirement may be met in one of the following ways

- achieving a grade of B ("3.0") or better in a fourth-semester language course (e.g. FREN/GERM/ITAL/SPAN 2020),
- achieving a grade of B ("3.0") or better in a graduate reading course (FREN 7000 and GERM 7000 are the only two courses available for this option. They are usually offered in the summer)
- achieving a grade of B ("3.0") or better in upper-division courses at the 3000- or 4000-levels (e.g. FREN 3302/GERM 3790/ITAL 3311/PORT 3301/SPAN3303),
- achieving a grade of B ("3.0") or better in graduate courses taught in the target language at the 6000- or 7000 levels (e.g. FREN 6302/PORT 6024/SPAN 6307),
- students who provide evidence of knowledge of a foreign language other than that of the concentration equivalent to a fourth-semester language course or superior may arrange with the section head of the specific language for a written test to prove competency.

Time Limitation

Doctoral degrees must be earned within 12 consecutive years. All course work must be completed within 10 years of the student's original admission to a doctoral program. The student may take a further two years of dissertation credit. However, some academic departments may have more stringent time limitations. There are no exceptions to program time limitations. However, students may request the option of validating old courses taken at The University of Memphis as described in the "Academic Regulations" section of this Bulletin.

Grades earned in courses at The University of Memphis older than program time limits will be shown on the transcript and calculated in the cumulative GPA, but will not be accepted for graduation purposes unless a request for expired course grade removal has been granted (see Admission to Candidacy section below).

Residency Requirement

Students must commit to full-time study for a minimum of two successive semesters after admission to the degree program to fulfill the residency requirement. Some academic departments do not count the summer term towards residency. The College of Education has an alternative residency program; refer to the appropriate section of this catalog or contact the College for additional information.

Advisory Committee

After admission to the doctoral program, the student will be assigned a major advisor, who must be a full member of the Graduate Faculty, to chair the student's Advisory Committee. This committee will work closely with the student to formulate an approved program of study. The program head, following consultation with the student and major advisor, will approve the appointment of a minimum of three members to the Advisory Committee. Only one adjunct or affiliate graduate faculty member may serve as a voting member on an advisory committee. These appointments will be forwarded to the Dean of the Graduate School. The advisory committee is not necessarily, but may be, the same as the dissertation committee (see below).

Qualifying Examination

Individuals seeking a doctoral degree may be required to take a qualifying examination administered by the academic department in which the student wishes to major. The examination may cover specialized and general knowledge of the major area as well as writing skill. The results of the qualifying exam should be used, in part, to plan the academic program. To be eligible to take this qualifying examination, the student must be fully admitted to the Graduate School. Academic departments may hold additional requirements.

Comprehensive Examination

When a student in good standing has completed all basic required coursework for the doctoral degree or is enrolled in the last semester of coursework (exclusive of dissertation hours), he/she must pass a comprehensive examination. This examination will normally contain both written and oral components, covering the major and collateral fields of study. Decision on the examination component(s) will be made by the program faculty members to preserve subject area competency, and any waiver for an individual student of written or oral component will be documented and included in the record. Performance must be acceptable to the Advisory Committee (not more than one dissenting vote is allowed). The result of the exam (positive or negative) must be communicated to the Graduate School on the Comprehensive Results Form within the same semester the exam was taken or by the specified deadline in the Graduate Catalog. Protocols and procedures for administration of comprehensive examinations can be obtained at the departmental level.

The comprehensive examination is not a course; therefore the results of the examination can not be appealed, nor can they be changed after the form has been filed with the Graduate School . Students may take the examination a second time, however. A second failure results in termination, which can be appealed. The retention appeals process is formalized and must be followed in all cases. See the section on Retention Appeals.

A student may register for dissertation hours only after passing the comprehensive examination, submitting the results to the Graduate School, and submitting an approved "Doctoral Degree Candidacy" form to the Graduate School.

Dissertation Committee

The student will select a dissertation committee (minimum of four members) made up of graduate faculty approved by the head of the academic unit and/or the college director. The chair of the dissertation committee must hold full graduate faculty status. It is strongly recommended that one member be outside the discipline. Only one affiliate or adjunct graduate faculty member may serve as a voting member of a dissertation committee. If the dissertation committee differs from the advisory committee, a new committee form must be filed with the Graduate School.

Admission to Candidacy

Before an applicant will be officially admitted to candidacy for a doctoral degree and allowed to register for dissertation hours, the student must have satisfied the following requirements:

The student must submit a graduation application ("Apply to Graduate") in the term the dissertation will be completed and submitted to Graduate School for final approval. This application is available in the student's MyMemphis account under the MyDegree tab. A student must have at least a 3.00 grade point average in all graduate work before applying to graduate.

The student must also submit a Doctoral Degree Candidacy Form, if one has not previously been submitted.

An approved Thesis/Dissertation Proposal Form must be filed with the Graduate School. Any necessary human or animal subjects approvals must be included before any research is undertaken. See the section on "Regulatory Issues."

The student must have a cumulative GPA of 3.0 on all graduate work undertaken at The University of Memphis whether or not the courses are listed on the candidacy form. Grades of "D" or "F" are not accepted for any graduate degree credit but these grades will be computed in the GPA. No more than (7 hours of "C+," "C," or "C-" will be

counted toward degree requirements. Expired course grades can be removed from the calculation of a given student's cumulative GPA. Expired courses will, however, still appear on the student's transcript. A student deemed eligible for expired course grade removal by their academic department must have a written plan for degree completion, developed with their academic advisor, in place before the student grade record can be updated. (Grades for these expired courses will have an "X" assigned with the letter grade.) Advisors can fill out a grade expiration form found here: http://www.memphis.edu/gradschool/resources/forms_index.php.

No more than 15 hours of 6000-level courses may be applied to a doctoral degree. Individual departments may have more restrictive requirements.

Grades earned on courses taken during the student's final semester may not be used to correct GPA deficiencies. All coursework offered for the doctoral degree must have been completed within 10 years.

If a student wishes to substitute a course for a required course, the substitution must be approved by the student's advisor or the graduate program coordinator on the Course Substitution Form. The form must accompany the candidacy form.

Dissertation

An acceptable dissertation is a requirement for all doctoral degrees. The dissertation must represent a significant scholarly effort that culminates in an original contribution to the field of inquiry. It should reflect the candidate's ability to conduct independent research and interpret in a logical manner the facts and phenomena revealed by the research. The dissertation must meet the specific regulations of the academic department in which the student is majoring and the Graduate School. Consult the academic department for the acceptable format. Students should also familiarize themselves with the Thesis/Dissertation Preparation Guide before starting to write.

The dissertation proposal (or prospectus) is developed under the guidance of the dissertation committee. All members of the dissertation committee must approve the proposal (prospectus) and the approved form must be filed with the Graduate School.

If human or animal subjects are involved, the appropriate approval forms must accompany the approved Thesis/Dissertation Proposal form. Approval from the institutional review board must be secured before undertaking any research. See the section on "Regulatory Issues."

The final draft of the dissertation must be approved by all members of the dissertation committee. After the successful defense, a copy of the defended and corrected dissertation must be submitted to the Graduate School along with the committee approval form. After the Graduate School has reviewed the final draft, the student must make all additional corrections. At such time, the student will convert the final corrected document into a PDF version and then upload to the Electronic Thesis/Dissertation (ETD) archival system. See the Graduate School Thesis/Dissertation Preparation Guide for instructions on how to upload the final document.

After the dissertation has been approved by the ETD manager, the student should submit the final approved PDF version to the Graduate School on a CD, along with an extra title page, an extra unnumbered abstract of not more than 350 words, the ProQuest Microfilming Agreement form (provided to student when defended copy has been reviewed) and confirmation that the Survey of Earned Doctorates has been completed. The abstract will be published by ProQuest. Fees to cover the cost of microfilming and publishing are specified in Section 6, under "Miscellaneous Fees," and are to be paid by the student.

Students who unsuccessfully defend their dissertation will be assigned a "U" (unsatisfactory) grade. The Graduate School will then send a letter of termination from the program.

Continuous Enrollment

Doctoral candidates must register for dissertation credit each academic semester (fall and spring) until the dissertation is completed. Students must enroll in the summer semester if they plan to complete and defend their dissertation then. See individual academic units for specific requirements. Failure to so register will result in the student being charged tuition for each semester he or she did not enroll.

The only exception to this policy is if the student's major professor is on leave or otherwise unavailable. In such cases the approval of the appropriate college director and the Vice Provost for Graduate Programs is required. In case of serious medical circumstances, students may request a leave of absence, subject to the approval of the program graduate coordinator, the college director of graduate studies, and the Dean of the Graduate School. Retroactive approval will not be granted. A leave of absence does not extend time limit to the degree.

Defense of Dissertation

After the completion of the dissertation and all other prescribed work for the degree, candidates will be given a final oral examination dealing with the dissertation and its relation to the candidate's major field of study. The student's dissertation advisory committee will conduct this exam. All members must be present at the examination. If the student's performance on this examination is satisfactory as judged unanimously by the committee, all requirements for the degree will have been completed. Students must be enrolled in the semester during which they defend the dissertation. Students who unsuccessfully defend their dissertation will be assigned a "U" (unsatisfactory). The Graduate School will then send a letter of termination from the program.

Dissertation Credit

Credit will be posted upon the completion and acceptance of the dissertation. A minimum of 6 hours of dissertation credit is required. No more than the maximum number of semester hours for dissertation accepted by the academic department will be counted towards the degree, even though the student may have registered for additional hours in order to maintain continuous enrollment.

Graduation

To be certified for graduation, the student's entire program, including the dissertation, must be acceptable to the dissertation committee, department chair and/or director of graduate studies in the student's college, and the Dean of the Graduate School. The following paper work, in addition to Comprehensive Examination Results and Admission to Candidacy forms (filed before enrolling for dissertation hours), must be filed in the Graduate School by the stated deadline:

Students must "Apply to Graduate" by the deadline published in the Graduate Catalog, posted on academic unit bulletin boards, and available on-line for the term the dissertation will be complete. No exceptions will be made if a student does not complete an application to graduate by the stated deadlines.

The Dissertation Defense Results form, as soon as the defense has concluded.

Please notify the Graduate School Graduation Analyst, Jennifer Beech, of any changes in name or address. Students who are graduating will receive notification from the Commencement Office explaining graduation ceremony requirements periodically throughout each semester.

Second Doctoral Degree

Students who hold or are pursuing a doctoral degree from the University of Memphis may pursue a second doctoral degree with a different major or degree if the academic unit accepts them. Students pursuing two doctoral degrees must seek prior approval from each major professor and doctoral committee before being considered a doctoral candidate.

No more than 12 semester hours from one doctoral degree may be applied toward the other degree. The second academic unit will determine whether any credit from the former degree will be accepted toward the second degree. Any credit accepted toward the second degree must have been earned within the regular time limit requirements for the doctoral degree. Students must pass separate comprehensive examinations and successfully defend separate dissertations. Two degrees may be pursued simultaneously or sequentially.

Research Resources

- Library Facilities
- Information Technology
- Benjamin Hooks Institute for Social Change
- Bureau of Business and Economic Research
- Center for Applied Psychological Research
- Center for Earthquake Research and Information
- Center for Health Services Research
- Center for Manpower Studies
- Center for Research in Educational Policy
- Center for Research on Women
- Center for the Study of Higher Education
- Center for Urban Research and Extension
- Chucalissa Indian Village and Museum (C.H. Nash Museum)
- DNA Laboratory
- Ecological Research Center
- Edward J. Meeman Biological Station
- Institute of Egyptian Art and Archaeology
- Institute for Intelligent Systems
- Integrated Microscopy Center
- Marcus W. Orr Center for the Humanities
- Regional Economic Development Center
- Speech and Hearing Center
- Other Research Units
- Recognized Centers and Chairs of Excellence

Library Facilities

The University Libraries includes the Ned R. McWherter Library and four branch libraries: Audiology and Speech-Language Pathology, Chemistry, Mathematical Sciences, and Music. Each branch is contiguous to the department or school it serves.

The University Libraries' collection totals over one million print volumes. The collection also contains information resources in many other formats, including 3.4 million microform pieces, over 9 million archival pieces, 90 licensed databases, 500 federal databases, and a variety of other formats. The Government Publications Department, located in McWherter Library, is the Regional Depository for Federal Documents for the State of Tennessee. The department also

serves as a depository for all State of Tennessee documents. The Special Collections Department houses collections of original papers, manuscripts, and rare materials that document the history and culture of the mid-south.

The University Libraries' holdings are indexed in the tomCat online catalog, which is available on over 200 workstations located throughout the libraries, on the campus network, and through the Internet. Faculty and staff of the University Libraries are available to assist library users with identifying and making the best use of library resources. The Interlibrary Loan staff will borrow resources from other libraries when they are not owned by the University Libraries. The University Libraries maintains agreements with several local academic libraries that enable direct borrowing by students, faculty, and staff of the University of Memphis. For more information on library services or resources, contact the Reference Department or visit the libraries web site.

Information Technology

The University of Memphis is committed to providing campus-wide information technology in support of research and instruction for students and faculty. The Division of Information Technology (IT) provides the infrastructure and support necessary for academic activities, networking, telecommunications, and administrative computing. The division provides education and training for widely used software and applications, maintains the campus information technology infrastructure, provides the leadership to involve students, faculty, and staff in technology decision-making, and leads the strategic planning process for the use of information technologies.

The IT HelpDesk (901.678.8888) is the first area of contact for students, staff, and faculty to establish accounts and report problems. The HelpDesk staff is the primary contact on questions related to software, telecommunications, network, and lab support. In addition they route and track questions to the most appropriate university personnel for resolution. Since the University operates on a Local Support Provider (LSP) model (i.e., schools and colleges as well as administrative units have departmental computer experts to assist them with technology), calls to the HelpDesk are frequently assigned to an LSP for resolution. However, the knowledge management system of the HelpDesk tracks the problem and its resolution for future reference. The HelpDesk also makes available desktop and server software for faculty computers and departmental servers.

Students can access two IT-supported 24-hour computer labs (one of which is a Super Lab and Smart Classroom) and over 65 other departmental labs located in various buildings and residence halls throughout the University. Over 30 smart classrooms with a full range of multimedia equipment are available for use by all faculty members and each classroom building is equipped with EduCarts (SmartCarts) that can turn almost any classroom into a "smart room." Many departmental labs have extended evening and weekend hours and students have access to the Internet, e-mail, Microsoft software, and a host of academic-related applications in a variety of computing environments. All labs are equipped with printers and other peripheral devices.

Information Technology provides a variety of technology support services to faculty, staff, and students including software training, software distribution, and web consulting. The Advanced Learning Center (ALC) provides consulting assistance for on-line and web-assisted course development. Students and faculty can attend free training seminars at the Training Center in Smith 412. The center is equipped with PCs, Macs, and smart presentation equipment. Faculty may reserve this facility as well as any of the smart classrooms for their instructional needs. Training courses and workshops are offered on all supported software. The Faculty Resource area in the Advanced Learning Center contains the latest multimedia and computer equipment for faculty and instructors to learn technologies or create course material. Online CBT (Computer-Based Training) is available free to all students, faculty, and staff either over the web or through downloadable tutorials. There are currently over 200 courses available to choose from.

Information Technology supports and maintains the University's fiber network that connects all offices, computer labs, classrooms and auditoriums, and selected residence halls. IT is committed to advancing the use of technology to assist the University in education and research. As part of this effort, The University of Memphis is a full partner and an Early Adopter of Internet-2 technology for research and instruction.

IT provides all telecommunication services (such as FAX and long distance service), cable TV, and calling number ID. Most of these services are also available in the dormitories.

More information on the services provided by Information Technology can be found at: www.memphis.edu/its.

Benjamin Hooks Institute for Social Change

The Institute pursues a broad programmatic agenda of research and outreach that builds upon Dr. Hooks' lifetime of work to achieve a more just society. The Hooks Institute is committed to advancing the goals of the American Civil Rights Movement, and making Memphis a national center for the study of the Civil Rights Movement and its legacy. www.memphis.edu/benhooks

Bureau of Business and Economic Research

The Bureau of Business and Economic Research is the organized research and public service unit of the Fogelman College of Business and Economics. The programs of the Bureau include public service to government agencies (state and local) and the business community, continuing education, and applied general research. www.memphis.edu/sbber

Center for Applied Psychological Research

The Center for Applied Psychological Research supports research on problems concerning health, mental health, education, schools, crime, the environment, and children and their families. The Center also supports basic scientific research in cognitive psychology, biopsychology, social psychology, developmental psychology, and research design and statistics. www.memphis.edu/psychology/centers/capr

Center for Earthquake Research and Information

The Center for Earthquake Research and Information was established in 1977 by the Tennessee Legislature to provide: (1) prompt reports and background information on regional earthquakes; (2) scientific research on the causes and effects of earthquakes and on the possibility of earthquake prediction; (3) studies related to the desirability of earthquake resistant construction; and (4) advice to business, government, and the public on the methods, means, and feasibility of mitigating earthquake hazards.

The Center operates as a research organization of The University of Memphis and was designated as a Tennessee Center of Excellence in 1985. It supports graduate research in geophysics, active tectonics, and earthquake engineering. It cooperates with the Department of Earth Sciences in offering a Bachelor's and Master's degree concentration in geophysics, and a Ph.D. degree in earth sciences.

Center for Health Services Research

The Center for Health Services Research is housed in the Division of Health Administration. The Center emphasizes collaborative, multi-disciplinary research focusing on issues in health care management, leadership, financing, economics, and administration. The Center's goal is to serve as a strong partner and resource for health care organizations, both public and private, in the Mid-South region. www.memphis.edu/health

Center for Manpower Studies

The Center for Manpower Studies, located in the Fogelman College of Business and Economics, conducts research on employment and training-related topics and provides technical assistance to federal, state, and local agencies. It also offers a variety of training programs for human resource development agencies throughout the southeast.

Center for Research in Educational Policy

The Center for Research in Educational Policy is funded by the State of Tennessee as one of five Centers of Excellence located at The University of Memphis. CREP's mission is to implement a research agenda associated with educational policies and practices in the preK-12 public schools of Tennessee and the nation and to provide a knowledge base for use by educational practitioners and policymakers. Research outcomes are intended not only to describe the complexities of educational phenomena, but also to offer recommendations for action.

Since 1989, the Center has served as a mechanism for mobilizing community and university resources to address educational problems and to meet the University's commitment to primary and secondary schools. The Center's research agenda is developed through analysis of persistent or emerging issues in schools and their communities, changes occurring in teacher education programs, and recommendations from educational authorities. In the past decade, CREP has gained national recognition for its contribution to discussions of issues such as reform of teacher education, educational equity, educational technology, school reform and restructuring, urban and multicultural education, interventions for at-risk students, and using formative evaluation methods for school improvement decision-making.

Center for Research on Women

Founded in 1982, the Center for Research on Women (CROW), located in the College of Arts and Sciences, is nationally recognized for its pioneering work on race, class, and gender. CROW's mission is to conduct, promote, and disseminate scholarship on women and social inequality. Its approach to research, theory, and programming emphasizes the structural relationships among race, class, gender, and sexual identity, particularly in the U.S. South and among women of color.

CROW-affiliated faculty span the University. They are currently engaged in action-oriented, community-based research on women in Memphis and the U.S. South; in historically grounded research that makes visible global processes affecting the persistence of inequalities in the U.S. South; and in the development of feminist theories and methods.

CROW offers postdoctoral fellowships to scholars studying race and gender in the U.S. South and provides graduate assistantships to students enrolled in the MA program in sociology.

Center for the Study of Higher Education

The Center for the Study of Higher Education, located in the College of Education, Health and Human Sciences, conducts research and sponsors workshops and conferences in higher and adult education. The Community College Student Experiences Questionnaire is located in the Center, as is the Leadership Institute in Judicial Education. www.memphis.edu/cshe

Center for Urban Research and Extension

The Center for Urban Research and Extension provides technical assistance, research and other services for neighborhood improvement in three Memphis Enterprise Neighborhoods. The Center supports the City of Memphis' Enterprise Community program, and collaborates with neighborhood residents as they embark upon various efforts in revitalizing their neighborhood.

Chucalissa Indian Village and Museum (C.H. Nash Museum)

This partly reconstructed prehistoric Indian village on its original site and the museum are operated by the Department of Anthropology as an educational and research facility. The indoor and outdoor exhibits are designed to reconstruct prehistoric Indian life in the Mid-South. Students are trained in the techniques of excavation, restoration and museum operations. The courses taught are listed in the Department of Anthropology offerings. Chucalissa is located 17 miles southwest of the main campus along the Mississippi River. www.memphis.edu/chucalissa

DNA Laboratory

The DNA Laboratory is a university facility providing access to resources required for modern molecular biology research. Custom nucleic acid synthesis and automated DNA sequencing are available on a fee basis to researchers both inside and outside the University. The Laboratory also houses a high-performance gel documentation system and a workstation with the GCG Wisconsin Package for nucleic acid and protein analysis.

Ecological Research Center

The Ecological Research Center (ERC) of the Department of Biology was established in 1974 on the South Campus of the University to conduct and coordinate research, teaching, and service activities in ecology and related areas.

Major areas of research include: fish culture, wildlife biology, endangered and threatened species, systematics, reproductive physiology, and physiological responses to the environment. The ERC has formal research agreements with private, state, and federal organizations to jointly pursue biological problems of mutual interest. The US Fish and Wildlife Service, Wildlife and Habitat Management Office, has offices in the ERC.

The teaching program of the ERC provides training for students interested in pursuing careers in various fields and affords an opportunity for students to participate in activities involving contemporary environmental problems.

Public service activities are directed toward promoting environmental awareness and providing information and consultation services to those concerned with the environment.

Edward J. Meeman Biological Station

The Edward J. Meeman Biological Station was established in 1967 to encourage and foster scientific pursuits in natural history, ecology, and environmental biology. Situated on two sites, the main research area encompasses over 600 acres adjacent to Meeman-Shelby Forest State Park. The second site sits on over 300 acres along the Loosahatchie River in Bartlett. The research sites provide laboratory, classroom, and small conference facilities to faculty and students from The University of Memphis and visiting researchers. Meeman Station is an integral part of the Department of Biology and a unique site dedicated to research, teaching, and community service.

Institute of Egyptian Art and Archaeology

The Institute, which was founded in 1984 and designated a Tennessee Center of Excellence in 1985, is a component of the Art Department at The University of Memphis. The Institute is dedicated to the study of the art and culture of ancient Egypt through teaching, research, exhibition, and excavation. It is staffed by Egyptologists who are faculty members of the Art Department and the History Department. Its research library consists of more than 6000 Egyptological books and periodicals including rare and out-of-print volumes. Supporting the Institute's programs is the Art Museum at the University of Memphis, which houses the Institute's growing collection of Egyptian antiquities, the largest in the Mid-South. In Egypt, the Institute sponsors an epigraphic project at the Great Hypostyle Hall of Karnak Temple in Luxor and partners with the Italian Archeological Mission to Luxor at the tomb of Hawa.

Institute for Intelligent Systems

The mission of the Institute for Intelligent Systems is to explore intelligent systems in humans, animals, computers, and abstract information technologies. It is widely recognized that there are substantial limitations with the conventional systems in computer science, telecommunications, business, management, and science. Conventional systems are static, linear, brittle, inflexible, slow, or not adaptive to changes in the world. Scientists, engineers and scholars throughout the world have therefore been developing intelligent systems that are considerably more powerful. These systems are hybrids of intelligence in machines, biology, and the human mind. The research in the IIS explores new, cutting edge areas of cognitive science, artificial intelligence, complex dynamical systems, educational technologies, neural networks, evolutionary modeling, massively parallel systems, and biological systems.

Integrated Microscopy Center

The Integrated Microscopy Center (IMC) houses microscopes, including light and fluorescent microscopes, a confocal laser scanning microscope, scanning and transmission electron microscopes, and ancillary equipment used to prepare samples. The Center is a resource facility of The University of Memphis, designed to provide expertise in the use of microscopy to graduate students, faculty, and researchers at The University of Memphis and throughout the immediate area.

Marcus W. Orr Center for the Humanities

The Marcus W. Orr Center for the Humanities promotes interdisciplinary research and teaching in the humanities at The University of Memphis. Its various programs including several lecture series and the sponsorship of visiting scholars, faculty seminars, and symposia are designed to encourage scholarly collaboration across departmental and college boundaries. It also seeks to promote the University's scholarly resources in the Memphis community, by offering a variety of public programs. The Center was founded in 1987 and renamed in 1991 in memory of former history professor Dr. Marcus W. Orr.

Regional Economic Development Center

The Regional Economic Development Center represents the University in its outreach function in the field of economic development planning. In providing technical and management assistance to the public and private sectors, the Center also serves as a laboratory for interdisciplinary research and service by faculty and graduate students in solving problems of urban and regional development.

The Center's professional planning staff have academic appointments and teach courses in the Division of City and Regional Planning.

Speech and Hearing Center

Located in the medical center of Memphis, this facility became affiliated with the University in 1967. An additional site is located on the South Campus. Both locations serve children and adults with communication disorders. Students at the University may receive services at no charge, while faculty and staff are seen at 50% of normal charges. The University administers and operates the Center in cooperation with the Board of Directors of the Memphis Speech and Hearing Center, Inc.

Other Research Units

- Anthropological Research Center
- Barbara K. Lipman Early Childhood Center and Research Institute
- Center for Community Health (formerly the Prevention Center)
- Center for River Studies
- Center for Health Services Research
- Center for Rehabilitative and Employment Research
- Center for Voluntary Action Research
- Computational Research on Materials Institute at U of M (CROMIUM)
- FedEx Center for Cycle Time Research
- Groundwater Institute
- Industry/University Cooperative Research Center for Biosurfaces
- Institute for Gambling Education and Research
- Memphis Alliance for Public Health Research
- Neuropsychology Research Laboratory
- Oral History Research Office
- Robert Wang Center for International Business
- Southern Music Archive
- Transportation Studies Institute
- W. Harry Feinstone Center for Genomic Research

Recognized Centers and Chairs of Excellence

The University of Memphis has been designated by the Tennessee Higher Education Commission as a location for centers and chairs of excellence. The units listed below receive special funding by the state in recognition of their status.

Centers of Excellence

- Center for Applied Psychological Research
- Center for Earthquake Research and Information (CERI)
- Center for Research in Educational Policy
- Center for Research Initiatives and Strategies for the Communicatively Impaired

- Center of Excellence in Egyptian Art and Archaeology

Chairs of Excellence

- Arthur Andersen and Company Alumni Chair in Accounting
- Bornblum Chair in Judaic Studies
- Federal Express Chair in Management Information Systems
- W. Harry Feinstone Chair in Molecular Biology
- Morris S. Fogelman Chair in Real Estate
- Helen and Jabie Hardin Chair of Economics/Managerial Journalism
- Jabie Sanford Hardin III Chair in Combinatorics
- Herbert Herff Chairs in Biomedical Engineering I and II
- Herbert Herff Chair in Law
- Dorothy K. Hohenberg Chair in Art History
- William A. and Ruth F. Loewenberg Chair in Nursing
- Plough Chair of Excellence in Audiology and Speech-Language Pathology
- William M. Morris Chair in International Economics
- Lillian and Morrie Moss Chair in English
- Lillian and Morrie Moss Chair in Philosophy
- Lillian and Morrie Moss Chair in Psychology
- Lillian and Morrie Moss Chair in Urban Education
- Sales and Marketing Executives, Inc. Chair in Sales
- Sparks Family Chair in International Business
- Thompson-Hill Chair in Accounting
- University of Memphis Chair in Free Enterprise Management
- Robert Wang Chair in International Business
- Wunderlich Chair in Finance
- Chair of Excellence for Fogelman Family
- Chair of Excellence in Sustainable Real Estate in Fogelman College of Business and Economics

University Calendar

The calendar is subject to change at any time prior to or during an academic term due to emergencies or causes beyond the reasonable control of the institution, including severe weather, loss of utility services, or orders by federal or state agencies.

Fall Semester 2019

- August 26: Classes begin, full and first sessions
- September 2: Holiday: Labor Day
- October 11: Last day of classes/exams, first session
- October 123-15: Fall Break
- October 16: First day of classes, second session
- November 27-December 1: Holiday: Thanksgiving
- December 4: Classes end, full and second sessions

- December 4: Second session exams
- December 5: Study Day
- December 6-12: Final examinations
- December 15: Commencement

Spring Semester 2020

- January 21: Holiday: M. L. King, Jr.
- January 20: Classes begin, full and first sessions
- March 6: Last day of classes/exams, first session
- March 7-15: Spring Break
- March 16: First day of classes, second session
- April 29: Classes end, full and second sessions
- April 29: Second session examsApril 30: Study Day
- May 1 - May 7: Final examinations
- May 9: Commencement (May 10: Back up date)

Summer 2020

To be completed. Check the Registrar's website for more information.

Study Day Definition: The day prior to final examinations during most regular semesters. No academic activities shall be scheduled on Study Day. No study or review sessions that the student may feel obligated to attend may be scheduled.

Final Examination Period: No examination shall be given at a time other than the scheduled time except with written permission from the department chair and the college dean. No social or athletic functions shall be scheduled during the Final Examination Period.

Intercollegiate athletics are excepted from the above policies.