

**MATH 1710-E02: COLLEGE ALGEBRA-University of Memphis  
Spring 2021 Syllabus**

**Instructor: S. Houston**

**Note: Should you need some assistance navigating Coronavirus, please visit this [link](#) provided by the math department.**

**Course Information**

**COURSE DESCRIPTION**

Analysis of functions (linear, quadratic, polynomial, root, rational, exponential, and logarithmic); polynomial division; inequalities; applications

**PREREQUISITES**

- An ACT MATH subscore of at least 20.
- Special Combo sections of MATH 1710 require an ACT MATH subscore of at least 18.
- MATH 1420 or 1420 Combo may serve as a prerequisite for Math 1710 Combo. [G]

NOTE: only one of MATH 1710 or MATH 1730 may be used to satisfy degree requirements

**COURSE OBJECTIVES**

- To expand the student's ability to analyze linear, quadratic, polynomial, root, rational exponential, and logarithmic functions using graphical, numerical and analytic methods.
- Through the use of the graphing calculator and graphical analysis and through the methods of synthetic division, theory of equations and inequalities to extend the student's ability to solve problems with algebraic tools in a variety of applications.

**COURSE TOPICS**

**Review Chapter: The Basic Concepts of Algebra**

R.1 The Real Number System

R.2 Integer Exponents, Scientific Notation and Order of Operations

R.3 Addition, Subtraction and Multiplication of Polynomials

R.4 Factoring

R.5 The Basics of Equation Solving

R.6 Rational Expressions

R.7 Radical Notation and Rational Exponents

## **Chapter 1: Review, Graphs, Functions, and Models**

1.1 Introduction to Graphing

1.2 Functions and Graphs

1.3 Linear Functions, Slope, and Applications

1.4 Equations of Lines and Modeling

1.5 Linear Equations, Functions, Zeros and Applications

1.6 Solving Linear Inequalities

## **Chapter 2: More on Functions**

2.1 Increasing, Decreasing, and Piece-wise Functions; Applications

2.2 The Algebra of Functions

2.3 The Composition of Functions

2.4 Symmetry and Transformations

2.5 Variation and Applications

## **Chapter 3: Quadratic Functions and Equations; Inequalities**

3.1 The Complex Numbers

3.2 Quadratic Equations, Functions, Zeros, and Models

3.3 Analyzing Graphs of Quadratic Functions

3.4 Solving Rational Equations and Radical Equations

3.5 Solving Equations and Inequalities with Absolute Value

## **Chapter 4: Polynomial Functions and Rational Functions**

4.1 Polynomial Functions and Models

4.2 Graphing Polynomial Functions

4.3 Polynomial Division; The Remainder Theorem and the Factor Theorem

4.4 Theorems about Zeros of Polynomial Functions

4.5 Rational Functions

4.6 Polynomial Inequalities and Rational Inequalities

## **Chapter 5: Exponential Functions and Logarithmic Functions**

5.1 Inverse Functions

5.2 Exponential Functions and Graphs

5.3 Logarithmic Functions and Graphs

5.4 Properties of Logarithmic Functions

5.5 Solving Exponential Equations and Logarithmic Equations

5.6 Applications and Models: Growth and Decay; and Compound Interest

## **SPECIFIC COURSE REQUIREMENTS**

It is more efficient to have access to a good computer or laptop with internet access and have a minimum of basic computer skills. It is also resourceful to be able to follow and understand the given guidelines.

## **Textbooks, Supplementary Materials, Hardware and Software Requirements**

### **REQUIRED MATERIAL:**

**MYMATHLAB -- STANDALONE ACCESS CARD, 4/E (CAN BE PURCHASED ONLINE ONCE YOUR 14 DAYS FREE TRIAL EXPIRES)**

ISBN-10: 032119991X

ISBN-13: 9780321199911

Publisher: Pearson

Copyright: 2012  
Format: Access Card Package

### **SUGGESTED (NOT REQUIRED) TEXTBOOKS+ACCESS CODE (ONLY AT U OF M)**

**College Algebra 4/e (COLLEGE ALGEBRA PACKAGE UNIVERSITY OF MEMPHIS with Code), Net price: \$108.25**

Author(s): Beecher, Judith | Bittinger, Marvin | Penna, Judith

### **SUPPLEMENTARY MATERIALS**

A TI 83 or 84 graphing utility calculator is recommended but not required. However, you will want a basic scientific calculator to assist in carrying out calculations. You may use the calculator on your computer (if available), but I prefer you not use a calculator on your phone for tests.

### **HARDWARE AND SOFTWARE REQUIREMENTS**

The minimum requirements can be found at <http://www.memphis.edu/uofmonline/technical.php>.

### **ASSESSMENT AND GRADING**

**METHODS:** This course is taught using MYMATHLAB for assignments and tests. There will be eight tests given throughout the semester, including the final exam. The final exam is **MANDATORY AND CUMULATIVE**. Homework **MUST** be completed by the announced date.

**GRADING:** There will be homework assignments from each section covered, which constitute 35% of the final score, seven chapter tests (six after the dropped exam) worth 50% of the final score, and a **COMPREHENSIVE** final exam worth 15% of the final score. The lowest of the seven **chapter** tests will be dropped. The final exam cannot be dropped.

**MAKE-UP POLICY:** **If a student knows in advance that they will be unavailable to complete an assignment on the due date, it must be completed ahead of time. One good thing about this course is that you have the ability to work ahead on assignments.**

**HOMEWORK:** Homework will be assigned from each section covered. Again, this homework is on MYMATHLAB. You will be given ample time to complete the assignments; therefore, no extensions will be granted for any reason. So, please do not wait until the night before to begin the homework. **Technical difficulties do not warrant extensions.** The homework will be due at 11:59pm on the due date. Before the due date, you get unlimited attempts for each homework problem. Your lowest 4 homework grades will be dropped at the end of the semester.

**Tests:** There will be 7 tests as posted on the Schedule (see that document for due dates, etc). Your lowest Chapter Test grade will be dropped at the end of the semester. If you miss a

chapter test, that is the test which will be your drop grade. The one dropped test is to take care of emergency situations which might come up in your life. On all the Chapter tests, you are given two attempts at the test. The higher of the two attempts will count as the grade for that test. The Final Exam has only one attempt and is password-protected. You will be given a 24-hour timeframe to complete the chapter tests. Approximately a 5-7 day timeframe will be given to complete the Final Exam. Each of the chapter tests is timed at 85 minutes, and the final exam is timed at 120 minutes.

**No Make-up** for a missed homework assignment, since you may drop a total of 4 during the semester.

**No Make-up** for a missed test, since one chapter test grade will be dropped.

**No Make-up** for the Final Exam. This time is listed on the schedule. Put this date on your calendar now.

## **GRADING SCALE**

90-100 - A

80-89 - B

70-79 - C

60-69 - D

below 60 -F

**All scheduled tests must be taken. If you miss one, then it will be an automatic F grade.**

**FINAL GRADES ARE FINAL UNLESS A CALCULATION ERROR WAS MADE.**

## **PUNCTUALITY**

To be successful in this online course, the College Algebra student should log into eCourseware regularly to find all of the semester materials/assignments and dates such as Homework, Exams and Final Exam or any updates on unforeseen events. Remember No Makeup Exams are allowed. We will have Zoom meetings at the scheduled class times, and you are expected to attend these classes. The Zoom Link will be placed on the eCourseware homepage.

## **Guidelines for Communication**

### **EMAIL**

- All correspondence will be sent to my UofM email ([sghoustn@memphis.edu](mailto:sghoustn@memphis.edu)). Do not email me through eCourseware.
- Always include a subject line.
- Remember without facial expressions some comments may be taken the wrong way. Be careful in wording your emails. The use of emoticons might be helpful in some cases, but please do not overdo it.
- Use standard fonts.
- Do not send large attachments without permission.
- Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.
- Respect the privacy of other class members

## **DISCUSSION GROUPS**

- Review the discussion threads thoroughly before entering the discussion. Be a lurker then a discussant.
- Try to maintain threads by using the "Reply" button rather starting a new topic.
- Do not make insulting or inflammatory statements to other members of the discussion group. Be respectful of others' ideas.
- Be patient and read the comments of other group members thoroughly before entering your remarks.
- Be cooperative with group leaders in completing assigned tasks.
- Be positive and constructive in group discussions.
- Respond in a thoughtful and timely manner.

## **CHAT**

- Introduce yourself to the other learners in the chat session.
- Be polite. Choose your words carefully. Do not use derogatory statements.
- Be concise in responding to others in the chat session.
- Be prepared to open the chat session at the scheduled time.
- Be constructive in your comments and suggestion
- Any comment deemed by the instructor to be derogatory toward any student or faculty member will be promptly removed from the discussion board and forwarded to the appropriate office.

## **WEB RESOURCES**

- Columbia Guide to Online Style by Janice R. Walker and Todd Taylor Citation Styles
- Online <http://www.bedfordstmartins.com/online/cite6.html>

## **Plagiarism and Integrity**

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly, through participation or assistance, are immediately responsible to the instructor of the class in addition to other possible disciplinary sanctions which may be imposed through the regular institutional disciplinary procedures. Expectations for academic integrity and student conduct are described in detail on the website of the Office of Student Judicial and Ethical Affairs <http://saweb.memphis.edu/judicialaffairs>. Please read in particular, the section about "Academic Dishonesty"

### **Library and Other Resources**

Links to library materials (such as electronic journals, databases, interlibrary loans, digital reserves, dictionaries, encyclopedias, maps, and librarian support) and Internet resources needed by learners to complete online assignments and as background reading must be included in all courses. The myMemphis Portal system, eCampus Student tab provides access to University library and tutorial services. Other support services are available through the Educational Resources site at: <http://www.memphis.edu/students.htm>

### **Students With Disabilities**

Qualified students with disabilities will be provided reasonable and necessary academic accommodations if determined eligible by the appropriate disability services staff at their home institution. Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility for specific accommodations from the disability services staff at the home institution. It is the student's responsibility to initiate contact with their home institution's disability services staff and to follow the established procedures for having the accommodation notice sent to the instructor.

### **Syllabus Changes**

The instructor reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both by individual email communication and posting both notification and nature of change(s) on the course bulletin board.

### **Technical Support**

Call the Helpdesk: 901-678-8888

Online Helpdesk: <https://helpdesk.memphis.edu/>

