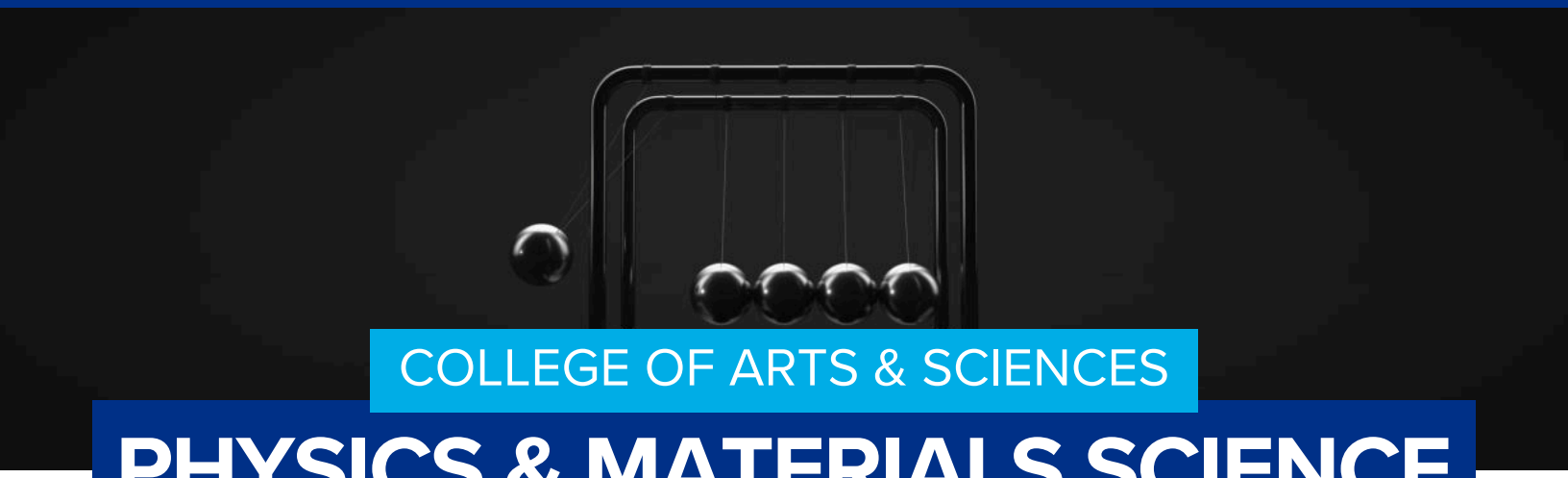

COLLEGE OF ARTS & SCIENCES

PHYSICS & MATERIALS SCIENCE

Physics & Materials Science—the foundation of all natural sciences and engineering—is a broad, complex field that seeks to understand the natural world, from the subatomic to the cosmological and everything in between, focusing on **the properties of matter, energy, radiation and space**.

DEPARTMENT STRENGTHS

- Individualized Support. Its moderate size means faculty within the department can work one-on-one with students to meet their needs and interests.
- Research Emphasis. Research is incorporated into the curriculum and undergrads may participate as early as freshman year.
- Program Flexibility. The department offers second major, Accelerated BS/MS and minor programs.

SAMPLE CURRICULUM

Core Courses*

- MATH 1910 Calculus I
- MATH 2110 Calculus III
- MATH 2120 Differential Equations
- CHEM 1110/1111 General Chemistry I & Lab
- CHEM 1120/1121 General Chemistry II & Lab

Additional Required Courses*

- PHYS 2110/2011 Phys. for Scientists Engineers I & Lab
- PHYS 2110/2011 Phys. for Scientists Engineers II & Lab
- PHYS 2130 Intermediate Physics
- PHYS 3010 Modern Physics
- PHYS 3070 Optical Techniques

DEGREE OPTIONS

- BS in Physics
  - Astronomy
  - Materials Science
  - Medical Sciences
  - Honors in Physics
- Minor in Physics
- Accelerated BS/MS in Physics
  - Biomedical Engineering
- MS in Physics
  - Computational Physics
  - Materials Science
- PhD in Applied Physics

RESEARCH FACILITIES

- Biomaterials Research Laboratory
- Characterization Techniques Laboratory
- Synthesis Laboratory

ADDITIONAL OPPORTUNITIES

- Internships
- Seminar & Endowed Lecture Series
- Society of Physics Students
- Study Abroad

THE UNIVERSITY OF MEMPHIS
College of Arts & Sciences

PHYSICS & MATERIALS SCIENCE
MAJOR FACT SHEET

BY THE NUMBERS (Spring 2024)

Student Enrollment

61	36	25
Total	Undergraduate	Graduate

Number of Minors

1
Total

Student Demographics

70%	57%	21%	21%
Male	Under 25	Pell Grant	First Gen

Faculty Employed

5:1 Student-Faculty Ratio†

12	2	20	34
Full-Time	Part-Time	Grad Asst	Total

Degrees Awarded

14 Total

2	2	6	4
Bachelor's	BSEE/ME	Master's	Doctorate

Career Outcomes‡

$62K	$76K
Avg Annual Salary 1-3 Years Post-Grad	Avg Annual Salary 7-10 Years Post-Grad
62%	52%
Employed in TN	Employed in Memphis

TN Employment Outlook

16.1%	400
10-Year Job Growth	Avg Annual Job Openings

CAREER OPTIONS

Job Titles

- Astronomer
- Data Analyst
- Geophysicist
- Hydrologist
- Materials Scientist
- Meteorologist
- Nuclear Physicist
- Optical Engineer
- Research Scientist
- Technical Writer

Industries

- Education
- Government
- Manufacturing
- Research
- Technology

WHO YOU ARE

Personality

- Adaptable
- Inquisitive
- Meticulous
- Observant
- Practical
- Resourceful

Interests & Hobbies

- Astronomy
- Electronics / Gadgetry
- Mathematics
- Model Building
- Photography
- Programming

WHAT YOU'LL LEARN

Core Skills

- Computational Modeling
- Cryogenic Methods
- Differential Equations
- Experimental Research & Design
- Optical Techniques
- Quantum Mechanics

Transferable Skills

- Attention to Detail
- Effective Communication
- Flexibility
- Organization
- Problem Solving
- Teamwork

* *The specified courses are for example purposes only. It is not a complete list of core or additional required courses.*

† *Calculated based on the number of student majors and the number of full-time faculty.*

‡ *Based on self-reported post-graduation outcomes of UofM students who have earned a Bachelor's degree in the last ten years.*