

**“Mathematics is as much an aspect of culture as it is a collection of algorithms.”**

*—Carl Boyer*

### **The Department**

The Department of Mathematics is one of the largest departments on campus with 11 full-time graduate faculty members. In addition, we teach over 5,000 students enrolled in mathematics classes each year. The department offers a flexible curriculum so that individual students may tailor their university mathematics programs to fit specific education and career objectives.

We strongly encourage students to consider opportunities in mathematics through a double-major, or by minoring in mathematics, and we also encourage our majors to develop broader interdisciplinary backgrounds, particularly in computer science. The members of the mathematics faculty have broad teaching and research interests and a profound dedication to the student scholar.

We offer over 50 undergraduate courses encompassing all the major areas of mathematics, including a variety of courses in each of the areas of analysis, algebra, topology, geometry, and applied and numerical mathematics. Students are encouraged to become independent thinkers, and there are opportunities for directed independent study projects.

### **The Undergraduate Degree Program**

There are two undergraduate degree programs in mathematics. The MATHBS degree program is the non-teaching degree. It requires that you earn a minor. The MATHLBS degree program in lieu of a minor provides licensure to teach at the secondary level.

The department maintains an active undergraduate research program that provides stimulating mathematical experiences for our best undergraduate scholars. Program participants work on mathematics problems under the direction of senior faculty. Participants have presented the results of their work to student and faculty groups throughout the Southeast and several have won awards at the annual meetings of the Louisiana-Mississippi Section of the Mathematical Association of America.

Our students have published their work in the Journal of Mathematics and Computer Education and the Journal of Undergraduate Mathematics, and of these, a few have chosen to go on to further their mathematical careers, pursuing degrees at some of the most-respected universities.

### **Student Employment Opportunities**

The department maintains several computer-based learning laboratories where student assistants provide tutorial assistance in lower-division courses. Outstanding undergraduate majors may qualify for employment in the department to work in these, as graders for faculty members, and in the departmental office.

### **Undergraduate Scholarships**

There are presently 10–12 undergraduate scholarships available through the Department of Mathematics. To apply for these scholarships, eligible students should send application materials to The Scholarship Committee, Department of Mathematics Office, Southern Hall, Room 319.

Undergraduate scholarship opportunities include The Wright W. Cross Endowment, the Virginia Felder Endowment for female students, the Alton C. Grimes Endowment, Fred H. and Nadyne M. Drews Endowment, and the NASA Space Grants for undergraduate U.S. citizens. In addition, there are other scholarships available to mathematics majors through the College of Science and Technology (CoST). Contact CoST directly at 601.266.4724 for information and applications.

The newly established \$2.9 million Cross Chair in Mathematics and Endowment for Undergraduate research provides an exciting range of new opportunities for talented mathematics majors in the department.

**“If people do not believe that mathematics is simple, it is only because they do not realize how complicated life is.”**

*—John von Neumann*

### Graduate Programs

The Department of Mathematics offers a traditional master's program consisting of 36 semester hours, which can include a minor. Students who currently hold Class A teacher certification in Mississippi can become eligible for Class AA certification by appropriately tailoring their minor.

The Department of Mathematics offers through the College of Science and Technology the Doctor of Philosophy degree in computational science with an emphasis in applied and computational mathematics.

In addition, the Department of Mathematics offers, through the Center for Science and Mathematics Education, the Doctor of Philosophy degree in science education with an emphasis in mathematics. Admission to the program requires a master's degree and eligibility for licensure to teach.

### Assistantships and Financial Aid

Financial assistance for students pursuing a masters in mathematics or a doctorate in applied and computational mathematics is available on a competitive basis in the form of graduate teaching assistantships. Stipends also cover tuition and fees and are valued up to \$22,800 for M.S. students and up to \$24,800 for Ph.D. students. Duties include grading, tutoring, mathematics computer lab assistants and participating in the departmental teacher training program. Candidates with 18 graduate hours credit in mathematics can be assigned to teach up to two introductory mathematics classes each semester.

### Further Information

For further information, application materials for scholarships or graduate programs, contact the Department of Mathematics at

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The University of Southern Mississippi  
118 College Drive #5045  
Hattiesburg, MS 39406-0001**

**Phone: 601.266.4289  
Fax: 601.266.5818**

Contact us by e-mail at

**[mathdept@www.math.usm.edu](mailto:mathdept@www.math.usm.edu)**

Additional information may be found online at our departmental Web site at

**[www.usm.edu/math/](http://www.usm.edu/math/)**

Thank you for your interest in our programs.

**“A modern  
mathematical proof  
is not very different  
from a modern  
machine, . . . the  
simple fundamental  
principles are hidden  
and almost invisible  
under a mass of  
technical details.”**

**—Hermann Weyl**

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# Bachelors, Masters, and Doctoral Programs in Mathematics



THE UNIVERSITY OF  
SOUTHERN MISSISSIPPI

Mathematics