MATHEMATICS, B.S.

Our department offers a Bachelor of Science (B.S.) degree in mathematics. Areas of emphasis within the major include general mathematics, actuarial science, secondary education and applied mathematics. The program provides students with foundational abilities in linear and abstract algebra as well as proficiency in logic, set theory, functions and fundamental methods of mathematical proof. In addition to core requirements, the department offers electives on topics such as applied math, geometry and topology, real analysis, discrete math, logic and number theory, to name only a few.

Mathematics is an ideal major or double major to build computational and collaborative skills for future researchers, scientists, economists and medical practitioners. Those immediately entering the workforce will have widely sought-after skills and habits of mind conducive to productive and rewarding careers. Students pursuing graduate-level studies will be prepared with the necessary analytical skills and effective problem-solving strategies.

Undergraduates may also pursue a B.S. with Distinction, which requires maintaining a high GPA, additional coursework, research experience and the completion of an undergraduate thesis with the mark of "distinction."

Learning Outcomes

1. Graduates with a B.S. in Mathematics will demonstrate understanding of logic, set theory, functions, and fundamental methods of mathematical proof.
2. Graduates with a B.S. in Mathematics will demonstrate mastery of the fundamental theoretical concepts of linear algebra.
3. Graduates with a B.S. in Mathematics will be able to solve problems in linear algebra using standard computational algorithms.
4. Graduates with a B.S. in Mathematics will demonstrate mastery of the fundamental concepts and methods of proof in abstract algebra.
5. Graduates with a B.S. in Mathematics will demonstrate mastery of the fundamental concepts and methods of proof in real analysis.
6. Graduates with a B.S. in Mathematics will, if they wish to pursue studies at the graduate level, be prepared with the necessary analytical skills, openness to new ideas, and positive attitudes (patience, persistence, and enthusiasm) for success. Those going on to employment will have the analytical skills that they need, an ability to learn new ones, and habits of mind that are conducive to productive and rewarding work. Graduates will be aware that mathematics is often a collaborative activity, and that careful reading and clear writing are as important as computational skills. They will know that mathematics is continually growing as research answers old questions and brings forth new ones. Finally, they will find joy in learning, doing, and communicating mathematics to others.

Transfer Requirement

In addition to the minimum University and College of Arts and Sciences requirements, a student seeking to transfer to the mathematics major from another program within the University, or from another accredited college or university, is required to have earned a grade of "B" or higher in at least one of the following courses, or their UofSC equivalent:

Course	Title	Credits
MATH 141	Calculus I	4
MATH 142	Calculus II	4
MATH 241	Vector Calculus	3
MATH 300	Transition to Advanced Mathematics	3

Retention and Other Details

- A grade of C or better is required in each MATH course.
- A student may enroll in each MATH course a maximum of two times. (Enrolled in a course is interpreted to mean that a grade, including W or WF, has been recorded.)
- A student may repeat a maximum of three MATH courses. (Receiving a grade of W is not to be considered a repeat.)