

Mathematics And Statistics Major (BS)

Degree Requirements

Majors in Arts and Sciences may be completed with a minimum of 120 semester hours unless designated otherwise. At least 30 hours of course work, which represents 25% of the required 120 hours, must be at the upper division level in order to fulfill the University's residency requirement. At least 15 of the 30 upper-division hours must be in the major or concentration area. An overall grade-point-average (GPA) of 2.0 is required for graduation. In addition, a minimum GPA of 2.0 is required in the student's major or concentration area.

The core requirements for this major provide the student with a balanced program of undergraduate mathematics and statistics in areas that have proven applications. The program produces a graduate who is employable based on good inductive and deductive inferential, problem formulating and solving, and communication skills.

Requirements for the Major are:	
Introductory courses:	
Calculus I	MA 125
Calculus II	MA 126
Statistics	ST 210 OR ST 315
Intermediate courses:	
Multivariable Calculus	MA 227
Linear Algebra	MA 237
Quantitative modeling courses:	
Differential Equations	MA 238
Regression	ST 335
Upper division courses:	
21 additional hours of 300 level or above courses in mathematics or statistics, including at least three courses chosen from MA 334; MA 335, or 400 and 500 level courses.	
Students who wish to concentrate in a specific area should choose these additional courses accordingly.	
Recommended concentrations are available at http://www.southalabama.edu/mathstat/css-undergrad.shtml	
Students in the major are encouraged to take MA 320 as soon as possible after taking MA 125.	
The program also requires an approved minor.	

General Education Requirements For Mathematics And Statistics Majors

General Education Requirements for Mathematics and Statistics are specified on the College of Arts and Sciences section. Note that the Mathematics section of Area III is satisfied by the major requirements specified above.

Where To Begin In The Mathematics Courses?

Students must begin at the proper level and in the proper track in mathematics. Students who lack college level credit in mathematics should take the placement exam at least 48 hours prior to registering for a mathematics course. Students must register online to take the test. Times and days of the test as well as registration information are available at the department website.

Note 1: To Avoid Duplication:

1. Credit for both MA 112 and MA 115 is not allowed.
2. Credit for both MA 113 and MA 115 is not allowed.
3. Credit for both MA 120 and MA 125 is not allowed.
4. Students may receive credit for only one of the following: ST 310, ST 315 or ST 320.

Note 2: MA 110 is not a prerequisite course for any other course required by mathematics and statistics major.

Department Information

Department of Mathematics and Statistics website
<https://www.southalabama.edu/colleges/artsandsci/mathstat/>

Developmental Studies

The courses and academic support through an on-demand tutoring center offered by the developmental studies in mathematics provide students with the opportunity to strengthen the basic mathematical skills necessary to progress to college-level mathematics courses.

Credits earned in courses with a DS prefix do not meet degree requirements within the University. The credits earned do carry institutional, non-degree credit and allow students to qualify for financial aid. Grades earned are computed into the overall GPA in most colleges and hours are counted toward classification (sophomore, etc.). Credits earned in courses with a MTH prefix count as free electives.

Math Lab Information

Location

The Math Technology Lab is located in ASC 1301.

Resources:

- 137 computer workstations with Internet access
- Separate testing area and private tutoring rooms
- Study room for one-on-one or group tutoring
- Tutors and instructors available during all operating hours to assist students

Undergraduate Studies

The purpose of the Department of Mathematics and Statistics is to provide a well-rounded program for students majoring in the mathematical sciences and to fulfill the mathematical science needs of students in other fields of study. To this end, the department emphasizes excellence in teaching, and encourages the professional growth of its faculty through study, research, and consulting.

The Department offers a major leading to the Bachelor of Science Degree in Mathematics and Statistics. We also offer a minor in mathematics and a minor in applied statistics. Students pursuing a degree in Mathematics and Statistics also must have a minor in another discipline.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. ST 335 will fulfill the technology proficiency requirement.

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Graduate Studies

A Master of Science degree in Mathematics is offered by the Department of Mathematics and Statistics. The program has been designed to meet the varied needs and goals of most students seeking advanced degrees in mathematics. The course of

study accommodates students interested in traditional and modern mathematics, applied mathematics, statistics, and computer science.

Requirements For Admission

Students are admitted each semester. The following criteria supplement the Graduate School requirements.

Regular Admission

1. A bachelor's degree in mathematics or in a mathematics-related field from an accredited institution of higher education with a concentration of upper-level mathematics courses including a sequence in advanced calculus or real analysis.
2. A minimum GPA of at least a 3.0 on all undergraduate work. In exceptional cases, applicants may be considered with at least a 2.5 GPA on all undergraduate work, or at least a 2.75 GPA on the last 60 hours of undergraduate work.
3. Submission of scores on the General Test of the Graduate Record Examination. A minimum combined score of 297 on the verbal and quantitative sections or a minimum score of 148 on the quantitative section (without regard to the score on the verbal section). An advanced degree or other standardized test score may be considered in lieu of a GRE score.
4. English proficiency requirement for international applicants:
 - Minimum TOEFL score of 71 OR
 - Minimum IELTS score of 6 OR
 - Minimum iTEP score 3.7 OR
 - Minimum Pearsons (PTE Academic) score 48

Applicants who hold a bachelor's degree from an accredited U.S. institution are not required to submit test scores.

5. Three original letters of recommendation written by persons familiar with the applicant's qualifications and ability to undertake the proposed course of study are required.

Non-Degree Admission

Applicants who do not meet all the conditions for admission or who are not interested in earning a graduate degree may apply for non-degree admission. Adequate undergraduate preparation in mathematics which indicates a reasonable chance of success in graduate mathematics courses is required for non-degree admission. After admission, permission of the department graduate coordinator is required for each course taken. In cases where undergraduate preparation is inadequate for a particular graduate course, a plan of study including additional undergraduate courses can be worked out in consultation with the graduate coordinator.

Graduate Assistantships

Graduate students holding assistantships are usually assigned duties such as tutoring or supervising recitation sections in the Department of Mathematics and Statistics. Awards are normally made for the academic year, but positions occasionally become available during the year. An assistantship application can be obtained from the Graduate Coordinator in the department and on-line. Three letters of recommendation sent directly to the Graduate Coordinator are required. Graduate Assistants are required to enroll in MA 592 (Seminar) each semester.

Policies And Procedures

The document "Department Policies and Procedures for the MS Degree Program in Mathematics" is posted on the departmental website. It contains details concerning advising, the comprehensive examination, graduate assistant duties, student meetings and colloquia.