MATHEMATICS

Studying Mathematics develops such skills as critical thinking, oral and written communication, arguing logically and rigorously, thinking abstractly, formulating and solving problems, analyzing data, analyzing mathematical models, quantitative and computer proficiency, and the ability to work in groups. Employers value these skills; consequently, Mathematics majors find themselves in demand by employers for careers in a wide spectrum of fields.

About this Program

- **College:** Liberal Arts and Sciences (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/)
- **Degrees:** Bachelor of Arts (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/MAT_BA_BS/MAT_BA/) | Bachelor of Science (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/MAT_BA_BS/MAT_BS/)
- **Credits for Degree:** 120
- **More Info**

To graduate with this major, students must complete all university, college, and major requirements.

Department Information

Graduates from the Department of Mathematics might take a job that uses their math major in an area like statistics, biomathematics, operations research, actuarial science, mathematical modeling, cryptography, or mathematics education. Or they might continue into graduate school leading to a research career. Professional schools in business, law, and medicine appreciate mathematics majors because of the analytical and problem solving skills developed in the math courses.
Website (https://math.ufl.edu/)

CONTACT

Email (undergraduatecoordinator@math.ufl.edu) | 352.294.2350

358 LITTLE HALL
GAINESVILLE FL 32611
Map (http://campusmap.ufl.edu/#/index/0655)

Curriculum

- Combination Degrees
- Mathematics
- Mathematics Minor

Degrees

Bachelor of Arts

Intended for students who wish to pursue a career in a mathematical field or to teach mathematics at the secondary-school level, but who do not currently contemplate graduate study in mathematics.

Bachelor of Science

Intended for students who wish to pursue graduate study in mathematics as well as for other strong students with a deep interest in mathematics.

Requirements for the Major

Students are required to take eight core courses, providing a broad base in mathematics, and four electives chosen from a list of approved courses. Students pursuing the BA degree have greater flexibility in their choice of electives, facilitating the possibility of a double-major with another scientific discipline.

A minimum of 39 credits of mathematics and mathematics-approved electives is required for each degree. All coursework for the major must be completed with minimum grades of C.

Relevant Minors and Certificates

Mathematics majors are encouraged to consider taking a minor in computer science, industrial and systems engineering, physics, or statistics. The Department of Statistics offers a minor in actuarial science. In addition, the UFTeach program offers a minor in mathematics teaching.
More Info (https://stat.ufl.edu/academics/undergraduate/minor-in-actuarial-science/)

UFTeach Program

There is a severe shortage of qualified high school mathematics teachers in Florida and nationwide. Students interested in entering this high-demand profession should see a departmental advisor about the UFTeach program. Mathematics majors in this program complete the requirements for the UFTeach minor in mathematics, as well as those for the BA or BS in mathematics. These students graduate with all the coursework and preparation the State of Florida requires for professional certification as a high school mathematics teacher.
More Info (http://education.ufl.edu/uf-teach/)

Research

Research and scholarly opportunities are described on the mathematics website under Opportunities for Undergraduates.
More Info (http://www.math.ufl.edu/mathematics-major/opportunities-for-undergraduates/)

Combination Degree Programs

Mathematics majors who complete the requirements for major by the end of the junior year are eligible for the combination-degree program. Students in this program take the graduate sequences MAA 5228 and MAA 5229 and MAS 5311 and MAS 5312 in their senior year. These 12 credits, which apply toward the undergraduate degree, will then also apply toward a master's degree in mathematics if the student is admitted to the graduate program. The student should successfully complete this degree with one full-time year of graduate school following receipt of a bachelor's degree.
More Info (https://math.ufl.edu/mathematics-major/combined-degree/)

Academic Learning Compact

The major in Mathematics enables students to develop proficiency in calculus, differential equations, advanced calculus, linear algebra and abstract algebra, and expose them to several other mathematical areas beyond these core fields. Students will learn to read and to construct mathematical proofs, to reason in abstract mathematical systems, and to use mathematical models. Students will also acquire the ability to read new mathematics and to formulate mathematical models and arguments.

Before Graduating Students Must

- Be evaluated on their responses to certain examination questions in upper-division courses that are required for their degree.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes | SLOs

Content

1. Bachelor of Arts: Explain conceptual and computational competency in core mathematics: calculus, differential equations, real analysis, linear algebra and abstract algebra.
   Bachelor of Science: Explain conceptual and computational competency in core mathematics: calculus, differential equations, advanced calculus, linear algebra and abstract algebra.

Critical Thinking

2. Identify correct mathematical arguments in abstract mathematical systems.
3. Develop and analyze mathematical models of scientific problems.

Communication

4. Develop and write correct mathematical arguments.

Curriculum Map

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3	SLO 4
Bachelor of Arts				
MAA 4102	I, R, A	I, R, A	I, R, A	I, R, A
MAA 4103	I, R, A	I, R, A	I, R, A	I, R, A
MAS 4105	I, R, A	I, R, A	I, R, A	I, R, A
MAS 4301	I, R, A	I, R, A	I, R, A	I, R, A
Bachelor of Science				
MAS 4105	I, R, A	I, R, A	I, R, A	I, R, A
MAA 4211	I, R, A	I, R, A	I, R, A	I, R, A

| MAA 4212 | I, R, A | I, R, A | I, R, A | I, R, A |
| MAS 4301 | I, R, A | I, R, A | I, R, A | I, R, A |

Assessment Types

- Exams