

# MATHEMATICS MAJOR

The Mathematics major provides students with the breadth of knowledge required to excel in a variety of careers including medicine, law, finance and technology-related industries. In addition, the mathematics major also provides excellent preparation for those students who want to pursue graduate studies. The flexibility in the curriculum allows students to emphasize core math, applied math, or statistics.

## Requirements

A major in mathematics consists of:

Course ID	Title	Credits
<b>Core Courses</b>		
MATH 1210	Calculus I <sup>1</sup>	4
MATH 1220	Calculus II <sup>2</sup>	4
MATH 2210	Calculus III	4
MATH 3050	Real Analysis I	3
MATH 3090	Linear Algebra	4
Select five elective mathematics courses at the 3000-level or above <sup>3</sup>		15
<b>Total Credit Hours</b>		<b>34</b>

<sup>1</sup> MATH 1150 Long Calculus I (3 c.h.) and MATH 1160 Long Calculus II (3 c.h.) may be substituted for MATH 1210 Calculus I (4 c.h.);

<sup>2</sup> MATH 1310 Consolidated Calculus (4 c.h.) may be substituted for MATH 1220 Calculus II (4 c.h.);

<sup>3</sup> Four additional mathematics courses at the 3000-level or above with the following provisos:

- At most one 2000-level course may be substituted for an elective 3000-level course
- At least two courses must be at the 4000-level or above
- The Senior Seminar (MATH 3980 and MATH 3990) may count as one 4000-level course.

## Suggested Curriculum

Students should enroll in an appropriate calculus course in their first year of study. Students with no prior calculus course should normally take MATH 1210 Calculus I (4 c.h.) and MATH 1220 Calculus II (4 c.h.), while students with one semester of calculus credit (or equivalent knowledge) should take MATH 1310 Consolidated Calculus (4 c.h.). Students with two semesters of calculus credit should start in MATH 2210 Calculus III (4 c.h.) and contact a mathematics major advisor during the first semester for major program planning advice. Students are encouraged to complete the core courses as early as possible in their programs. It is generally recommended to take MATH 3090 Linear Algebra (4 c.h.) before MATH 3050 Real Analysis I (3 c.h.), but they can be taken concurrently. The MATH 3070-MATH 3080 sequence provides the foundation for upper-level courses in probability and statistics. The Senior Seminar MATH 3980-MATH 3990 is strongly recommended for majors who are not completing an honors thesis.

Students considering a math major should arrange an appointment with the department Director of Undergraduate Studies early in their program. They will be assigned a major advisor who will advise them on course selection within the major. The major program is designed to provide the student with a solid foundation during the first two years and provide for a variety of programs of study during the junior and senior years. A major program in mathematics can provide a background for both graduate study and work in a variety of areas of the mathematical sciences as well as provide preparation for professional schools such as law, medicine, and business. The major program should be designed as early as possible with the student's goals in mind and with the help of the major advisor.