

Department of Mathematical Sciences

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Mathematics

This program offers up-to-date, sound curricula in pure and applied mathematics from which students may attain a high degree of intellectual maturity and professional competence. The department's attention to mathematical discoveries and developments and to new areas of investigation and application, along with periodic reviews of its core of fundamental courses, ensures that its graduates are mathematically equipped for future pursuits in graduate school or in positions of employment outside academia.

It is strongly recommended that a mathematics major consider a minor or a second major utilizing mathematics, such as statistics, economics, natural sciences or computer science. The industrial mathematics and statistics major prepares students well for working in the industrial and commercial world. The major is a blend of mathematics, statistics and computer science.

Students in a major with licensure must complete the Teacher Education General Education Requirements as found on Page 59 and the Professional Education Requirements listed on Page 63. Descriptions for MATH courses begin on Page 178.

Degree: Bachelor of Arts (B.A.)
or Bachelor of Science (B.S.)

Major: Mathematics

1. Bachelor's Degree Requirements, see Page 41.

Note: Students must successfully complete UNIV 101. B.A. candidates must satisfy the language requirement (6-14 hours), see Page 41. The B.A. and B.S. degrees require a minimum of 40 hours of upper-division courses. Developmental and vocational/technical courses will not be counted toward graduation requirements.

2. General Education Requirements (38 Hours), see Page 45.

3. Mathematics Course Requirements (44-45 Hours).

CS	120	Introduction to Computer Programming (3) OR
CS	123	Computer Science I (4)
MATH	124	Calculus I (4)
MATH	132	Calculus II (4)
MATH	202	Calculus III (4)

MATH	340	Foundations of Higher Mathematics (3)
MATH	341	Abstract Algebra I (3)
MATH	351	Ordinary Differential Equations (4)
MATH	352	Introduction to Linear Algebra (4)
MATH	371	Real Analysis (3)
STAT	403	Probability and Mathematical Statistics (3)

Students must also complete 9 hours upper-division (300-/400-level) MATH (excluding MATH 310, 311, 317, 345 and 429), STAT (excluding STAT courses taken by statistics minors) or CS courses (excluding CS courses taken by computer science minors).

4. Minor in a different field or a second major.

5. Electives to complete a minimum of 120 hours.

Degree: Bachelor of Science (B.S.)
Major: Industrial Mathematics
and Statistics

1. Bachelor's Degree Requirements, see Page 41.

Note: Students must successfully complete UNIV 101. The B.S. degree requires a minimum of 40 hours of upper-division courses. Developmental and vocational/technical courses will not be counted toward graduation requirements.

2. General Education Requirements (38 Hours), see Page 45.

3. Math Course Requirements (62 Hours).

CS	120	Introduction to Computer Programming (3)
CS	123	Computer Science I (4)
CS	220	Discrete Mathematics for Computer Science (3)
CS	234	Computer Science II (4)
CS	357	Data Structures (3)
ENG	305	Report Writing (3)
MATH	124	Calculus I (4)
MATH	132	Calculus II (4)
MATH	202	Calculus III (4)
MATH	340	Foundations of Higher Mathematics (3)
MATH	351	Ordinary Differential Equations (4)
MATH	352	Introduction to Linear Algebra (4)
MATH	418	Decision Theory and Prescriptive Analytics (3)
STAT	213	Statistical Methods I (4)
STAT	313	Statistical Methods II (3)
STAT	403	Probability and Mathematical Statistics (3)
STAT	417	Operations Research (3)
STAT	400	Data Science (3)

4. Electives to complete a minimum of 120 hours.

Note: This major does not require a minor.

Minor: Mathematics

Note: Students earning a major in mathematics or in industrial mathematics and statistics may not also minor in mathematics.

Mathematics Course Requirements (24-26 Hours).

MATH	124	Calculus I (4)
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