Department of Mathematical Sciences

Professors: Hamid Allamehzadeh
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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)