Mathematics  
undergraduate program

Mathematics (Applied)  
55 credits  
Bachelor of Science

This course of studies enables students to learn the mathematics that is useful currently in business and industry. An industrial mathematician uses and adopts the mathematics necessary to attack problems of practical concern.

Because students of Applied Mathematics become familiar with the problems of science and engineering, and because they are encouraged to elect some courses in Computer Science and Engineering as part of their program of studies, they will be attractive to firms offering employment oriented towards those fields.

Employment:
* Marketing research
* Banking industry
* Colleges and Universities
* Industries including manufacturing, transportation, Aerospace, communications, machinery, electrical equipment, pharmaceuticals

Core Courses  11 courses - 36 or 37 credits

- MATH 0220  Analytic Geometry and Calculus 1
- MATH 0230  Analytic Geometry and Calculus 2
- MATH 0240  Analytic Geometry and Calculus 3
- MATH 0413  Introduction to Theoretical Math
- MATH 0420  Introduction to Theory 1 - Variable Calculus
- MATH 1070  Numerical Mathematics Analysis
- MATH 1180  Linear Algebra 1
- MATH 1270  Ordinary Differential Equations 1
- MATH 1110  Industrial Mathematics or
- MATH 1360  Modeling in Applied Mathematics 1
- MATH 1530  Advanced Calculus 1 or
- MATH 1550  Vector Analysis and Application or
- MATH 1560  Complex Variables and Applications

Elective Courses  1 course - 3 credits

Choose one course from the following list of courses:

- MATH 1100  Linear Programming
- MATH 1110  Industrial Mathematics
- MATH 1360  Modeling in Applied Mathematics 1
- MATH 1530  Advanced Calculus 1
- MATH 1540  Advanced Calculus 2
- MATH 1550  Vector Analysis and Application
- MATH 1560  Complex Variables and Application

Related Area  3 courses - 12 credits

Take 12 credits in Actuarial Science, Computer Science, Education or Statistics. A student may choose to do a minor in the above fields to substitute the related area. See an Advisor for course requirements and further details.

Additional Requirements  2 courses - 3 credits

Applied Mathematics majors must take the following sequences of courses to fulfill the capstone course requirement:

- MATH 1951  Senior Research for Applied Math 1
- MATH 1952  Senior Research for Applied Math 2

Required Science Courses  3 courses - 12 credits

Applied Mathematics majors must take the following courses as part of their General Education Requirements:

- PHYS 0174  Basic Physical Science and Engineering 1
- PHYS 0175  Basic Physical Science and Engineering 2
- STAT 1000  Applied Statistical Methods or
- STAT 1151  Introduction to Probability