Mathematics, B.A./B.S., Applied Mathematics Concentration
303-556-3208 Science Building 1022
School of Letters, Arts, and Sciences

This sheet applies to the 2013-14 catalog only. It does not replace the full catalog or departmental advising sheets as official statements of requirements. Students with declared majors must work with a faculty advisor on course selection and sequencing to ensure a timely graduation.

MAJOR CORE COURSES (Please see a Faculty Advisor)
All majors in mathematics are required to complete the following basic core of courses (with a required minimum grade of “C” in each of these courses).

- MTH 1410 (4 hrs) Calculus I
- MTH 2410 (4 hrs) Calculus II
- MTH 2420 (4 hrs) Calculus III
- MTH 3100 (3 hrs) Introduction to Mathematical Proofs

Required Applied Mathematics Courses
- MTH 3140 (4 hrs) Linear Algebra
- MTH 3210 (4 hrs) Probability and Statistics
- MTH 3420 (4 hrs) Differential Equations
- MTH 4480 (4 hrs) Numerical Analysis I

One of the following three courses:
- CS 1050 (4 crh) Computer Science 1
- OR MTH 2510 (4 crh) Computer Programming with Mathematica
- OR CSS 1510 (4 crh) Computer Programming: FORTRAN

One of the following sequences:
- MTH 3420-Differential Equations AND MTH 3440-Partial Diff. Equations
- MTH 4480-Numerical Analysis I AND MTH 4490-Numerical Analysis II
- MTH 4410-Advanced Calculus I AND MTH 4420-Advanced Calculus II
- MTH 4410-Advanced Calculus I AND MTH 4450-Complex Variables

Additional hours from the following for a total of at least 42 hours:
MTH 3220 - Design of Experiments MTH 3250 - Optimization Techniques I
MTH 3260 - Optimization Techniques II MTH 3440 - Partial Differential Equations MTH 4210 - Probability Theory MTH 4410 - Advanced Calculus I
MTH 4420 - Advanced Calculus II MTH 4450 - Complex Variables
MTH 4490 - Numerical Analysis II

MINOR (required)
- 3 Multicultural Requirement
  (may be satisfied within General Studies major, minor, or elective)

ELECTIVES 27

*TO BE COMPLETED WITHIN FIRST 30 COLLEGE-LEVEL CREDIT HOURS

Written Communication
- ENG 1010 (3 hrs.) Composing Arguments*
or
- ENG 1008/1009 (6 hrs.) Freshman Comp: The Essay Part I & II*
- ENG 1020 (3 hrs.) Freshman English: Anal., Rsrch.& Docum.
  (must be completed within 45 credit hours)

Quantitative Literacy*
- MTH 1110-4 College Algebra or higher-level mathematics course

Oral Communication*
- (3 hrs.)

Arts and Humanities
- (3 hrs.)
- (3 hrs.)

Historical
- (3 hrs.)

Natural and Physical Sciences
- (3 hrs.)
- (3 hrs.)

Social and Behavioral Sciences I
- (3 hrs.)

Social and Behavioral Sciences II
- (3 hrs.)

Global Diversity
- (3 hrs.) may be satisfied within General Studies