

Mathematics, B.A./B.S., Applied Mathematics Concentration

303-556-3208 Science Building 1022

Catalog 12-13

This sheet applies to the 2012-13 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.

General Studies	33 min
Major courses	42
Minor	18 min
Electives	27
Total to graduate (min. 40 hrs upper division)	120 min

Students who have reached junior standing (60 hrs) should request a CAPP (graduation compliance report) and review it with a faculty advisor.

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

Written Communication

- ___ ENG 1010 (3 hrs.) Freshman English: The Essay*
- 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

- ___ **Multicultural Requirement** may be satisfied in Gen Studies, major, minor, or electives

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** CSS 1247 (4 crh) Introduction to Programming: Visual Basic
- 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)