

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

Department of Mathematics & Computer Sciences, 303-556-3208, Science Building 1022

College of Letters, Arts, and Sciences

Catalog 14-15

This sheet applies to the 2014-15 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	Students who have reached junior standing (60 hrs) should request a CAPP (graduation compliance report) and review it with a faculty advisor.
Major courses	42	
Minor (determines BA or BS - see MTH advisor)	18 min	
Electives	27	
Total to graduate (min. 40 hrs upper division)	120 min	

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

Written Communication

- ___ ENG 1010 (3 hrs) Composing Arguments*
or ENG 1008/1009 (6 hrs.) Intro to Composition, Parts 1 & 2*
___ ENG 1020 (3 hrs) Freshman Comp: Analysis, Research, & Documt.
(ENG 1020 must be completed within 45 credit hours)

Oral Communication*

- ___ (3 hrs)

Quantitative Literacy*

- ___ MTH 1110 (4 hrs.) College Algebra or higher level math
*NOTE: MTH 1110 & MTH 1120 -OR- MTH 1400 are prereqs for MTH 1410 do **not** take MTH 1112 College Algebra through Modeling*

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 within General Studies major, minor, or elective)

MAJOR CORE COURSES (Please see a Math Advisor in M&CS dept)

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:

Work with your Math advisor in the M&CS department .

- MTH 3220 - Design of Experiments MTH 3250 - Optimization Techniques I
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) - Your choice of minor determines if you earn a BS or BA so work with your mathematics faculty advisor on this selection.

ELECTIVES