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

This sheet applies to the 2015-16 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.

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<th>General Studies</th>
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<td>Major courses</td>
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<td>Minor (determines BA or BS - see MTH advisor)</td>
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<td>Electives</td>
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<td><strong>Total to graduate (min. 40 hrs. upper division)</strong></td>
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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.) 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.)

**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 (Senior Experience)

One of the following three courses:
___ CS 1050 (4 hrs.) Computer Science 1
OR MTH 2510 (4 hrs.) Computer Programming with Mathematica
OR CSS 1510 (4 hrs.) 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 - Statistical Methods
MTH 3250 - Optimization Techniques I
MTH 3440 - Partial Differential Equations
MTH 4210 - Probability Theory
MTH 4420 - Advanced Calculus II
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**