# Mathematics, B.S., Applied Mathematics Concentration

**General Studies**
- Major courses: 44 min
- Minor courses: 18 min
- Electives: 24 min
- Total to graduate (min. 40 hrs upper-division): 120 min

This sheet applies to the 2010-2011 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 COURSES
- MTH 1410-4 Calculus I *
- MTH 2410-4 Calculus II
- MTH 2420-4 Calculus III
- MTH 3100-3 Introduction to Mathematical Proofs

One of the following three courses:
- CS 1050-4 Computer Science I
- CSS 1247-4 Intro to Programming: Visual Basics
- MTH 1510-4 Computer Programming: FORTRAN

All four of the following courses:
- MTH 3140-4 Linear Algebra**
- MTH 3210-4 Probability & Statistics
- MTH 3420-4 Differential Equations
- MTH 4480-4 Numerical Analysis I (Senior Experience)

At least one of the following sequences:
- MTH 3420 & 3440 Differential Equations & Partial Differential Equations
- MTH 4480 & 4490 Numerical Analysis I & II
- MTH 4410 & 4420 Advanced Calculus I & II
- MTH 4410 & 4450 Advanced Calculus I & Complex Variables

Additional hours from the following for a total of at least 42 hours:
- MTH 3220-4 Design of Experiments
- MTH 3250-4 Optimization Techniques I
- MTH 3260-4 Optimization Techniques II
- MTH 3440-4 Partial Differential Equations
- MTH 4210-4 Probability Theory
- MTH 4410-4 Advanced Calculus I ***
- MTH 4420-3 Advanced Calculus II
- MTH 4450-4 Complex Variables
- MTH 4490-4 Numerical Analysis II

*Some sections of this course have a Mathematica component.
**See department for approved substitutions for MTH 3140.
***Students considering grad school in Mathematics

A grade of "C" or better is required in each course included in the major.