**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 I
- 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 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**