



# Mathematics, B.S. *major*

## Applied Emphasis

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coursework in related fields such as biology, business, chemistry, computer science, economics, geography, geology, environmental studies, physics or technology. Students planning to attend graduate school in applied mathematics or a related field should take both MATH 2490 Differential Equations and MATH 4410 Introduction to Analysis.

Note: If the student's high school mathematics courses and/or the Mathematics Placement Test indicate a lack of readiness for calculus, the student will be placed in one of the following precalculus sequences: MATH 1470; or MATH 1170 and MATH 1180; or MATH 1170 and MATH 1470.

Required Credits: 40

Required GPA: 2.25

### I REQUIRED CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- MATH 2210 Discrete Mathematics (4 credits)
- MATH 2471 Calculus I (5 credits)
- MATH 2472 Calculus II (5 credits)
- MATH 2480 Multivariable Calculus (4 credits)
- MATH 3310 Linear Algebra (4 credits)

### APPLIED EMPHASIS

SELECT AT LEAST 6 COURES FROM THE FOLLOWING:

- CS 2322 Computer Science II (4 credits)
- MATH 2490 Differential Equations (4 credits)
- MATH 3710 Mathematical Modeling (3 credits)
- MATH 3720 Numerical Methods (3 credits)
- MATH 4410 Introduction to Analysis (3 credits)
- MATH 4760 Topics in Applied Mathematics (3 credits)
- STAT 2610 Applied Statistics (4 credits)  
or STAT 3631 Probability And Statistics I (4 credits)
- STAT 3610 Time Series Analysis (3 credits)
- STAT 3632 Probability And Statistics II (3 credits)

### SUGGESTED SEMESTER SCHEDULE FOR MATHEMATICS MAJOR, B.S.

The following is a list of required Mathematics Major, B.S. courses by year. This schedule is intended to help students plan their courses in an orderly fashion; however, these are only suggestions and this schedule is flexible.

#### Freshman

- MATH 1470 Precalculus (5 credits)
- MATH 2471 Calculus I (5 credits)
- MATH 2472 Calculus II (5 credits)
- Liberal Education requirements

#### Sophomore

- MATH 2210 Discrete Mathematics (4 credits)
- MATH 2480 Multivariable Calculus (4 credits)
- MATH 3310 Linear Algebra (4 credits)
- Courses in the Field of Emphasis (consult with advisor)
- Liberal Education requirements

#### Junior/Senior

- Courses in the Field of Emphasis (consult with advisor)
- Complete Liberal Education requirements

Students seeking the Applied emphasis are encouraged to take significant