Mathematics Theory and Computation B.S.

**Math 100**
Intro to Proofs and Problem Solving

**Math 24**
Ordinary Differential Equations

**Math 152**
Programming for Math (Preferred option)

**ASTR 119**
Intro Sci Computing in Python

**EART 112**
Geophysical Data Science

**EART 119**
Intro Programming for Geoscientists

**PHYS 115**
Computational Physics

**Math 110**
Number Theory

**Math 103A**
Complex Analysis

**Math 111A**
Algebra

**Math 105A**
Real Analysis

**Math 111T**
Algebra

**Math 117**
Advanced Linear Algebra

**Math 117**
Advanced Linear Algebra

**Math 194**
Senior Seminar

**Math 195**
Senior Thesis

**Math 115**
Graph Theory

**Math 116**
Combinatorics

**Math 134**
Cryptography

**Math 140**
Industrial Math

**Math 145**
Chaos Theory

**Math 147**
Computational Methods

**Math 148**
Numerical Analysis

**Math 160**
Mathematical Logic

**Math 161**
Graph Theory

3 Electives from Approved List

**Coding**
(Must take one of the following)

**Algebraic Computation***
(Must take one of the following)

**Comprehensive Requirement**
(Must take one of the following)
## Approved List of Elective Courses

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* Courses from departments other than Mathematics, Applied Math or Statistics are intended for double major or minor students and have significant prerequisite requirements.

**Students who are declared in the Computer Science BS and wish to double major in the Mathematics Theory and Computation BS may petition to use CSE courses towards the upper division coding requirement and the 3 required upper division electives for the Mathematics Theory and Computation BS Major.

** Students who take more than one course from the Algebraic Computation or Analysis Computation Requirements may use the extra courses towards the three major electives requirement.

ASTR 119, EART 112, EART 119 and PHYS 115 are intended for double major students.