Mathematics Theory and Computation B.S.

Coding**

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

Math 152

Programming for Math (Preferred option)

Or

ASTR 119

Intro Sci Computing in Python

EART 112

Geophysical Data Science

Or

EART 119

Intro Programming for Geoscientists

Or

PHYS 115

Computational Physics

3 Electives from **Approved List**

Math 24

Ordinary Differential Equations

Algebraic Theory

(Must take one of the following)

Math 110

Number Theory

Math 111A

Algebra

Or

Math 111T

Algebra

Or

Math 117

Advanced Linear Algebra

Math 100

Intro to Proofs and Problem Solving

Analysis Theory

(Must take one of the following)

Math 103A

Complex Analysis

Math 105A

Real Analysis

Comprehensive Requirement

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

Math 194

Senior Seminar

Or

Math 195

Senior Thesis

Analysis Computation*** (Must take **one** of the

Math 145

following)

Chaos Theory

Math 148

Numerical Analysis

Or

AM 114

Dynamical Systems

Or

AM 147

Computational Methods

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

Math 115

Graph Theory

Math 116

Combinatorics

Math 134

Cryptography

Or

Math 140

Industrial Math

Or

Math 160

Mathematical Logic

Approved List of Elective Courses

Mathematics	Applied Math	Statistics	Astronomy*	Earth & Planetary Sciences*	Electrical and Computer Engineering*	Economics*	Physics*
MATH 106	AM 107	STAT 108	ASTR 111	EART 124	ECE 103	ECON 104	PHYS 116C
MATH 107	AM 115	STAT 131		EART 125	ECE 130	ECON 113	PHYS 139A
MATH 118	AM 129	STAT 132		EART 162	ECE 135	ECON 114	PHYS 139B
MATH 120	AM 148	Applied Math or Statistics are			ECE 141	ECON 124	PHYS 171
MATH 124		intended for double major or minor students and have significant prerequisite requirements.				ECON 166A	
**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 requirement upper division electives for the					ECE 153	ECON 166B	

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

Mathematics Theory and Computation BS Major.

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