Applied Math Major
2020-2021 Curriculum Chart

Calculus
Complete one sequence

- MATH 19A
  Calculus for Sci., Engr. & Math
- MATH 19B
  Calculus for Sci., Engr. & Math

OR

- MATH 20A
  Honors Calculus
- MATH 20B
  Honors Calculus

Linear Algebra & Differential Equations

AM 10
(Strongly Preferred)
Math Methods for Engineers I

OR

- MATH 21
  Linear Algebra

AM 20
(Strongly Preferred)
Math Methods for Engineers II

OR

- MATH 24
  Differential Equations

Multivariable Calculus
Complete one sequence

- MATH 23A
  Vector Calculus
- MATH 23B
  Vector Calculus

OR

AM 30
(Strongly Preferred)
Multivariate Calculus for Engineers

Lower Division Electives*

- ELECTIVE
- ELECTIVE

A list of the lower division electives can be found on the BSOE Undergraduate Advising website here: https://undergrad.soe.ucsc.edu/applied-math-lower-division-electives

Upper-Division Courses

AM 100
Mathematical Methods for Engineers

AM 112
Introduction to Partial Differential Equations

OR

AM 212A*
Applied Partial Differential Equations

AM 114
Introduction to Dynamical Systems

OR

AM 214*
Applied Dynamical Systems

AM 129
Foundations of Scientific Computing for Scientists and Engineers

OR

AM 209
Foundations of Scientific Computing

STAT 131
Introduction to Probability Theory

OR

CSE 107
Probability & Statistics for Engineers

Upper-Division Electives*

- ELECTIVE
- ELECTIVE
- ELECTIVE

A list of the upper division elective can be found on the BSOE Undergraduate Advising website here: https://undergrad.soe.ucsc.edu/applied-math-upper-division-electives

Comprehensive Requirement

- AM 170A*
  Mathematical Modeling 1
- AM 170B
  Mathematical Modeling 2

♣ The DC requirement is satisfied by completing AM 170A
### Applied Math Major
#### 2020-2021 Curriculum Chart

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**Key Legend**

♦ Students are required to take two lower-division electives from the following list, in preparation for the upper division electives. Students are encouraged to plan ahead carefully in consultation with undergraduate advising in making their selection.

* Students who intend to pursue an M.S. degree in scientific computing and applied mathematics later are strongly encouraged to take the AM 212A and AM 214 options.

♥ Students are required to take three upper-division elective courses from the following list of possible electives. Note that many of these electives have lower-division prerequisites. Students should plan carefully which ones to take to ensure they are prepared for their selected upper-division electives. Also note that enrollment in the graduate courses is by permission of the instructor, who will verify adequate preparation.

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Student Name: 
Staff Advisor: 
Faculty Advisor: