

# Applied Math Minor 2019-2020 Curriculum Chart

## Calculus

**MATH 19A  
or 20A**  
Calculus

&

AND

**MATH 23A**  
Vector Calculus

&

**MATH 19B  
or 20B**  
Calculus

**MATH 23B**  
Vector Calculus

## Linear Algebra & Differential Equations

**AM 10**  
Math Methods for  
Engineers I

&

OR

**MATH 21\***  
Linear Algebra

&

OR

**PHYS 116A\***  
Math Methods in  
Physics

&

**AM 20**  
Math Methods for  
Engineers II

**MATH 24\***  
Differential  
Equations

**PHYS 116B\***  
Math Methods in  
Physics

\*Students who complete Math 21 and 24 or Physics 116A and 116B in lieu of AMS 10 and 20 are strongly recommended to complete the MATLAB self-paced tutorial at: <http://matlab-training.soc.ucsc.edu/>

## Dynamical Systems

**AM 114 or 214**  
Dynamical Systems

## Probability Theory

**STAT 131**  
Introduction to  
Probability Theory

OR

**CSE 107**  
Probability & Statistics  
for Engineers

## Applied Math Elective

**ELECTIVE\***

\*Choose one elective from the following list:

AM 107/217	AM 231	MATH 117
AM 115/215	AM 232	MATH 121A
AMS 198	AM 250	PHYS 105
AM 212B	ECE 103	PHYS 139A
AM 213A	ECE 115	PHYS 139B
AM 213B	ECE 141	PHYS 171
AM 216	MATH 103A	STAT 132

Students may also propose other electives which use applied mathematical methods (e.g. relevant courses from Mathematics, Physics, Chemistry, Earth Sciences, Ocean Sciences, Ecology & Evolutionary Biology, etc.), subject to approval by the department.

## Numerical Methods

**AM 147**  
Computational  
Methods &  
Applications

OR

**PHYS 115**  
Computational  
Physics

OR

**EART 119**  
Intro to Scientific  
Computing

OR

**ASTR 119**  
Intro to Scientific  
Computing

## Partial Differential Equations

**AM 212A**  
Applied Math  
Methods I

OR

**PHYS 116C**  
Math Methods in  
Physics

OR

**MATH 107**  
Partial Differential  
Equations

The applied mathematics minor is available for students who wish to develop (1) proficiency in modeling real-life problems using mathematics and (2) knowledge of standard, practical analytical and numerical methods for the solution of these models. This minor could be combined with a major in any of the physical, biological, mathematical, or engineering sciences as preparation for a graduate degree in that field or in applied mathematics.

**Applied Math Minor  
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Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Student Name:
Staff Advisor:
Faculty Advisor: