

# Applied Math Minor 2018-2019 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

**AMS 10**  
Math Methods for  
Engineers I

&

OR

**MATH 21\***  
Linear Algebra

&

OR

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

&

**AMS 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.soe.ucsc.edu/>

## Dynamical Systems

**AMS 114 or 214**  
Dynamical Systems

## Probability Theory

**AMS 131**  
Introduction to  
Probability Theory

OR

**CMPE 107**  
Probability & Statistics  
for Engineers

## Applied Math Elective

**ELECTIVE\***

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\*Choose one elective from the following list:

AMS 107/217	AMS 231	MATH 103A
AMS 115/215	AMS 232	MATH 117
AMS 132	AMS 250	MATH 121A
AMS 198	EE 103	PHYS 105
AMS 212B	EE 154	PHYS 139A
AMS 213A	CMPE 115	PHYS 139B
AMS 213B		PHYS 171
AMS 216		

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

**AMS 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

**AMS 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.

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Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

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Student Name:
Staff Advisor:
Faculty Advisor: