

Applied Mathematics & Statistics: Applied Math Minor 2015-2016 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*

*Choose one elective from the following list:

AMS 107/217	AMS 231	MATH 103A
AMS 115/215	AMS 290B	MATH 117
AMS 132	EE 103	MATH 121A
AMS 198	EE 154	PHYS 105
AMS 212B	CMPE 115	PHYS 139A
AMS 213	CMPE 145	PHYS 139B
AMS 216	CMPS 165	PHYS 171

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

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 _____

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Student Name: Staff Advisor: Faculty Advisor:
