

# Applied Math Minor 2020-2021 Curriculum Chart

**Calculus**  
*Complete one sequence*

<b>MATH 19A</b> Calculus for Sci., Engr. & Math	&	<b>MATH 19B</b> Calculus for Sci., Engr. & Math
<b>OR</b>		
<b>MATH 20A</b> Honors Calculus	&	<b>MATH 20B</b> Honors Calculus

**Linear Algebra & Differential Equations**

<b>AM 10</b> Math Methods for Engineers I	&	<b>MATH 21*</b> Linear Algebra	OR	<b>MATH 24*</b> Differential Equations	OR	<b>PHYS 116A*</b> Math Methods in Physics
<b>AM 20</b> Math Methods for Engineers II						

\*Students who complete Math 21 and 24 or Physics 116A are strongly recommended to complete the MATLAB self-paced tutorial at: <http://matlab-training.soe.ucsc.edu/>

**Multivariable Calculus**  
*Complete one sequence*

<b>MATH 23A</b> Vector Calculus	&	<b>MATH 23B</b> Vector Calculus
<b>OR</b>		
<b>AM 30</b> Multivariate Calculus for Engineers	&	<b>AM 100</b> Mathematical Methods for Engineers

**Probability Theory**

<b>STAT 131</b> Introduction to Probability Theory	OR	<b>CSE 107</b> Probability & Statistics for Engineers
--	----	---

**Applied Math Elective**

**ELECTIVE\***

\*Choose one elective from the following list:

AM 107/217	AM 217	MATH 117
AM 115/215	AM 231	MATH 121A
AM 129	AM 232	PHYS 105
AMS 198	AM 250	PHYS 107
AM 212B	ASTR 171	PHYS 139A
AM 213A	ECE 103	PHYS 139B
AM 213B	ECE 115	PHYS 171
AM 215	ECE 141	STAT 132
AM 216	MATH 103A	

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.

**Dynamical Systems**

<b>AM 114</b> Introduction to Dynamical Systems	OR	<b>AM 214*</b> Applied Dynamical Systems
---	----	---

**Numerical Methods**

<b>AM 147</b> Computational Methods & Applications	OR	<b>PHYS 115</b> Computational Physics
--	----	--

**Partial Differential Equations**

<b>AM 212A*</b> Applied Partial Differential Equations	OR	<b>AM 112</b> Introduction to Partial Differential Equations	OR	<b>PHYS 116C</b> Math Methods in Physics	OR	<b>MATH 107</b> 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.

\*Students intending to do graduate work in Applied Math should take AM 212A and AM 214 instead of AM 112 and AM 114.

**Applied Math Minor  
2020-2021 Curriculum Chart**

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Student Name:
Staff Advisor:
Faculty Advisor: