Applied Math Minor
2021-2022 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 Math Methods for Engineers I

&

AM 20 Math Methods for Engineers II

OR

MATH 21* Linear Algebra

&

MATH 24* Differential Equations

OR

PHYS 116A* Math Methods in Physics

*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

| **MATH 23A** Vector Calculus | **&** | **MATH 23B** Vector Calculus |

OR

| **AM 30** Multivariate Calculus for Engineers | **&** | **AM 100** Mathematical Methods for Engineers |

Probability Theory

STAT 131 Introduction to Probability Theory

OR

CSE 107 Probability & Statistics for Engineers

Applied Math Elective

ELECTIVE*

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*Choose one elective from the following list:

AM 107/217	AM 231	MATH 117
AM 115/215	AM 232	MATH 121A
AM 129	AM 250	PHYS 105
AM 198	ASTR 171	PHYS 107
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.

Dynamical Systems

AM 114 Introduction to Dynamical Systems

OR

AM 214*♦ Applied Dynamical Systems

Numerical Methods

AM 147 Computational Methods & Applications

OR

PHYS 115 Computational Physics

Partial Differential Equations

AM 212A* Applied Partial Differential Equations

OR

AM 112 Introduction to Partial Differential Equations

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.

*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
2021-2022 Curriculum Chart

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Student Name:

Staff Advisor:

Faculty Advisor: