

Math Applied Track (Physics) Requirements
Part A: Required Prerequisites

Math 1151 and 1152	Calculus I and II	10
Math 1295	Introductory Seminar	1
Physics 1250 and 1251	Mechanics, Thermal Physics, Waves and E & M, Optics, Modern Physics	10
Chem 1210	General Chemistry I	10
CSE 1222 or 1223	Intro to Computer Programming in C++ or Intro Computer Programming in Java	3

Choose one of the following two:

Biology 1113	Biological Sciences: Energy Transfer and Development	4
Biology 1114	Biological Sciences: Form, Function, Diversity and Ecology	4

Part B: Major Program (Minimum grade of C- and GPA of 2.0)
Core Requirements

Math 2153 or 2182H	Calculus III or Honors Calculus II	4-5
Math 2568 or 2568H	Linear Algebra	3
Math 3345 or 3345H	Foundations of Higher Mathematics	3
Math 4530 or Stat 4201	Probability or Introduction to Mathematical Statistics I	3-4
Stat 4202	Introduction to Mathematical Statistics II	4

Required Courses

Math 2255	Differential Equations and Their Applications	3
Math 4557	Partial Differential Equations	3

Applied Math Courses:

Physics 2300	Intermediate Mechanics I	4
Physics 2301	Intermediate Mechanics II	4

Choose two of the following three:

Math 3607 or 3607H	Beginning Scientific Computing	3
Math 4552	Complex Analysis	3
Math 4556	Dynamical Systems	3

Applied Math Electives (choose at least 6 hours of math):

Math 3607 or 3607H	Beginning Scientific Computing (IF NOT BEFORE)	3
Math 4350	Quantitative Neuroscience	3
Math 4547	Introductory Analysis I	3
Math 4548	Introductory Analysis II	3
Math 4551	Vector Analysis	3
Math 4552	Complex Analysis (IF NOT BEFORE)	3
Math 4556	Dynamical Systems (IF NOT BEFORE)	3
Math 4578	Discrete Mathematical Models	3
Math 5101	Linear Mathematics in Finite Dimensions	3
Math 5102	Linear Mathematics in Infinite Dimensions	3
Math 5451	Calculus of Variations and Tensor Calculus	3
Math 5756	Mathematical Methods in Relativity Theory I	3
Math 5757	Mathematical Methods in Relativity Theory II	3
Total Hours		43-45

Honors Degree: Students completing an honors degree must complete at least 5 honors eligible courses selected in consultation with a faculty advisor. At most 2 courses can count from (2182H, 2568H, 3345H, or 3607H), at least 3 courses must be at the 4000-5000 level.

Math Applied Track (Physics) Sample Schedule

	Autumn		Spring	
Year 1	Math 1151	5	Math 1152	5
	Chem 1210	5	Math 1295	1
	CSE 1222 or 1223	3	Physics 1250	5
	ARTSSCI 1100.01	1	English 1110	3
	GE	3	GE	3
		17		17
Year 2	Math 2153	4	Math 3345	3
	Physics 1251	5	Math 2255	3
	GE	3	Math 2568	3
	GE	3	Biology 1113 or 1114	4
			GE	3
		15		16
Year 3	Math 4530 or Stat 4201	3-4	Stat 4202	4
	Physics 2300	4	Physics 2301	4
	Math 4557	3	GE	3
	GE	3	GE	3
			13-14	
Year 4	Applied Math Course or Elective	3-5	Applied Math Course or Elective	3-5
	Applied Math Course or Elective	3-5	Applied Math Course or Elective	3-5
	GE	3	GE	3
	GE	3		
			12-16	

Additional hours may be necessary depending on course selection.