

Math Applied Track (Chemistry) 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 and 1220	General Chemistry I and II	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	Prereq: Math 2153	3
Math 3345 or 3345H	Foundations of Higher Mathematics	Prereq: Math 2153	3
Math 4530 or Stat 4201	Probability or Introduction to Mathematical Statistics I	Prereq: Math 2153	3-4
Stat 4202	Introduction to Mathematical Statistics II	Prereq: Math 4530 or Stats 4201	4

Required Courses

Math 2255	Differential Equations and Their Applications	Prereq: Math 2153	3
Math 4557	Partial Differential Equations	Prereq: Math 2255	3

Applied Math Courses (choose two of the following three):

Math 3607 or 3607H	Beginning Scientific Computing	Prereq: Math 2255 and 2568	3
Math 4552	Complex Analysis	Prereq: Math 2153	3
Math 4556	Dynamical Systems	Prereq: Math 2153	3

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

Chem 2210	Analytical Chemistry I: Quantitative Analysis	Prereq: Chem 1220 and Math 1148 & 1149	5
Chem 4300	Physical Chemistry I	Prereq: Chem 2210, Math 2153 & 2255, Phys 1250	3
Chem 4310	Physical Chemistry II		3

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

Math 3607	Beginning Scientific Computing (IF NOT BEFORE)	Prereq: Math 2255 and 2568	3
Math 4350	Quantitative Neuroscience	Prereq: Math 1152	3
Math 4547	Introductory Analysis I	Prereq: Math 1148 & 1149 or Math 1150	3
Math 4548	Introductory Analysis II		3
Math 4551	Vector Analysis	Prereq: Math 2153	3
Math 4552	Complex Analysis (IF NOT BEFORE)	Prereq: Math 2153	3
Math 4556	Dynamical Systems (IF NOT BEFORE)	Prereq: Math 2153	3
Math 4578	Discrete Mathematical Models	Prereq: Math 2568 and 4530	3
Math 5101	Linear Mathematics in Finite Dimensions	Prereq: Math 2568	3
Math 5102	Linear Mathematics in Infinite Dimensions	Prereq: Math 5101	3
Math 5451	Calculus of Variations and Tensor Calculus	Prereq: Math 2415 and 2568	3
Math 5756	Mathematical Methods in Relativity Theory I	Prereq: Math 2568 and Phys 2000 ⁺	3
Math 5757	Mathematical Methods in Relativity Theory II		3
Total Hours			41-45

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 (Chemistry) Sample Schedule

	Autumn		Spring	
Year 1	Math 1151	5	Math 1152	5
	Chem 1210	5	Math 1295	1
Year 1	CSE 1222 or 1223	3	Chem 1220	5
	ARTSSCI 1100.01	1	English 1110	3
Year 1	GE	3	GE	3
		17		17
Year 2	Math 2153	4	Math 3345	3
	Physics 1250	5	Math 2255	3
Year 2	Biology 1113 or 1114	4	Math 2568	3
	GE	3	Physics 1251	5
Year 2			GE	3
		16		17
Year 3	Math 4530 or Stat 4201	3-4	Stat 4202	4
	Chemistry 2210	5	Chemistry 4300	3
Year 3	Math 4557	3	GE	3
	GE	3	GE	3
Year 3		14-15		13
	Applied Math Course or Elective	3-5	Applied Math Course or Elective	3-5
Year 4	Applied Math Course or Elective	3-5	Applied Math Course or Elective	3-5
	GE	3	GE	3
Year 4	GE	3		
		12-16		9-13

Additional hours may be necessary depending on course selection.