

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

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

Choose one of the following two:

CSE 1222	Introduction to Computer Programming in C++ for Engineers and Scientists	3
CSE 1223	Introduction to Computer Programming in Java	3

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

Math 2153	Calculus III	4
Math 2568	Linear Algebra	3
Math 3345	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 (choose two of the following three):

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

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

Chem 2210	Analytical Chemistry I: Quantitative Analysis	5
Chem 4300	Physical Chemistry I	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)	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 41-44

Math Applied Track (Chemistry) Sample Schedule

	Autumn		Spring		Major Hours
Year 1	Math 1151	5	Math 1152	5	0
	Chem 1210	5	Math 1295	1	
	CSE 1222 or 1223	3	Chem 1220	5	
	ARTSSCI 1100.01	1	English 1110	3	
	GE	3	GE	3	
		17		17	
Year 2	Math 2153	4	Math 3345	3	13
	Physics 1250	5	Math 2255	3	
	Biology 1113 or 1114	4	Math 2568	3	
	GE	3	Physics 1251	5	
			GE	3	
		16		17	
Year 3	Math 4530 or Stat 4201	3-4	Stat 4202	4	16-19
	Applied Math Course or Elective	3-5	Applied Math Course or Elective	3-5	
	Math 4557	3	GE	3	
	GE	3	GE	3	
		12-15		13-15	
Year 4	Applied Math Course or Elective	3-5	Applied Math Course or Elective	3-5	12-14
	Applied Math Course or Elective	3-5	Applied Math Course or Elective	3-5	
	GE	3	GE	3	
	GE	3			
		12-16		9-13	

Additional hours may be necessary depending on course selection.