

Math Biology Track Requirements

Part A: Required Prerequisites

Math 1151 and 1152	Calculus I and Calculus II	10
Math 1295	Introductory Seminar	1
Chem 1210	General Chemistry I	5
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	Prereq: Math 2153	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 3350	Introduction to Mathematical Biology	Prereq: Math 2255	3
Choose one of the following two:			
Biology 3401	Integrated Biology	Prereq: Biology 1113, 1114, Chem 1220, Math 1150	4
Molgen 4500	General Genetics	Prereq: Bio 1113 plus 1 Bio course	3

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

Math 3607 or 3607H	Beginning Scientific Computing	Prereq: Math 2255 and 2568	3
Math 4556	Dynamical Systems	Prereq: Math 2153	3
Math 4557	Partial Differential Equations	Prereq: Math 2255	3

Applied Math Electives (choose at least 6 hours):

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 3345	3
Math 4551	Vector Analysis	Prereq: Math 2153	3
Math 4552	Complex Analysis	Prereq: Math 2153	3
Math 4556	Dynamical Systems (IF NOT BEFORE)	Prereq: Math 2153	3
Math 4557	Partial Differential Equations (IF NOT BEFORE)	Prereq: Math 2255	3
Math 4580	Abstract Algebra I	Prereq: Math 3345 & 2568	3
Math 5101	Linear Mathematics in Finite Dimensions	Prereq: Math 2568	3
Math 5102	Linear Mathematics in Infinite Dimensions	Prereq: Math 5101	3
Math 5540H	Honors Differential Geometry	Prereq: Math 5520H or (2182H & 2568)	5
Biochem 4511	Introduction to Biological Chemistry	Prereq: Chem (1220 or 1250) & Chem (2510 or 2310)	4
Chem 2510	Organic Chemistry	Prereq: Chem 1220	4
EEOB 3310	Evolution	Prereq: Bio 1114	4
EEOB 3420	Behavioral Ecology	Prereq: Bio 1114	3-4
EEOB 4520	Comparative Physiology	Prereq: Bio 1114 plus 1 Bio course	3
MolGen/Math 5660	Integrated Molecular and Cellular Biology for Non-Biologists		5
MolGen 5601	Eukaryotic Molecular Genetics Lab	Prereq: MolGen 4500 plus 1 Bio course	3-4
Total Hours			38-45

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 Biology Track Sample Schedule

	Autumn		Spring		
Year 1	Math 1151	5	Math 1152	5	
	Chem 1210	5	Math 1295	1	
	ARTSSCI 1100.01	1	Biology 1113	4	
	GE	3	English 1110	3	
	GE	3	GE	3	
		17		16	
Year 2	Math 2153	4	Math 3345	3	
	Biology 1114	4	Math 2255	3	
	GE	3	Math 2568	3	
	GE	3	GE	3	
			14		12
Year 3	Math 4530 or Stat 4201	3-4	Stat 4202	4	
	Biol 3401 or MolGen 4500	3-4	Applied Math Course or Elective	3-5	
	GE	3	Math 3350	3	
			9-11		10-12
Year 4	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	
			9-12		9-11

Additional hours may be necessary depending on course selection.