

Honors Math Biology Track Requirements

This requires an ASC Honors contract

Part A: Required Prerequisites

Pick ONE of the following calculus options:

Math 1151 & 1152	Calculus I & II	5,5
Math 1181H	Honors Calculus I	5

Chem 1210	General Chemistry I	5
Biology 1113 & 1114	Energy Transfer and Development & Form, Function, Diversity, Ecology	4,4

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

Honors Core Requirements -- At most 2 of the following Honors math can count toward the "5 Honors eligible courses":

Math 2153 or 2182H	Calculus III or Honors Calculus II	Prereq: Math 1152 or 1181H	4-5
Math 2568 or 2568H	Linear Algebra	Prereq: Math 2153	3
Math 3345 or 3345H	Foundations of Higher Mathematics	Prereq: Math 2153	3

Core Requirements

Math 4530 or Stat 4201	Probability or Intro to Mathematical Statistics I	Prereq: Math 2153	3-4
Stat 4202	Intro to Mathematical Statistics II	Prereq: Math 4530 or Stat 4201	4

Required Courses for Biology Track

Math 2255	Differential Equations and Their Applications	Prereq: Math 2153	3
Math 3350	Introduction to Mathematical Biology - SP only	Prereq: Math 2255	3

Choose ONE of the following:

Biology 3401	Integrated Biology	Prereq: Bio 1113,1114, <u>Chem 1220</u> , Math 1150	4
MolGen 4500	General Genetics	Prereq: Bio 1113 & one other Bio course	3

Applied Math Courses -- Choose ONE path:

Path A:

Math 4556	Dynamical Systems - AU only	Prereq: Math 2153	3
Math 5401 & 5402	Applied Differential Equations I and II - AU/SP	Prereq: Math 2255 & 2568	6
Math 5601	Essentials of Numerical Methods - AU only	Prereq: Math 2568 & 4556	3

Path B:

Math 4556	Dynamical Systems - AU only	Prereq: Math 2153	3
Math 4557	Partial Differential Equations	Prereq: Math 2255	3
Math 5601 & 5602	Numerical Methods & Computational PDEs - AU/SP	Prereq: Math 2568, 4556, & 4557	6
Math 5401	Applied Differential Equations I - AU only	Prereq: Math 2255 & 2568	3

Path C:

Math 4556	Dynamical Systems - AU only	Prereq: Math 2153	3
Math 4557	Partial Differential Equations	Prereq: Math 2255	3
Math 5401	Applied Differential Equations I - AU only	Prereq: Math 2255 & 2568	3
Math 5651	Math Modeling for Biological Processes - SP only	Prereq: Math 2568, 4556, & 4557	3
Math 5601	Essentials of Numerical Methods - AU only	Prereq: Math 2568 & 4556	3

Note: Honors math eligible courses are bolded. Total Hours **38-44**

ASC Honors Contract: Students pursuing such a contract must complete at least "5 honors math eligible courses" selected in consultation with an honors math advisor. At most 2 courses can count from 2182H, 2568H, or 3345H. For the remaining 3 courses, one needs to complete one of the listed sequences available for each track, and select another course from a list of approved courses at the 4000-5000 level (see honors math advisor).

Honors Math Biology Track Sample Schedule

	Autumn		Spring	
Year 1	Math 1181H (AU only)	5	Math 2182H (SP only)	5
	Chem 1210	5	Biology 1113	4
	ARTSSCI 1110.01	1	English 1110	3
	GE	3	GE	3
	GE	3		
		17		15
Year 2	Math 2568/ 2568H (AU only)	3	Math 4530 or Stat 4201	3-4
	Biology 1114	4	Math 3345/ 3345H (SP only)	3
	Math 2255	3	GE	3
	GE	3	GE	3
		13		12-13
Year 3	Math 4556 (AU only)	3	Math 5402^A (SP only)	3
	Stat 4202	4	Math 4557 ^{B,C}	3
	Math 5401 (AU only)	3	Math 3350 (SP only)	3
	GE	3	GE	3
		13		12
Year 4	Math 5601 (AU only)	3	Math 5602^B (SP only)	3
	MolGen 4500	3	Math 5651^C (SP only)	3
	GE	3	GE	3
		9		9

Additional hours may be necessary depending on course selection.

^{A,B,C} Math courses required for the particular path.