

Courses offered by the Biology Department: Fall 2025

Please note that this list does NOT replace Connect Carolina, which should be your primary source for course listings. Classes and instructors are subject to change. You can accumulate 3 hours of different 600-level courses for them to count as a biology elective. Courses highlighted in yellow are offered by other departments and are crosslisted as bio electives. We cannot guarantee that they will be offered.

Introduction and Core Courses

Number	Course	Professors	Prerequisites	Credit hours	Comments
101	Principles of Biology	Claytor; Hastie; TBA	None	(3)	Gateway course
101L	Introductory Biology Lab	Stegenga	None	(1)	Gateway course
102L	Introductory Biology Lab Research	Stegenga	None	(1)	Gateway course
103	How Cells Function	Garland; Ott; Ott;TBA	101	(3)	Fundamental
104	Biodiversity	Claytor; Evans	101	(3)	Fundamental
105L	Biological Research Skills	Hastie; Nevil	101/L	(3)	Fundamental
117	Considering Health Professions	Garland	None	(1)	For all pre-health students. Does not count for the major.
119	Experiencing Health Professions	Zomorodi	117	(3)	For all pre-health students. Does not count for the major.
220	Molecular Genetics	Shemer; Peifer; Zwemer	103	(3)	Intermediate Core
220H	Molecular Genetics Honors	Bloom	103	(3)	Intermediate Core
220H	Molecular Genetics Honors	Kieber	103	(3)	Intermediate Core
240	Cell Biology	Rogers & Slep; TBA	103	(3)	Intermediate Core
250	Evolutionary Biology	Willett	104	(3)	Intermediate Core

Cell and Developmental Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
408H	Embryology to Biomedical Frontiers Honors	Shiau	103+104+220+240	(3)	
431	Biological Physics	Hill	Phys 118, 119	(3)	QBiol; Crosslisted with phys 405
440	Stem Cell Biology	Gordon	103+104+(220 or 240)	(3)	
447	Cell Biology: Beyond Core Basics	P. Maddox	103+104+240. Co-requisite 447L	(1)	
447L	Cell Biology Lab	P. Maddox	Co-requisite 447	(3)	Counts as lab.
449	Immunology	Garland	103+104+240	(3)	
514H	Evolution & Development (Honors)	D. Pfennig	103+104+240	(3)	
543H	Cardiovascular Biology	Bautch	103+104+220+240	(3)	
590-002	Cytoskeleton	Rogers & Slep	103+104+240. Co-requisite 590L	(3)	
590L- 401	Cytoskeleton Lab	Rogers & Slep	Co-requisite 590	(1)	Counts as lab.
545	Exploring Brain, Gut, and Immunity	Shiau	103+104+240	(3)	

Genetics, Molecular Biology and Biochemistry

Number	Course	Instructors	Prerequisites	Credit hours	Comments
221	Seafood Forensics	Bruno	Pre- 101;Coreq 221L	(3)	CURE Lab.
221L	Seafood Forensics Lab	Bruno	Co-requisite 221	(1)	
223L	Molecular Genetics Research Lab	Nagpal & Reed	permission of the instructor	(2)	Lab (but not a full elective w/L)
227L	Communicating Genome Sci	Nevil	101; 103 (220 is recommended)	(3)	Lab; Counts as comm beyond carolina
425	Human Genetics	Copenhaver & Sekelsky	103+104+220	(3)	
430/430H	Introduction to Biochemistry	Hogan; Erie	101, chem262/262H	(3)	Crosslisted w/ chem 430
454	Evolutionary Genetics	Johri	103+104	(3)	QBiol
502	Genome Editing Technologies	Nimchuk	103+104+220	(3)	
621	Principles of Genetic Analysis	Copenhaver & Sekelsky	220	(3)	Crosslisted with gnet 621

Physiology, Neurobiology, Microbiology, and Disease

Number	Course	Instructors	Prerequisites	Credit hours	Comments
252	Human Anatomy and Physiology	Johnson; Shemer; TBA	101/L	(3)	
252L	Human Anatomy and Physiology Lab	Johnson	101L, co-req 252	(1)	Lab
290-001	Frontiers of Fermentation	C. Jones	103+104	(3)	
290L-401	Frontiers of Fermentation Lab	C. Jones	Co-req 290	(1)	Lab
408H	Embryology to Biomedical Frontiers Honors	Shiau	103+104+220+240	(3)	
421	Bacterial Genetics	Matthysse	103+104+220/mcro251 /bio 204	(3)	
421L	Bacterial Genetics Lab	Matthysse	Pre or co-req with 421	(1)	
422	Microbiology	Parker	103+104+220	(3)	Counts as organismal when 422/L are completed
422L	Microbiology Laboratory	Burch	Pre- or co- 422	(1)	
437	Neural Engineering	Yang	103+104	(3)	QBiol
449	Immunology	Garland	103+104+240	(3)	
450	Neurobiology	Chen	103+104+240	(3)	
455	Behavioral Neuroscience	Burmeister	103+104+240	(3)	
523	Sex Differences in Human Disease	Conlon	103+104	(3)	
545	Exploring Brain, Gut, and Immunity	Shiau	103+104+240	(3)	

Zoology and Animal Physiology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
278	Animal Behavior	C. Lohmann	101/L	(3)	Counts as organismal, when 278 + 278L are completed
278L	Animal Behavior lab	C. Lohmann	Pre- or co- 278	(1)	
350	Oceanography	Arnosti; Alperin		(3)	Crosslisted with emes 401
456	Marine Phytoplankton	Marchetti		(3)	Crosslisted with emes 444

Quantitative Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
431	Biological Physics	Hill	Phys 118, 119	(3)	QBiol; Crosslisted w/ phys 405
437	Neural Engineering	Yang	103+104	(3)	QBiol
454	Evolutionary Genetics	Johri	103+104	(3)	QBiol
525	Analysis of Sequence-Based Functional Genomics	Furey	103+104+220; comp; stor. Corequisite 525L	(3)	
525L	Analysis of Sequence-Based Functional Genomics Lab	Furey	Corequisite 525	(1)	QBiol lab
553	Mathematical & Computational Models in Biology	Servedio	103+104; math231; math232/stor155/stor120; Co-req 553L	(3)	QBiol lab; Crosslisted with Math 553
562	Statistics for Environmental Scientists	Feng	Stor 155	(4)	QBiol lab

Ecology, Botany and Evolution

Number	Course	Instructors	Prerequisites	Credit hours	Comments
272	Local Flora	Fuller	101/L	(3)	Counts as organismal, when 272 + 272L are completed
272L	Local Flora	Fuller	101/L	(1)	
454	Evolutionary Genetics	Johri	103+104	(3)	QBiol
464	Global Change Ecology	Riddell	103+104+260	(3)	
465	Global Biodiversity	Hurlbert	103+104+260	(3)	
469	Behavioral Ecology	Pfennig K.	103+104	(3)	
514H	Evolution & Development (Honors)	D. Pfennig	103+104	(3)	
562	Statistics for Environmental Scientists	Feng	Stor 155	(4)	QBiol lab
639	Seminar in Plant Molecular and Cell Biology	Reed	permission of the instructor	(2)	

Teaching, Research and Others

Number	Course	Instructors	Prerequisites	Credit hours	Comments
291	Teaching apprentice in Biology	Faculty members	GPA biology 3.0 or higher; Permission of the instructor	(1)	Does not count for the major
292	Teaching assistant in Biology	Faculty members	GPA biology 3.0 or higher; Permission of the instructor	(2)	Does not count for the major
293	Internship in Biology	Zwemer	Permission of the instructor. For majors only	(3)	Does not count for the major.
295	Educational and Social Research in Biology	Faculty members		(1-3)	Does not count towards the major
395/495	Undergraduate Research	Faculty members	Intermediate core (e.g. 220). Permission of the instructor. For majors only.	(1-3)	Counts Research & discovery.
395H	Undergraduate Research (Honors)	Zwemer	GPA 3.0 or higher; Intermediate core (e.g. 220). Permission of the instructor. For majors only.	(1-3)	Counts as Research & discovery.
409L	Printmaking and Biology	Goldstein & Grabowski	Co-req with arts 409H; a 200-level course in Biol or in Studio Art; permission of instructor	(1)	Does not count for the major.
692H	Senior Honors Thesis	Nevil	395; Permission of the instructor; candidates for degrees with Honors. Cumulative and biology GPA = 3.3 or above.	(3)	Seniors majors only