Courses offered by the Biology Department during the fall semester of 2020

Please note that this list does NOT replace the undergraduate bulletin or Connect Carolina. Check both for the courses you find interesting and make sure you understand all the details. Connect Carolina should be your primary source for course listings. Classes and instructors are subject to change. 600 level courses are open to exceptionally advanced undergraduates, with a special permission from the instructor. You can accumulate 3 hours of different 600-level courses for them to count as a biology elective

Introductory Courses

Number	Course	Instructors	Prereq.	Credit hours	Comments
64	**FYS- Modeling fluid flow through and around organs and organisms**	Miller		(3)	Does not count for the major
89	**FYS- Genes & Determinism**	Hibshman & Murray		(3)	Does not count for the major
101	**Principles of Biology**	Evans; Garland		(3)	Gateway course
101H	**Principles of Biology (Honors)**	Eylers		(3)	Gateway course
101L	**Introductory Biology Lab**	Stegenga		(1)	Gateway course
102L	**Introductory Biology CURE Lab- Hunting for Microbes**	Stegenga		(1)	CURE class. Counts same as 101L. Counts as EE
115	**Reasoning with Data: Navigating a Quantitative World**	Vision		(3)	Does not count for the major
117	**Considering Health Professions**	TBA		(1)	Does not count for the major
190L	**Molecular Genetics Bootcamp**	Sojren & Jones		(1)	Does not count for the major

Core Courses

Number	Course	Instructors	Prerequisites	Credit hours	Comments
201	**Ecology and Evolution**	Evans & Burch (both sections)	101+ chem 101 or 102 (grade C or better)	(4)	
202	**Molecular Biology and Genetics**	Garland; Garland; TBA	101+ chem 101 or 102 (Grade C or better)	(4)	
202H	**Molecular Biology and Genetics (Honors)**	Matson	101+ chem 101 or 102 (Grade C or better)	(4)	
205	**Cellular and Developmental Biology**	Peifer & Werner; Rogers & Nimchuck	202 (grade C- or better)	(4)	

Cell and Developmental Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
217	**Physician's Garden**	A. Jones	101	(3)	Transfer students only
431	**Biological Physics**	Falvo	Phys 118, 119	(3)	QBiol; Crosslisted with phys 405
440	**Stem Cell Biology**	Gordon	205	(3)	
443	**Developmental Biology**	McKay	205	(3)	
446	**Unsolved Problems in Cell Biology**	Harris	205	(3)	
450	**Neurobiology**	Dickerson & Hige		(3)	
514H	**Evolution & Development (Honors)**	D. Pfennig	201;202;205	(3)	
542	**Light Microscopy**	P. Maddox & Bloom	205 + permission of the instructor	(3)	QBiol
543H	**Cardiovascular Biology (Honors)**	Bautch	205	(3)	
544L	**Lab in Diseases of the Cytoskeleton**	Slep & Rogers	205; 430	(3)	
680-2	**Modern experimental approach in zebrafish to study human-relevant biology and disease**	Shiau	Permission of the instructor	(1)	

Neurobiology and Behavior

Number	Course	Instructors	Prerequisites	Credit hours	Comments
252	**Human Anatomy and Physiology**	Shemer; TBA	101/L	(3)	
252L	**Human Anatomy and Physiology Lab**	Johnson	101L, co-req 252	(1)	Lab
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)	
450	**Neurobiology**	Dickerson & Hige		(3)	

Physiology, Microbiology, and Disease

Number	Course	Instructors	Prerequisites	Credit hours	Comments
252	**Human Anatomy and Physiology**	Shemer; TBA; TBA	101/L	(3)	
252L	**Human Anatomy and Physiology Lab**	Johnson	101L, co-req 252	(1)	Lab
422	**Microbiology**	Matthysse	202	(3)	Counts as organismal when 422 & L are completed
422L	**Microbiology Laboratory**	Matthysse	Permission of the instructor	(1)	
543H	**Cardiovascular Biology (Honors)**	Bautch	205	(3)	
680-2	**Modern experimental approach in zebrafish to study human-relevant biology and disease**	Shiau	Permission of the instructor	(1)	

Genetics, Molecular Biology and Biochemistry

Number	Course	Instructors	Prerequisites	Credit hours	Comments
221	**Seafood Forensics**	Bruno	Pre- 101;Coreq 221L	(3)	CURE Lab. Counts as EE
221L	**Seafood Forensics Lab**	Bruno	Co-requisite 221	(1)	
425	**Human Genetics**	Copenhaver & Sekelsky	202	(3)	
427	**Human Diversity and Population Genetics**	C. Jones	201, 202	(3)	
430/430H	**Introduction to Biochemistry**	TBA	101, chem260/262H	(3)	Crosslisted with chem 430
434	**Molecular Biology**	Matera; Matson	202 & chem 261	(3)	
454	**Evolutionary Genetics**	Matute	201 & 202	(3)	QBiol
537	**Biotechnology and Synthetic Biology**	Reed	202	(3)	
621	**Principles of Genetic Analysis I**	Copenhaver, Ahmed, Sekelsky	202 and permission of the instructor	(3)	Crosslisted with gnet 621
639	**Seminar in Plant Molecular and Cell Biology**	Kieber	permission of the instructor	(1)	

Plant Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
217	**Physician's Garden**	A. Jones	101	(3)	Transfer students only
272	**Local Flora**	Weakley & Poindexter	101/L	(4)	Lab; Counts as organismal
639	**Seminar in Plant Molecular and Cell Biology**	Kieber	permission of the instructor	(1)	

Ecology and Evolution

Number	Course	Instructors	Prerequisites	Credit hours	Comments
256	**Mountain Biodiversity**	TBA		(4)	Crosslisted with enec 256. Taught at Highlands, NC
272	**Local Flora**	Weakley	101/L	(4)	Lab; Counts as organismal
452	**Marine Microbial Symbioses**	Septer		(3)	Crosslisted with masc 446
454	**Evolutionary Genetics**	Matute	201 & 202	(3)	QBiol
461	**Fundamentals of Ecology**	Tucker	201	(4)	Lab; Crosslisted with enec 461
465	**Global Biodiversity & Macroecology**	Hurlbert	201	(4)	QBiol lab
469	**Behavioral Ecology**	Pfennig K.	201	(3)	
474	**Evolution of Vertebrate Life**	Sockman	201 or 202	(3)	Counts as organismal when 474 and 474L are completed
474L	**Evolution of Vertebrate Life Lab**	Johnson	Pre- or co-474	(1)	
514H	**Evolution & Development (Honors)**	D. Pfennig	201;202;205	(3)	
562	**Statistics for Environmental Scientists**	Umbanhowar	Stor 155	(4)	QBiol lab
659	**Seminar in Evolutionary Biology**	Servedio	Permission of the instructor	(2)	
669- 001	**Seminar in Ecology**	Mitchell	201	(1)	
669- 002	**Seminar in Ecology**	Waitt	201	(2)	

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		(3)	Crosslisted with masc401
452	**Marine Microbial Symbioses**	Septer		(3)	Crosslisted with masc 446
474	**Evolution of Vertebrate Life**	Sockman	201 or 202	(3)	Counts as organismal when 474 + 474L are completed
474L	**Evolution of Vertebrate Life Lab**	Johnson	Pre- or co- 474	(1)	

Quantitative Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
226	**Mathematical Methods for Quantitative Biology**	Taylor	201 or 202; Math 232 corequisite 226L	(3)	QBiol lab
226L	**Mathematical Methods for Quantitative Biology- lab**	Taylor	corequisite 226	(1)	
431	**Biological Physics**	Falvo	Phys 118, 119	(3)	QBiol; Crosslisted with phys 405
454	**Evolutionary Genetics**	Matute	201 & 202	(3)	QBiol
465	**Global Biodiversity & Macroecology**	Hurlbert	201	(4)	QBiol lab
525	**Analysis and Interpretation of Sequence-Based Functional Genomics**	Furey	Corequisite 525L; Pre- biol 202, comp 110/biol116, stor 155	(3)	QBiol
525L	**Analysis and Interpretation of Sequence-Based Functional Genomics Lab**	Furey	Corequisite 525	(1)	QBiol Lab
534	**Mathematical Modeling in the Life Sciences**	Mitran	Math 383	(3)	QBiol; crosslisted with math 564
542	**Light Microscopy**	P. Maddox & Bloom	205 + permission of the instructor	(3)	QBiol
562	**Statistics for Environmental Scientists**	Umbanhowar	Stor 155	(4)	QBiol lab
680-1	**Advanced Seminar: Analyzing Biological Data Using Deep Learning**	Hedrick	Permission of the instructor	(1)	

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**	Coble	201 or 202; Permission of the instructor. For majors only	(3)	Does not count for the major. Counts as EE
395/495	**Undergraduate Research**	Faculty members	201 or 202; Permission of the instructor. For majors only	(1-3)	Counts as a lab if taken for 6 hr. or 3hr + 692H. Counts as EE
395H	**Undergraduate Research (Honors)**	Shemer	201 or 202 and GPA 3.0 or higher; Permission of the instructor	(1-3)	Counts as a lab if taken for 6 hr. or 3hr + 692H. Counts as EE
409L	**Printmaking and Biology**	Goldstein& Grabowski	Co-req with arts409H; a 200-level course in Biol/ Studio Art; permission of instructor	(1)	Does not count for the major. Counts as EE
410	**Principles and Methods of Teaching Biology**	Coble	202 and 201/205; Permission of the instructor	(4)	Counts as EE
680-1	**Advanced Seminar: Analyzing Biological Data Using Deep Learning**	Hedrick	Permission of the instructor	(1)	
692H	**Senior Honors Thesis**	A. Maddox	395; Permission of the instructor; candidates for degrees with Honors. Cumulative and biology GPA = 3.3 or above.	(3)	Seniors majors only