

Courses offered by the Biology Department during the spring semester of 2022

Please note that this list does NOT replace Connect Carolina. 600-level courses are mainly geared towards graduate students and are open to exceptionally advanced undergraduates, with a special permission from the instructor

EE= Experiential Education requirement Organismal= Organismal structure and diversity requirement

Introduction Courses and First-Year Seminars

Number	Course	Instructors	Prerequisites	Credit hours	Comments
53	Biotechnology: GMO to the Sequence of the Human Genome	J. Dowan		(3)	FYS. Does not count for the major
101	Principles of Biology	Evans; Hogan	None	(3)	Gateway course
101L	Introductory Biology Lab	Stegenga	None	(1)	Gateway course
118	Pursuing Health Professions (<i>not counting towards the major</i>)	Garland & TBA	None	(1)	For all pre-health students. Does not count for the major

Core Courses

Number	Course	Instructors	Prerequisites	Credit hours	Comments
201	Ecology and Evolution	Evans & Vision; Evans & Vision	101+ chem 101 or 102 (Grade C or better)	(4)	
202	Molecular Biology and Genetics	Zwemer; Ott & Slep; Zwemer	101+ chem 101 or 102 (Grade C or better)	(4)	
205	Cellular and Developmental Biology	Garland & Gordon; Garland	202	(4)	
205H	Cellular and Developmental Biology- Honors	Godstein & Shiau	202	(4)	

Research, Teaching, and Professional Development

Number	Course	Instructors	Prerequisites	Credit hours	Comments
291/292	Teaching Apprentice/Teaching Assistant in Biology	Faculty members	GPA biology 3.0 or higher; Permission of the instructor	(1)	Does not count for the major
293	Internship in Biology	TBA	201 or 202; Permission of the instructor	(3)	Does not count for the major; Counts as EE
296	Directed Reading in Biology	Faculty members	Permission of the instructor	(1-3)	Does not count for the major
395/495 and 395H	Undergraduate Research in Biology	Faculty members	201 or 202; Permission of the instructor	(1-3)	Counts as a lab if taken for 6 hr. or 3hr +biol 692H; Counts as EE; Majors only
635	Careers in Biotechnology	Salmeron		(1)	Does not count for the major
692H	Senior Honors Thesis in Biology	A. Maddox	395; Permission of the instructor	(3)	Seniors and majors only

Genetics, Molecular Biology, and Biochemistry

Number	Course	Instructors	Prerequisites	Credit hours	Comments
430	Introduction to Biochemistry	B. Hogan	101, chem262 or 262H	(3)	Cross-listed as chem 430
436H	Plant Genetics, Development, and Biotechnology Honors	Reed	202 or 271	(3)	
454	Evolutionary Genetics	Matute	201 & 202	(3)	QBiol
490-3	Advanced Topics in Biology: Good Genes	Zwemer	C or higher in 202	(3)	
590	The Genome Editing Revolution	Nimchuk	202 & Permission of the instructor	(3)	
625	Seminar in Genetics	C. Jones, Copenhaver & Sekelsky	Permission of the instructor	(2)	Cross-listed as gnet 625

Human Physiology, Microbiology, and Disease

Number	Course	Instructors	Prerequisites	Credit hours	Comments
252	Human Anatomy and Physiology	Ott; Shemer; Ott	101/L	(3)	
252H	Human Anatomy and Physiology- Honors	Johnson	101/L	(3)	
252L	Human Anatomy and Physiology Lab	Johnson	101L, co-req 252	(1)	
253	Advanced Human Anatomy and Physiology (<i>not counting towards the major</i>)	Hastie; Hastie	252; co-req 253L	(3)	Does not count for the major
253L	Advanced Human A&P Lab (<i>not counting towards the major</i>)	Hastie	252L; co-req 253	(1)	Does not count for the major
402	Infectious Disease in the Developing World	Duronio & Peifer	202 & 205	(3)	
426H	Biology of Blood Diseases- Honors	Church	205	(3)	
445	Cancer Biology	Shemer	205	(3)	
449	Introduction to Immunology	Garland	205	(3)	
453	Molecular Control of Metabolism and Metabolic Disease	R. Dowan	202; chem 261	(3)	
490-1	Biology of Aging	Ahmed	205	(3)	
490-2	Epidemic Diseases in History	Matthysse	202; 422/mcro 251	(3)	

Cell and Developmental Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
445	Cancer Biology	Shemer	205	(3)	
447	Advanced Cell Biology	P. Maddox	205 (C+ or higher); co-req 447L	(3)	
447L	Advanced Cell Biology Lab	P. Maddox	205; co-req 447	(1)	
545	Exploring Brain, Gut, and Immunity	Shiau	205	(3)	

Zoology and Animal Physiology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
278	Animal Behavior	C. Lohmann	101 and 101L	(3)	Counts as organismal, when 278 & 278L are completed
278L	Animal Behavior lab	C. Lohmann	Pre- or co- 278	(1)	
350	Oceanography	Teske	None	(3)	Cross-listed as envr 417, geol 403, masc 401
451	Comparative Physiology	Hedrick & Kier	101/L; phys114/118; phys115/119	(3)	Counts as organismal when 451 & 451L are completed
451L	Comparative Physiology lab	Hedrick & Kier	Pre- or co- 451	(1)	
457	Marine Biology	Septer			Cross-listed as masc 442
475	Biology of Marine Animals	K. Lohmann	101; co-req 475L	(3)	Counts as organismal, when 475 & 475L are completed
475L	Biology of Marine Animals Lab	K. Lohmann	101L; co-req 475	(1)	
476	Avian Biology	Hurlbert & Sockman	101; co-req 476L	(3)	Counts as organismal, when 476 & 476L are completed
476L	Avian Biology Lab	Hurlbert & Sockman	101L; co-req 476	(1)	
657	Biological Oceanography	TBA	Permission of the instructor	(4)	Does not count as a lab. Cross-listed as masc 504

Quantitative Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
214H	Mathematics of Evolutionary Processes Honors	Servedio	Math 231	(3)	QBiol
528	Quantitative personalized genomics	Laederach	Corequisite 528L; Pre- biol 202, comp 116/biol226	(3)	QBiol w/L
528L	Quantitative personalized genomics Lab	Laederach	Corequisite 528	(1)	
554	Introduction to Computational Neuroscience	Taylor	201/202; math 231; biol 226/comp 116/comp110/instructor permission	(3)	Qbiol
Comp 555	Bioalgorithms	McMillan	Comp 401, 410; math 231/553/biol 525	(3)	QBiol

Neurobiology and Behavior

Number	Course	Instructors	Prerequisites	Credit hours	Comments
252	Human Anatomy and Physiology	Ott; Shemer; Ott	101/L	(3)	
252H	Human Anatomy and Physiology- Honors	Johnson	101/L	(3)	
252L	Human Anatomy and Physiology Lab	Johnson	101L, co-req 252	(1)	
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)	
547	Synaptic Plasticity: Analysis of Primary Literature	Hige		(3)	
554	Introduction to Computational Neuroscience	Taylor	201/202; math231; biol226/comp110/comp116/inst. permission	(3)	Qbiol

Plant Biology

Number	Course	Instructors	Prerequisites	Credit hours	Comments
271	Plant Biology	TBA	101 and 101L; corequisite 271L	(3)	Counts as organismal when 271 & 271L are completed
271L	Plant Biology- Lab	TBA	101 and 101L; corequisite 271	(1)	
436H	Plant Genetics, Development, and Biotechnology Honors	Reed	202 or 271	(3)	

Ecology and Evolution

Number	Course	Instructors	Prerequisites	Credit hours	Comments
255H	The Evolution of Extraordinary Adaptations Honors	Willet	Pre- 101 (B or higher); Coreq 255L	(3)	Counts as EE
255HL	The Evolution of Extraordinary Adaptations Lab Honors	Willet	Co-requisite 255	(1)	
471	Evolutionary Mechanisms	Kingsolver & D. Pfennig	201 and 202; corequisite 471L	(3)	Counts as organismal when 471 & 471L are completed
471L	Evolutionary Mechanisms- Lab	Kingsolver & D. Pfennig	corequisite 471	(1)	
490-4	Advanced Topics in Biology: Major Events in the Evolution of Life	Gensel	BIOL 101 or permission of the instructor	(3)	
568	Disease Ecology and Evolution	Mitchell	201; math 231	(3)	
659	Seminar in Evolutionary Biology	Kingsolver	Permission of the instructors	(2)	

For additional information on research and honors thesis, please check the Biology website