

**B. A. Biology (BIO)**

With\*\* or Without Teacher Licensure Option

*College: Arts & Science***DEGREE REQUIREMENTS**

Course requirements for all UNCW degrees include: (1) Basic Studies, (2) specific major requirements, and (3) sufficient elective hours for a combined total of a minimum of 124 hours.

**(1) BASIC STUDIES** (45 semester hours)

See Basic Studies sheet and/or information on the WEB at <http://www.uncw.edu/uc/basic/basic.html>

**(2) MAJOR REQUIREMENTS - BIO** (Minimum 51 hours)

Check when complete:

- \*+<sup>1</sup>BIO 201 Principles of Biology: Cells (4)  
 \*+<sup>1</sup>BIO 202 Principles of Biology: Biodiversity (4)  
 <sup>2</sup>BIO 495 Seminar (1-3) Prerequisite: Junior or senior standing and consent of instructor  
 Or BIOL 495 (Meets **Oral Communication Competency Requirement**)  
 \*+CHM 101 General Chemistry (4)  
 \*+CHM 102 General Chemistry (4) Prerequisite: CHM 101

Choose a minimum of 34 hours of BIO courses numbered above 299

- <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_  
 <sup>2</sup>BIO \_\_\_\_\_

**Computer Competency Requirement:** Two of the following: BIO <sup>2</sup>335, <sup>2</sup>345, <sup>2</sup>366, <sup>2</sup>488, and <sup>2</sup>495

**\*\*Teacher Licensure:** In addition to completing the requirements for a degree in biology or marine biology and the other requirements of the Teacher Education Program, the following courses are required for licensure: BIO 160 or BIO 335 and BIOL 335, BIO 190 or 425, BIO 315, BIO 325 and BIO 325L or BIO 340 or BIO 345 and BIOL 345, BIO 366 and BIOL 366; GLY 101 or 150, and PHY 101 or 105. Additionally to earn Secondary Science Licensure students must select at least 21 hours from 3 physical science areas. A minimum of 2 courses from each discipline, including PHY 260, is required. For information on the Teacher Education Program admissions criteria and the courses required for licensure in North Carolina, see the Watson School of Education section of the catalogue or the Watson School of Education WEB site. Students planning to pursue licensure should apply to the Watson School of Education as soon as admissions requirements are met (typically in the sophomore year) and plan their programs in regular consultation with their advisors. Teacher licensure requirements are established at the state level and may be changed by the state at any time.

<sup>1</sup> *Students may declare a major in BIO after completion of 24 hours and a GPA of 2.50 or higher in two BIO lab courses, preferably BIO 201 or 202.*

<sup>2</sup> *A "C" (2.00) or better average is required in all BIO courses above 200*

\* *These courses either include a lab or require a corequisite lab*

+ *May also be used to satisfy Basic Studies requirements*

**(3) ELECTIVES**

\_\_\_\_\_ Elective hours to equal a minimum of 124 hours

**Requirements to declare PRE-BIO:** Completion of 24 semester hours.

**Requirements to declare BIO:** Completion of two BIO lab courses, preferably BIO 201 or 202, with an average of 2.50 or higher.

For further information see the BIO WEB site: <http://www.uncw.edu/bio> and [http://www.uncw.edu/ed/deglicenpdfs/ps\\_sc.pdf](http://www.uncw.edu/ed/deglicenpdfs/ps_sc.pdf)

## BIOLOGY COURSES

- BIO 105.** **Concepts of Modern Biology** (4)  
**BIO 140.** **Human Physiology** (3) **BIOL 140. Lab** (1)  
**BIO 150.** **Humans and Ecology** (3)  
**BIO 160.** **Genetics in Human Affairs** (3)  
**BIO 170.** **Biology of the Sea** (3)  
**BIO 180.** **Plants and the Environment** (3)  
**BIO 190.** **Microbes and Human Society** (3)  
*BIO 201 and 202. Core courses for BIO majors*
- BIO 201.** **Principles of Biology: Cells** (4)  
**BIO 202.** **Principles of Biology: Biodiversity** (4)  
**BIO 240.** **Human Anatomy and Physiology I** (4)  
 Prerequisites: BIO 201 and CHM 101  
**BIO 241.** **Human Anatomy and Physiology II** (4)  
 Prerequisite: BIO 240  
**BIO 246.** **Microbiology of Human Diseases** (4)  
 Prerequisite or corequisite: BIO 240  
**BIO 291.** **Introductory Research** (1-3) Prerequisite:  
 Freshman or sophomore standing and consent of  
 instructor and department chair  
**BIO 311.** **Plant Morphology** (4) Prerequisite: BIO 201, 202  
**BIO 312.** **Marine Botany** (4) Prerequisite: BIO 201, 202  
**BIO 313.** **Marine Phycology** (4) Prerequisite: BIO 340  
**BIO 314.** **Mycology** (3) **BIOL 314. Lab** (1) Prerequisite:  
 BIO 201, 202  
**BIO 315.** **Comparative Vertebrate Anatomy** (4) Prerequisite:  
 BIO 201, 202  
**BIO 316.** **Vertebrate Embryology** (4) Prerequisite: BIO 201, 202  
**BIO 318.** **Invertebrate Zoology** (4) Prerequisite: BIO 201, 202  
**BIO 320.** **Immunology** (3) Prerequisite: BIO 201, 202  
**BIO 325.** **Molecular Biology of the Cell** (3) **BIOL 325. Lab**  
 (1) Prerequisite: BIO 201, 202 and CHM 211  
**BIO 335.** **Genetics** (3) **BIOL 335 Lab** (1)  
 Prerequisite: BIO 201, 202  
**BIO 340.** **Plant Physiology** (4) Prerequisite: BIO 201, 202 and  
 CHM 102  
**BIO 345.** **Animal Physiology** (3) **BIO 345L. Lab** (1)  
 Prerequisite: BIO 201, 202 and CHM 102  
**BIO 356.** **Vertebrate Natural History** (4)  
 Prerequisite: BIO 201, 202  
**BIO 357.** **Ichthyology** (3) **BIOL 457. Lab** (1)  
 Prerequisite: BIO 201, 202  
**BIO 358.** **Marine Mammals** (3) Prerequisite: BIO 201, 202  
**BIO 362.** **Marine Biology** (4) Prerequisite: BIO 201 and 202  
**BIO 366.** **Ecology** (3) **BIOL 366. Lab** (1)  
 Prerequisite: BIO 201 and 202  
**BIO 368.** **Behavioral Ecology** (3) Prerequisite: BIO 201, 202  
**BIO 371.** **Human Fungal Diseases** (1) Prerequisite: BIO 201, 202  
**BIO 380.** **Mariculture** (3) Prerequisite: BIO 335 w/ lab or BIO  
 362 or BIO 366 w/ lab  
**BIO 415.** **Vertebrate Histology** (4) Prerequisite: BIO 201, 202  
**BIO 425.** **Microbiology** (4) Prerequisite: BIO 201, 202 and  
 junior status  
**BIO 430.** **(ANT 430) Evolutionary Biology** (3)  
 Prerequisite: BIO 335  
**BIO 434.** **Coastal Marine Ecology** (3) Prerequisite: BIO 366  
**BIO 440.** **Developmental Biology** (3) Prerequisite: BIO 335  
**BIO 452.** **Mammalogy** (4) Prerequisite: BIO 201, 202  
**BIO 455.** **Field Methods in Marine Mammology** (3)  
 Prerequisite: BIO 201, 202 and consent of instructor  
**BIO 456.** **Ornithology** (4) Prerequisite: BIO 201, 202
- BIO 458.** **Fisheries Biology** (4) Prerequisite: BIO 366 or  
 consent of instructor  
**BIO 459.** **Endocrinology** (3) Prerequisites: BIO 201, 202  
 and CHM 212  
**BIO 460.** **Limnology** (3) **BIOL 460. Lab** (1)  
 Prerequisite: BIO 201, 202 and CHM 102 and  
 junior status  
**BIO 462.** **Deep Sea Biology** (3) Prerequisite: BIO 362  
**BIO 463.** **Coral Reef Ecology** (3) Prerequisite: BIO 325  
 or 345; BIO 362 or 366 or consent of instructor.  
**BIO 465.** **Biochemistry** (3) **BIOL 465. Lab** (1)  
 Prerequisite: BIO 201, 202; CHM 211 and junior  
 status  
**BIO 466.** **Conservation Biology** (3) Prerequisite: BIO 335,  
 366, and junior status  
**BIO 471.** **Phytoplankton** (4) Prerequisite: BIO 201, 202,  
 junior status or consent of instructor  
**BIO 474.** **Comparative Morphology of Vascular**  
**Plants** (4) Prerequisite: BIO 340  
**BIO 475.** **Plant Taxonomy** (4) Prerequisite: BIO 311  
**BIO 478.** **Global Environmental Problems** (3)  
 Prerequisite: BIO 201, 202 and CHM 101  
**BIO 480.** **Field Studies in Biology** (1-6)  
 Prerequisite: BIO 201, 202, and consent of  
 instructor (BIO 366 and credit in advanced zoology  
 or botany recommended)  
**BIO 482.** **Wildlife Ecology** (3) Prerequisite: 6 hrs upper  
 level BIO  
**BIO 483.** **Biology of Crustaceans** (3) **BIOL 483. Lab** (1)  
 Prerequisite: BIO 366  
**BIO 484.** **Methods in Biological Research** (1)  
 Prerequisites: BIO 201 and 202  
**BIO 485.** **Special Topics in Advanced Biology** (1-6)  
 Prerequisites: BIO 201 and 202  
**BIO 486.** **Advanced Topics in Mariculture** (3)  
 Prerequisite: BIO 201 and 202  
**BIO 487.** **(GLY 458/558) Introduction to Coastal**  
**Management** (4) Prerequisite: Junior standing or  
 consent of instructors  
**BIO 488.** **(EVS 488/588) Forensic Environmental Science** (3)  
 Prerequisite: CHM 102 or equivalent and junior  
 status  
**BIO 491.** **Directed Individual Study** (1-3) Prerequisite:  
 Overall GPA 2.00, junior or senior standing, and  
 consent of instructor, dept chair, and dean  
**BIO 493.** **Biology Laboratory Teaching Practicum** (1-4)  
 Prerequisites: Junior standing, consent of  
 instructor, and a 3.00 cumulative GPA.  
**BIO 495.** **Seminar** (1-3) Prerequisite: Junior or senior  
 standing and consent of instructor  
**BIO 498.** **Internship in Biological Sciences** (3-12)  
 Prerequisites: Junior or senior majors within the  
 Department of Biological Sciences, minimum  
 overall average of 2.00 and consent of instructor  
**BIO 499.** **Honors work in Biology** (2-3) Prerequisite:  
 Second semester junior or senior standing