

**Bachelor of Science (BS)**  
**Degree Code 205\***  
**Concentration Code 205A**

**Checksheet for Biology Majors**  
**ECOLOGY, EVOLUTION, & ENVIRONMENTAL**  
**BIOLOGY CONCENTRATION**

**I. GENERAL EDUCATION CURRICULUM..... 44**  
 Chemistry 1101-1110 and 1102-1120 fulfill the Science Inquiry Perspective. Math 1110 fulfills the Quantitative Literacy requirement.

**II. BIOLOGY MAJOR REQUIREMENTS (not including 12 s.h. counted in Area I, above)..... 66**  
**2.0 major GPA is required for graduation. Major GPA calculation will include all courses taken in the major department, plus any other courses under II. Minimum of 18 semester hours of courses taken to fulfill major requirements must be courses offered by Appalachian.**

- A. Biology Core Requirements: 8 semester hours (must be completed before taking any other biology courses)**  
 BIO 1801 \_\_\_\_ (4) Biological Concepts I (Co: CHE 1101)      **AND**      BIO 1802 \_\_\_\_ (4) Biological Concepts II (Pre: 1801 w/grade "C")
- B. Additional Required Biology Courses: 13 semester hours**  
 BIO 2400 \_\_\_\_ (3) Genetics (Pre: BIO 1801, CHE 1102, MAT 1025)      **OR**      BIO 2700 \_\_\_\_ (3) Human Gen (Pre: BIO 1802, CHE 1102, MAT 1025)  
 BIO 3302 \_\_\_\_ (4) Ecology      **AND**      BIO 3436 \_\_\_\_ (3) Introduction to Evolutionary Biology
- and** one of the following Senior Capstones: (Pre: Senior Standing; WID)  
 BIO 4501 \_\_\_\_ (3) Independent Research [CAP]      BIO 4700 \_\_\_\_ (3) Seminar in Biological Science [CAP]  
 BIO 4910 \_\_\_\_ (3) Capstone Internship in Biology [CAP]

**C. Ecology, Evolution, Environmental Concentration: 38 hours**  
*Courses may only meet one requirement. If a course is chosen in one area, it may not be used in another.*  
**\*\*\*\*Student MUST choose one Junior Writing [WID] course.\*\*\*\***

- Cellular/Subcellular or Anatomy & Physiology:** Choose one course (3-4 s.h.) from the following  
 BIO 2400 \_\_\_\_ (3) Genetics (Pre: BIO 1801, CHE 1102, MAT 1025)      BIO 2410 \_\_\_\_ (1) Genetics Laboratory (Pre/Co: BIO 2400/2700)  
 BIO 2600 \_\_\_\_ (3) Cell Biology (Pre: CHE 1102)      BIO 2610 \_\_\_\_ (1) Cell Bio Lab (Pre: MAT 1025; Pre/Co: BIO 2600)  
 BIO 2700 \_\_\_\_ (3) Human Gen (Pre: BIO 1802, CHE 1102, MAT 1025)      BIO 3301 \_\_\_\_ (3) Human Sys Phys [WID] (Pre: 1 sem org CHE;ENG2001)  
 BIO 3308 \_\_\_\_ (4) Microbiology (Pre: CHE 1102/1120)      BIO 3309 \_\_\_\_ (4) Developmental Biology  
 BIO 3314 \_\_\_\_ (4) Comparative Vertebrate Zoo [WID] (Pre:ENG2001)      BIO 3800 \_\_\_\_ (4) Molecular Bio [WID] (Pre: 1 sem org CHE; ENG 2001)  
 BIO 4555 \_\_\_\_ (4) Plant Physiology (Pre: CHE 1102/1120)      BIO 4563 \_\_\_\_ (3) Biology of Aging  
 BIO 4564 \_\_\_\_ (4) Microscopy      BIO 4568 \_\_\_\_ (4) Immunology (Pre: BIO 2400/2700)  
 BIO 4569 \_\_\_\_ (4) Invertebrate Zoology
- Evolution or Ecology or Environmental:** Choose two lab courses (8 s.h.) from the following  
 BIO 2000 \_\_\_\_ (4) Introduction to Botany      BIO 2001 \_\_\_\_ (4) Introduction to Zoology  
 BIO 4571 \_\_\_\_ (4) Plant/Insect Interactions in Terrestrial Ecosystems      BIO 4601 \_\_\_\_ (3) Animal Beh-Ethology [WID] (Pre: ENG 2001)
- Biodiversity:** Choose two courses (6-8 s.h.) from the following  
 BIO 2000 \_\_\_\_ (4) Introduction to Botany      BIO 2001 \_\_\_\_ (4) Introduction to Zoology  
 BIO 3304 \_\_\_\_ (3) Systematic Botany (Pre: BIO 2000)      BIO 3310 \_\_\_\_ (4) Marine Sciences  
 BIO 4551 \_\_\_\_ (3) Ornithology      BIO 4552 \_\_\_\_ (4) Entomology  
 BIO 4556 \_\_\_\_ (4) Mycology      BIO 4557 \_\_\_\_ (4) Ichthyology  
 BIO 4558 \_\_\_\_ (3) Taxonomy of the Fleshy Fungi      BIO 4559 \_\_\_\_ (3) Mammalogy  
 BIO 4560 \_\_\_\_ (3) Herpetology      BIO 4569 \_\_\_\_ (4) Invertebrate Zoology  
 BIO 4570 \_\_\_\_ (4) Parasitology
- Other Sciences: (18-21 s.h.) Courses from BIO, CHE, PHY, GLY or courses listed below may be chosen to bring total in AREA II.C. to 38 s.h.**  
 ANT 2230 \_\_\_\_ (3) Biological Anthropology      ANT 3120 \_\_\_\_ (3-6) Field Archeology (Pre: ANT 2221)  
 ANT 3200 \_\_\_\_ (3) Zooarcheology (Pre: ANT 2221)      GHY 1010 \_\_\_\_ (3) Intro to Physical Geography  
 GHY 2310 \_\_\_\_ (3) Map Interpret. & Map Making      GHY 3100 \_\_\_\_ (3) Weather & Climate (Pre: GHY 1010)  
 GHY 3110 \_\_\_\_ (3) Vegetation, Soils, & Landforms (Pre: GHY 1010)      GHY 3812 \_\_\_\_ (3) Introduction to GIS (Pre: GHY 2310, 2812)  
 GHY 4820 \_\_\_\_ (3) Geographical Hydrology (Pre: GHY 1010, 3100, 3110)      S D 3100 \_\_\_\_ (4) Principles of Agroecology

**D. Required Cognate Courses: 19 semester hours**  
**Chemistry**  
 CHE 1101/1110 \_\_\_\_ (4) Intro. Chemistry I & lab  
 CHE 1102/1120 \_\_\_\_ (4) Intro. Chemistry II & lab (Pre: CHE 1101)  
 CHE 2101/2203 \_\_\_\_ (4) Fund.of Organic Chem & Lab (Pre: CHE 1102/1120)

**Mathematics**  
 MAT 1110 \_\_\_\_ (4) Calc w/Analytic Geometry I (Pre: MAT 1025 w/C-)  
 STT 2810 \_\_\_\_ (3) Intro to Statistics (Pre: MAT 1010)

**III. MINOR (optional)**

Major Requirements that count in Gen Education:		
Quantitative Lit	MAT 1110	4 s.h.
Science Inquiry	CHE 1101/1110	4 s.h.
	CHE 1102/1120	4 s.h.
Total Major hrs:	78	
Gen Ed hrs:	- 12	
Net Major hrs:	66	

**IV. ELECTIVES (taken to a minimum of 128 hours for the degree)..... 18**  
**2 semester hours of free electives must be outside the major discipline. 128**