Bachelor of Science (BS)  Checksheet for Biology Majors
Degree Code 205*  ECOLOGY, EVOLUTION, & ENVIRONMENTAL
Concentration Code 205A  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 (Pre: BIO 1801 & 1802 required for all additional BIO courses)
BIO 2400 (3) Genetics (Pre: CHE 1102, MAT 1025)  OR  BIO 2700 (3) Human Gen (Pre: 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 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.***

1. Cellular/Subcellular or Anatomy & Physiology: Choose one course (3-4 s.h.) from the following
   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 3301 (4) Human Sys Phys [WID] (Pre: CHE2201/2101; ENG2001)
   BIO 3308 (4) Microbiology (Pre: CHE 1102/1120)  BIO 3309 (4) Developmental Biology
   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

2. Evolution or Ecology or Environmental: Choose two 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  BIO 4601 (4) Animal Behavior-Ethology

3. 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 (4) Systematic Botany (Pre: BIO 2000)  BIO 3310 (4) Marine Sciences
   BIO 4551 (4) Ornithology  BIO 4552 (4) Entomology
   BIO 4556 (4) Mycology  BIO 4557 (4) Ichthyology
   BIO 4558 (3) Taxonomy of the Fleshy Fungi  BIO 4559 (4) Mammalogy
   BIO 4560 (4) Herpetology  BIO 4569 (4) Invertebrate Zoology
   BIO 4570 (3) Parasitology

4. Other Sciences: (18-22 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) Cartographic Design & Analysis  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 (3) 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)

   Major Requirements that count in Gen Educ:
   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

III. MINOR (optional)

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.

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