

I. GENERAL EDUCATION CURRICULUM..... 44

Chemistry 1101/1110 & 1102/1120 fulfills Science Inquiry. Math 1110 fulfills Quantitative Literacy requirement.

II. MAJOR REQUIREMENTS (Not including 12 semester hours already counted in 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: BIO 1801 w/"C" or better)

B. Additional Required Biology Courses: 21 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 Genetics (Pre: CHE 1102; MAT 1025)  
BIO 2600 \_\_\_\_ (3) Cell Biology (Pre: CHE 1102)  
BIO 2012 \_\_\_\_ (3) Introduction to Evolutionary Biology  
BIO 3800 \_\_\_\_ (4) Molecular Biology [WID] (Pre: CHE 2201 or 2101; RC 2001)

Choose one of the following: (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]  
BIO 4519 \_\_\_\_ (3) Biology Honors Thesis [CAP] (Pre: BIO 4518 w/min B)

Choose one of the following:

BIO 3301 \_\_\_\_ (4) Human Sys Phys [WID] (Pre: CHE 2201 or 2101; RC 2001)  
BIO 3314 \_\_\_\_ (4) Comparative Vertebrate Zoo [WID] (Pre: RC 2001)  
BIO 4555 \_\_\_\_ (4) Plant Physiology (Pre: CHE 1102 & 1120; Sr. standing)

Choose one of the following:

BIO 2410 \_\_\_\_ (1) Genetics Lab (Pre/Co: BIO 2400 or 2700)      OR      BIO 2610 \_\_\_\_ (1) Cell Biology Lab (Pre: MAT 1025; Pre/Co: Bio 2600)

C. Biology Electives in the Areas (15 semester hours) – Students may not count a course more than once.

1. Evolution/Ecology or Biodiversity Electives: Choose one (3-4 hours)

BIO 2000 \_\_\_\_ (4) Introduction to Botany  
BIO 2001 \_\_\_\_ (4) Introduction to Zoology  
BIO 3302 \_\_\_\_ (4) Ecology  
BIO 3304 \_\_\_\_ (4) Systematic Botany (Pre: BIO 2000)  
BIO 3312 \_\_\_\_ (3) Environmental Studies [WID] (Pre: RC 2001)  
BIO 3313 \_\_\_\_ (4) Global Change Ecology [WID] (Pre: RC 2001)  
BIO 3315 \_\_\_\_ (3) Conservation Biology [WID] (Pre: RC 2001)  
BIO 3320 \_\_\_\_ (3) Air Pollution Eff on Plants & People (Pre: Jr stdg)  
BIO 4240 \_\_\_\_ (4) Aquatic Biology (Pre: BIO 3302; Sr. standing)  
BIO 4551 \_\_\_\_ (4) Ornithology (Pre: Sr. standing)  
BIO 4552 \_\_\_\_ (4) Entomology (Pre: Sr. standing)  
BIO 4556 \_\_\_\_ (4) Mycology (Pre: Sr. standing)  
BIO 4557 \_\_\_\_ (4) Ichthyology (Pre: Sr. standing)  
BIO 4558 \_\_\_\_ (3) Taxonomy of the Fleshy Fungi (Pre: Sr. standing)  
BIO 4559 \_\_\_\_ (4) Mammalogy (Pre: Sr. standing)  
BIO 4560 \_\_\_\_ (4) Herpetology (Pre: Sr. standing)  
BIO 4569 \_\_\_\_ (4) Invertebrate Zoology (Pre: Sr. standing)  
BIO 4571 \_\_\_\_ (4) Plant/Insect Interactions in Trstl Ecosys (Pre: Sr. stdg)  
BIO 4575 \_\_\_\_ (4) Ecotoxicology [CAP] (Pre: CHE 2201/2101; WID; Sr. stdg)  
BIO 4601 \_\_\_\_ (4) Animal Behavior-Ethology (Pre: Sr. standing)

2. Cellular/Subcellular or Anatomy & Physiology Electives: Choose 11-12 s.h. not chosen above to bring total hours in AREA II-C to 15 s.h.

BIO 2410 \_\_\_\_ (1) Genetics Lab (Pre/Co: BIO 2400 or 2700)  
BIO 2610 \_\_\_\_ (1) Cell Biology Lab (Pre: MAT 1025; Pre/Co: Bio 2600)  
BIO 3301 \_\_\_\_ (4) Human Sys Phys [WID] (Pre: CHE2201or2101; RC 2001)  
BIO 3308 \_\_\_\_ (4) Microbiology (Pre: CHE 1102 & 1120; BIO 2400/2600/2700)  
BIO 3314 \_\_\_\_ (4) Comparative Vertebrate Zoo [WID] (Pre: RC 2001)  
BIO 4001 \_\_\_\_ (3) Developmental Biology (Pre: BIO 2600; BIO 2400/2700)  
BIO 4011 \_\_\_\_ (1) Developmental Bio Seminar (Honors) (Pre: BIO 2600; BIO 2400 or 2700; Co: BIO 4001)  
BIO 4375 \_\_\_\_ (3) Bacterial Pathogenesis (Pre: BIO 2600, 3308; Sr. stdg)  
BIO 4513 \_\_\_\_ (4) Plant Molecular Biology (Pre: BIO 3800; Sr. standing)  
BIO 4555 \_\_\_\_ (4) Plant Physiology (Pre: CHE 1102 & 1120; Sr standing)  
BIO 4563 \_\_\_\_ (3) Biology of Aging (Pre: Sr. standing)  
BIO 4564 \_\_\_\_ (4) Microscopy (Pre: Sr. standing)  
BIO 4568 \_\_\_\_ (4) Immunology (Pre/Co: BIO 2400; Sr. standing)  
BIO 4572 \_\_\_\_ (3) Virology (Pre: BIO 2600; Sr standing)

D. Required cognate courses: 34 semester hours

Chemistry

CHE 1101/1110 \_\_\_\_ (4) Intro. Chem I & lab (Pre: MAT 1020 or higher)  
CHE 1102/1120 \_\_\_\_ (4) Intro. Chem II & lab (Pre: CHE 1101/1110; MAT 1020 or higher)  
CHE 2201/2203 \_\_\_\_ (4) Organic Chem I & lab (Pre: CHE 1102/1120)  
CHE 2202/2204 \_\_\_\_ (4) Organic Chem II & lab (Pre: CHE 2201/2203 w/C-)  
CHE 4580 \_\_\_\_ (3) Biochem I (Pre: BIO 1801; CHE 2101/2202 w/min grade C-; Sr stndg)

Mathematics

MAT 1110 \_\_\_\_ (4) Calculus w/ Analytical Geom. I (Pre: MAT 1025 w/C-)      AND      STT 2810 \_\_\_\_ (3) Intro to Statistics (Pre: MAT 1010 or higher)

Physics

PHY 1103 \_\_\_\_ (4) General Physics I (Co: MAT 1020 or 1025)  
PHY 1104 \_\_\_\_ (4) General Physics II (Pre: PHY 1103)

III. MINOR (optional)

IV. ELECTIVES (taken to total a minimum of 122 hours for the degree)..... 12

2 semester hours of free electives must be outside the major discipline.