

I. GENERAL EDUCATION CURRICULUM.....44
Chemistry 1101/1110 & 1102/1120 fulfills Science Inquiry Perspective. 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 2012 ____ (3) Introduction to Evolutionary Biology
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 3800 ____ (4) Molecular Biology [WID] (Pre: CHE 2201 or 2101; ENG 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]

Choose one of the following:

BIO 3301 ____ (4) Human Sys Phys [WID] (Pre: 1sem org CHE; ENG 2001)
BIO 3314 ____ (4) Comparative Vertebrate Zoo [WID] (Pre: ENG 2001)
BIO 4555 ____ (4) Plant Physiology (Pre: CHE 1102 & 1120)

Choose one of the following:

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

C. Biology Electives in the Areas (15 semester hours) – Students MUST choose one [WID] course. 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: ENG 2001)	BIO 3313 ____ (4) Global Change Ecology [WID] (Pre: ENG 2001)
BIO 3315 ____ (3) Conservation Biology [WID] (Pre: ENG 2001)	BIO 3320 ____ (3) Air Pollution Eff on People & Plants (Pre: JR stndg)
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 4571 ____ (4) Plant/Insect Interactions in Terrestrial Ecosys	BIO 4575 ____ (4) Ecotoxicology [CAP] (Pre: 1 sem organic CHE; WID; Sr. stndg)
BIO 4601 ____ (4) Animal Behavior-Ethology	

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 Laboratory (Pre/Co: BIO 2400/2700)	BIO 2610 ____ (1) Cell Biology Lab (Pre: MAT 1025; Pre/Co: BIO 2600)
BIO 3301 ____ (4) Human Sys Phys [WID] (Pre: CHE2201/ 2101; ENG 2001)	BIO 3308 ____ (4) Microbiology (Pre: CHE 1102/1120)
BIO 3314 ____ (4) Comparative Vertebrate Zoo [WID] (Pre: ENG 2001)	BIO 4552 ____ (4) Entomology
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	BIO 4572 ____ (3) Virology (Pre: BIO 2600)

D. Required cognate courses: 34 semester hours

Chemistry

CHE 1101/1110 ____ (4) Intro. Chemistry I & lab
CHE 1102/1120 ____ (4) Intro. Chemistry II & lab (Pre: CHE 1101/1110)
CHE 2201/2203 ____ (4) Organic Chemistry I & lab (Pre: CHE 1102)
CHE 2202/2204 ____ (4) Organic Chem II & lab (Pre: CHE 2201/2203 w/C-)
CHE 4580 ____ (3) Biochemistry I (Pre: CHE 2101 or 2202)

Physics

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

Mathematics

MAT 1110 ____ (4) Calculus w/ Analytical Geom. I (Pre: MAT 1025 w/C-)
STT 2810 ____ (3) Introduction to Statistics (Pre: MAT 1010)

III. MINOR (optional)

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