

- 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 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; ENG 2001)
- Choose one of the following: (Pre: Senior standing; WID)** **Choose one of the following:**
- BIO 4501 ____ (3) Independent Research [CAP] BIO 3301 ____ (4) Human Sys Phys [WID] (Pre: CHE2201/2101; ENG 2001)
BIO 4700 ____ (3) Seminar in Biological Science [CAP] BIO 3314 ____ (4) Comparative Vertebrate Zoo [WID] (Pre: ENG 2001)
BIO 4910 ____ (3) Capstone Internship in Biology [CAP] 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 org 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 4001 ____ (3) Developmental Biology (Pre: BIO 2600; BIO 2400 or 2700)
BIO 4011 ____ (1) Developmental Biology Seminar (Honors) (Pre: BIO 2600; BIO 2400/2700; Co: BIO 4001)
BIO 4513 ____ (4) Plant Molecular Biology (Pre: BIO 3800; Sr. standing) 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 4572 ____ (3) Virology (Pre: BIO 2600)
- D. Required cognate courses: 34 semester hours**
- Chemistry** **Physics**
- CHE 1101/1110 ____ (4) Intro. Chemistry I & lab PHY 1103 ____ (4) General Physics I (Co: MAT 1020 or 1025)
CHE 1102/1120 ____ (4) Intro. Chemistry II & lab (Pre: CHE 1101/1110) PHY 1104 ____ (4) General Physics II (Pre: PHY 1103)
CHE 2201/2203 ____ (4) Organic Chemistry I & lab (Pre: CHE 1102) **Mathematics**
CHE 2202/2204 ____ (4) Organic Chem II & lab (Pre: CHE 2201/2203 w/C-) MAT 1110 ____ (4) Calculus w/ Analytical Geom. I (Pre: MAT 1025 w/C-)
CHE 4580 ____ (3) Biochemistry I (Pre: CHE 2101 or 2202) 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
Total major requirements – 78; Gen Ed courses that may count in major (depends on choices) – 21; net major 66 hours