I. GENERAL EDUCATION CURRICULUM


II. MAJOR REQUIREMENTS (Not including 12 semester hours already counted in I. above)

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 1110; MAT 1025) OR BIO 2700 ____ (3) Human Genetics (Pre: CHE 1110; MAT 1025)
BIO 2001 ____ (4) Introduction to Zoology
BIO 2000 ____ (4) Introduction to Botany
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)

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 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 4554 ____ (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 4564 ____ (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. stdg)
BIO 4555 ____ (4) Plant Physiology (Pre: CHE 1102 & 1120; Sr stdg)
BIO 4563 ____ (3) Biology of Aging (Pre: Sr. stdg)
BIO 4564 ____ (4) Microscopy (Pre: Sr. stdg)
BIO 4568 ____ (4) Immunology (Pre/Co: BIO 2400; Sr. stdg)
BIO 4572 ____ (3) Virology (Pre: BIO 2600; Sr. stdg)

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 stdg)

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.