I. GENERAL EDUCATION CURRICULUM

CHE 1101/1110 & CHE 1102/1120 fulfills Science Inquiry perspective. MAT 1110 fulfills Quantitative Literacy requirement.

II. MAJOR REQUIREMENTS (Not including 12 s.h. 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. Science Core Requirements: 53 semester hours

BIO 1801 (4) Biological Concepts I (Co: CHE 1101)
BIO 1802 (4) Biological Concepts II (Pre: BIO 1801)
ENV 1010 (3) Intro to Environmental Sci & Engineering
MAT 1110 (4) Calc w/Analytic Geometry I (Pre: MAT 1025)
MAT 1120 (4) Calc w/Analytic Geometry II (Pre: MAT 1110)
STT 3850 (4) Statistical Data Analysis (Pre: MAT 1110)

B. Required Environmental Courses: 17 semester hours (A writing course [WID] must be taken in the Junior year.)

BIO 3302 (4) Ecology (Pre: BIO 1801)
GHY 3820 (3) GIS for Env & Social Sciences OR GHY 3812 (3) Introduction to GIS (Pre: GHY 2310, 2812; see dept)
GLY 3131 (3) Geochemistry (Pre: GLY 2250, CHE 1101, MAT 1110) OR CHE 2550 (3) Intro to Env’l Chem (Pre: CHE2101/2102 or 2201/2203)
GLY 4630 (3) Hydrogeology (Pre: 6 s.h. GLY ≥2000; Jr stndg)
PLN 4460 (4) Environmental Policy & Planning

C. Science Courses: 12 semester hours (Must choose from at least 2 of these categories.)

ENV 3010 (3) Dynamics of Complex Systems (Pre: BIO 1802, CHE 2101 or 2201, GLY 2250, PHY 1151)
ENV 3560 (1-3) Undergraduate Research (Counts towards the 12 hours required in part C, but does not count as one of the 2 categories. By permit only.)
ENV 3530-49 (1-4) Selected Topics

Chemistry

CHE 2202/2204 (4) Organic Chemistry II & Lab (Pre: CHE 2201/2203 w/min grade of “C-” in each)
CHE 2210/2211 (4) Quantitative Analysis & Lab (Pre: CHE 1102/1120)
CHE 3301/3303 (4) Physical Chemistry I & Lab [WID] (Pre: CHE 2210/2211, ENG 2001, MAT 1120, PHY 1151)
CHE 3560/3561 (4) Instrumental Methods of Analysis (Pre: CHE 3301)
CHE 4620 (4) Environmental Chemistry (Pre: CHE 3301, 3560/3561, STT 2810)
CHE 3530-49 (3) Selected Topics

Geophysical Sciences

C S 1445 (4) Introduction to Programming with Interdisciplinary Applications (Pre: MAT 1020 or 1025 w/min grade C-)
GHY 3110 (3) Vegetation, Soils, & Landforms (Pre: GHY 1010)
GHY 3310 (3) Environmental Remote Sensing
GLY 3150 (3) Principles of Structural Geology & Tectonics (Pre: GLY 2250, 2745)
GLY 3333 (4) Geomorphology (Pre: 6s.h.GLY)
GLY 3800 (3) Sedimentology & Stratigraphy (Pre: GLY 2250)
GLY 4705 (3) Advanced Environmental & Engineering Geology (Pre: 6 s.h. GLY ≥2000)
ENV/GLY 3455 (3) Quantitative Data Analysis for Earth & Environmental Scientists (Pre: GLY 2250, MAT 1110, PHY 1150)
PHY/GLY 3160 (3) Introduction to Geophysics (Pre: 1 intro GLY course; PHY 1103/1150; MAT 1110)
PHY 3140 (3) Environmental Physics (Pre: PHY 1104 or 1151)
PHY 3150 (3) Atmospheric Physics (Pre: PHY 1151)
PHY 3230 (3) Thermal Physics (Pre: PHY 1104 or 1151; MAT 2130)
PHY 3850/3851 (3) Environ. Geochemistry & Lab (Pre: PHY 1104 or 1151)
PHY 4330 (3) Digital Electronics
PHY 4730 (3) Analog Systems (Co: PHY 3210) OR PHY 3530-49 (3) Selected Topics

Biology

BIO 2000 (4) Intro to Botany
BIO 2001 (4) Intro to Zoology
BIO 3304 (4) Systematic Botany (Pre: BIO 2000)
BIO 3320 (3) Air Pollution Effects on Plants & People (Pre: Jr stndg)

Students may take up to two organismal biology courses from the following list.

BIO 4551, BIO 4552, BIO 4556, BIO 4557, BIO 4558, BIO 4559, BIO 4560, BIO 4567

*Pre-/Co- requisite is not included in the 123 hours required for the degree. Students may count these hours in AREA II.D. and/or AREA IV or seek instructor permission.

D. Science Electives: 3 semester hours

E. Environmental Science Capstone Course: Choose at least 3 semester hours (Pre: Senior Standing)

ENV 4100 (3) Environmental Science Seminar [CAP] (Pre: ENV 3100)
ENV 4510 (1-3) Senior Honors Research & Thesis [CAP] (Pre: ENV 3560; ENV majors only; 3.45+ GPA cum and in ENV courses)

III. MINOR (optional)

IV. ELECTIVES (taken to a minimum of 123 hours for the degree)

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

Total major = 88 hrs; Gen Ed courses may count in major (depends on choices) – up to 12; net major 76 hours.