

**I. GENERAL EDUCATION CURRICULUM ..... 44**  
 Chemistry 1101/1110 & 1102/1120 fulfill the Science Inquiry perspective. MAT 1110 fulfills Quantitative Literacy.

**II. MAJOR REQUIREMENTS (not including 12 hours counted in Area I, above)..... 73**  
 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. Geology (31 semester hours):**

Choose one introductory geology course:

- |                   |   |                   |                         |
|-------------------|---|-------------------|-------------------------|
| GLY 1101_____ (4) | Introduction to Physical Geology                | GLY 1104_____ (4) | Water: Mountains to Sea |
| GLY 1102_____ (4) | Introduction to Historical Geology              | GLY 1105_____ (4) | Oceanography            |
| GLY 1103_____ (4) | Introduction to Environmental & Applied Geology |                   |                         |

- GLY 2250 \_\_\_\_\_ (4) Evolution of the Earth (Pre: GLY 1101, 1102, 1103, 1104, or 1105)
- GLY 2745 \_\_\_\_\_ (4) Preparation of Geologic Reports [WID] (Pre: ENG 2001; GLY 2250)
- GLY 3150 \_\_\_\_\_ (3) Principles of Structural Geology and Tectonics (Pre: GLY 2250, 2745)
- GLY 3220 \_\_\_\_\_ (3) Fundamentals of Mineralogy (Pre: GLY 2250)
- GLY 3715 \_\_\_\_\_ (3) Petrology and Petrography (Pre: CHE 1101/1110; GLY 2250, 2745, 3220)
- GLY 3800 \_\_\_\_\_ (3) Introduction to Stratigraphy and Sedimentology (Pre: GLY 2250)
- GLY 4210 \_\_\_\_\_ (1) Geology Seminar [CAP] (Pre: Senior Standing)
- GLY 4835 \_\_\_\_\_ (6) Summer Field Geology or other approved field course (Pre: GLY 3150, 3715, 3800)

**B. Quantitative Geoscience concentration (15 semester hours)**

- GLY 3131 \_\_\_\_\_ (3) Geochemistry (Pre: GLY 2250; CHE 1101/1110; MAT 1110)
- PHY/GLY 3160 \_\_\_\_\_ (3) Introduction to Geophysics (Pre: 1 intro GLY; PHY 1101; MAT 1110)
- GLY 4630 \_\_\_\_\_ (3) Hydrogeology (Pre: 6 s.h. GLY ≥ 2000; Jr. standing)
- GLY 4705 \_\_\_\_\_ (3) Advanced Environmental & Engineering Geology (Pre: 6 s.h. GLY ≥ 2000; Jr. standing)

**Plus choose 3 s.h. from the following courses:**

- GLY 3025 \_\_\_\_\_ (3) Principles of Paleontology (Pre: GLY 2250; 6 sh BIO or ANT ≥ 2000 level)
- GLY 3333 \_\_\_\_\_ (3) Geomorphology (Pre: 6 sh GLY)
- GLY 3680 \_\_\_\_\_ (3) Geoarchaeology (Pre: 4 sh GLY)
- GLY 4501 \_\_\_\_\_ (1) Senior Research (Pre: Sr. standing; min GPA 3.25 in GLY)
- GLY 4510 \_\_\_\_\_ (3) Senior Honors Thesis (Pre: GLY 4501; Sr. standing; min GPA 3.25 in GLY)

**C. Mathematics/Chemistry/Physics (33 hours)**

(Taking all 5 math courses will earn the math minor. The extra MAT course will count as a non-GLY course elective below.)

- MAT 1110 \_\_\_\_\_ (4) Calculus with Analytic Geometry I (Pre: MAT 1025 w/min grade C-)
- MAT 1120 \_\_\_\_\_ (4) Calculus with Analytic Geometry II (Pre: MAT 1110 w/min grade of C-)
- MAT 2130 \_\_\_\_\_ (4) Calculus with Analytic Geometry III (Pre: MAT 1120 w/min grade of C-)
- MAT 2240 \_\_\_\_\_ (3) Intro to Linear Algebra (Pre: MAT 1120) **OR** MAT 3130\_\_\_\_\_ (3) Intro to Differential Equations (Pre: MAT 1120)
- CHE 1101/1110 \_\_\_\_\_ (4) Introductory Chemistry I & Lab **AND** CHE 1102/1120 \_\_\_\_\_ (4) Intro Chem II & Lab (Pre: CHE 1101/1110)
- PHY 1150 \_\_\_\_\_ (5) Analytical Physics I (Co: MAT 1110) **AND** PHY 1151 \_\_\_\_\_ (5) Analytical Physics II (Co: MAT 1120)

**D. Six semester hours from the following:**

- GHY 2812 \_\_\_\_\_ (3) Geospatial Data & Technology
- GHY 3310 \_\_\_\_\_ (3) Environmental Remote Sensing
- GHY 3812 \_\_\_\_\_ (3) Intro to GIS (Pre: GHY 2310, 2812)
- GHY 4812 \_\_\_\_\_ (3) Advanced GIS (Pre: GHY 3812)
- STT 2810 \_\_\_\_\_ (3) Introduction to Statistics (Pre: MAT 1010)
- STT 3820 \_\_\_\_\_ (3) Statistical Methods I (Pre: STT 2810/2820)
- CS 1425 \_\_\_\_\_ (3) Overview of Computer Science (Co: MAT 1020/1025)
- CS 1440 \_\_\_\_\_ (4) Computer Science I (Pre: MAT 1020/1025 w/minimum grade "C-")
- CS 1445 \_\_\_\_\_ (4) Intro to Programming w/Interdisciplinary Applications (Pre: MAT 1020/1025 w/minimum grade "C-")

During the senior year the B.S. (non-teaching) student must take and achieve a satisfactory score on a COMPREHENSIVE EXAMINATION covering theoretical and practical aspects in areas of geology. Students who are unsuccessful on portions or all of the examination may retake appropriate portions up to two additional times prior to graduation.

**III. MINOR (optional)**

**IV. ELECTIVES (taken to total 122 hours for the degree).....5**  
 2 semester hours of free electives must be outside the major discipline. **122**