

# BACHELOR OF SCIENCE IN ENVIRONMENTAL GEOLOGY

DEPARTMENT OF GEOLOGY AND PLANETARY SCIENCE

WWW.GEOLOGY.PITT.EDU

69 credits minimum

Updated 03/11/04

Visit the Department web page and click on Undergraduate Programs for a complete range of advising information plus the latest Environmental Geology requirements.

## Core courses (check each as completed):

(30 credits)

\_\_\_ Choose **one** of the following introductory geology classes:

- \_\_\_ GEOL 0040 Physical Geology (3) **OR** GEOL 0800 Geology (3) **OR** GEOL 0860 Environmental Geology (3)
- \_\_\_ GEOL 0055 Geology Laboratory (2) [Fall, Spring, Jones] **This is a prerequisite for all core courses!**
- \_\_\_ GEOL 1001 Mineralogy (4) [Fall, Stewart] **This is a prerequisite for GEOL 1003 and co-req. for 1020!**
- \_\_\_ GEOL 1003 Igneous and Metamorphic Petrology (4) [Spring, Skilling]
- \_\_\_ GEOL 1020 Sedimentology and Stratigraphy (4) [Fall, Abbott]
- \_\_\_ GEOL 1051 Groundwater Geology (4) [Spring, TBA]
- \_\_\_ GEOL 1100 Structural Geology (4) [Fall, Anderson]
- \_\_\_ GEOL 1960 Field Camp (4) [Summer; Seek out programs run by other universities (see advising web page) and transfer in the credits. The Yellowstone Field Trip does not fulfill this requirement.]
- \_\_\_ GEOL 3900 Colloquium (weekly Department lecture series) (1)

*Note: GEOL 0060 and GEOL 1020 together fulfill one writing (W) requirement. You can take GEOL 1313 or a W class outside the Department to fulfill the second W.*

## Electives (At least 9 credits of upper division or graduate level GEOL courses):

(12 credits)

- \_\_\_ GEOL 0060 History of the Earth (4) [Spring, Jones]
- \_\_\_ GEOL 1052 Paleoclimates (3) [Spring, Abbott]
- \_\_\_ GEOL 1055 Environmental Science, Ethics, and Public Policy (3) [Spring, McCord/Rollins]
- \_\_\_ GEOL 1056 Environmental Science, Ethics, and Public Policy (3) [Spring, McCord/Rollins]
- \_\_\_ GEOL 1060 Geomorphology (4) [Alternate years, Spring, Abbott]
- \_\_\_ GEOL 1079 Field Methods (1) [See advisor; Spring, Staff]
- \_\_\_ GEOL 1080 Geoarchaeology (3) [TBA]
- \_\_\_ GEOL 1200 Paleontology (3) [TBA]
- \_\_\_ GEOL 1313 W - Scientific Communication for Environmental Professionals (3) [Fall, Spring, Collins]
- \_\_\_ GEOL 1410 Exploration Geophysics (3) [Alternate years, Spring, Harbert] **Excellent choice.**
- \_\_\_ GEOL 1445 GIS, GPS Surveying, and Computer Methods for Earth Scientists (3) [Fall, Harbert]
- \_\_\_ GEOL 1460 Remote Sensing of the Earth (3) [Spring, Ramsey]
- \_\_\_ GEOL 1515 Environmental Geochemistry (3) [Fall, Capo] **Excellent choice.**
- \_\_\_ GEOL 1640 Geologic and Environmental Hazards (3) [Alternate years, Fall, Ramsey]
- \_\_\_ GEOL 1900 Internship (4-6) [staff]
- \_\_\_ GEOL 1901 Independent Study (1-12) [staff]
- \_\_\_ GEOL 1903 Undergraduate Research (2-4) [staff]
- \_\_\_ GEOL 1304 W - Scientific Communication for Environmental Professionals (3) [Fall, Spring, Collins]
- \_\_\_ GEOL 1904 Directed Study (1-12) [staff]
- \_\_\_ GEOL 1904 Environmental Policy (3) [Spring, McElwaine]
- \_\_\_ GEOL 1904 W — Communication for Environmental Professionals (3) [Fall, Spring, Collins]
- \_\_\_ GEOL 2447 Introduction to Arc/View and Advanced Arc/View Programming (3) [Spring, Harbert]
- \_\_\_ GEOL 3963 Topics in Environmental Geology (3) [Topics and times vary, Hopey]
- \_\_\_ GEOL 1\_\_\_ Other upper level classes (GEOL 1000 or higher) may be approved by your advisor.

## Plus one upper division BIOSC, CHEM, CE, MATH, or CS course such as:

- \_\_\_ BIOSC 0370 Ecology and Evolutionary Biology (3)
- \_\_\_ CHEM 0310 Organic Chemistry (3)
- \_\_\_ CS 1503 Introduction to Environmental Engineering (3)

## Co-requirements (check each as completed):

(27 credits)

- \_\_\_ MATH 0220 Analytical Geometry and Calculus 1 (4)
- \_\_\_ MATH 0230 Analytical Geometry and Calculus 2 (4)
- \_\_\_ CHEM 0110 General Chemistry 1 (4)
- \_\_\_ CHEM 0120 General Chemistry 2 (4)
- \_\_\_ PHYS 0174 Basic Physics for Science and Engineering 1 (4)
- \_\_\_ PHYS 0175 Basic Physics for Science and Engineering 2 (4)
- \_\_\_ BIOSC 0150 Foundations of Biology 1 (3)

**Reduction of General College Requirements:** Environmental Geology majors admitted before Fall 2003 are exempt from **two** of the following three gen. ed. requirements: **3)** 2nd Lit/Music/Art/Creative Exp; **7)** Pub Pol Iss/2nd Soc Sci or His; **10)** Nat Sci 3rd Course.

**Sample Course Schedules: The first is well-planned, the second is crammed.**

Words of wisdom: If at all possible, do **not** take Mineralogy, Sedimentology/Stratigraphy, and Structural Geology all in one semester. The three labs taken at once are **Lab Hell**. Also, take your co-requisites as early as possible.

**1. Luxury Schedule: You picked environmental geology as a major early on.**

<b>Fall, Sophomore Year</b>	<b>Spring, Sophomore Year</b>
Geol 0040, 0800 or 0860 (an introductory class)	Geology elective (e.g., Geol 0060)
Geol 0055: Geology Laboratory	Geology elective or Geol 0055 if necessary
<b>Fall, Junior Year</b>	<b>Spring, Junior Year</b>
Geol 1001: Mineralogy (w/ lab)	Geol 1003: Igneous and Metamorphic Petrology (w/ lab)
Geol 1020: Sedimentology and Stratigraphy (w/ lab)	Geol 1051: Groundwater Geology (w/ lab)
<b>Fall, Senior Year</b>	<b>Spring, Senior Year</b>
Geol 1100: Structural Geology (w/ <b>Big Lab</b> )	Geology elective; Register for a <b>summer field camp!</b>
Geology elective	

**2. Desperate Schedule o Pain: You picked geology at the last minute and want to graduate pronto.**

<b>Fall, Junior Year</b>	<b>Spring, Junior Year</b>
Geol 0040, 0800 or 0860 (an introductory class)	Geology elective (e.g., Geol 0060)
Geol 0055: Geology Laboratory	Geology elective or Geol 0055 if necessary
Geol 1001: Mineralogy (w/ lab) or Geology elective	Geology elective (check prerequisites carefully)
<b>Fall, Senior Year</b>	<b>Spring, Senior Year</b>
Geol 1020: Sedimentology and Stratigraphy (w/ lab)	Geol 1003: Igneous and Metamorphic Petrology (w/ lab)
Geol 1100: Structural Geology (w/ <b>Big Lab</b> )	Geol 1051: Groundwater Geology (w/ lab)
Geology elective or Mineralogy (w/ lab)	Geology elective; Register for a <b>summer field camp!</b>

**Departmental Honors Requirements:** Complete the requirements for *one* of the following three options:

**Course Option:** Complete the minimum degree requirements, earn an overall QPA of 3.25 or more, and:

1. Satisfactorily complete a total of at least nine additional credits. These may be selected from other formal GEOL courses (excluding the 0800 series) or from any of the following: CHEM 0250, 0260, 0310, 0320, 1410, 1540; PHYS 0160, 0577, 1150; BIOSC 0370, 0740, 1000, 1160, 1260, 1320, 1370; CS 1910, MATH 0240, 0250; CE 1503, 1513, 1620.
2. Include within the requirements listed above a minimum of three credits in geochemistry (GEOL 1051, 1515, 2500, 2515 or 2520) or three credits in geophysics (GEOL 1410 or 1460).

**Research Option:** Complete the minimum degree requirements, earn an overall QPA of 3.25 or more, and complete a minimum of three credits of Undergraduate Research (GEOL 1903) under the supervision of a faculty member from the Department of Geology and Planetary Science. This research must culminate in a written thesis that documents original research conducted by the student. Acceptance of the thesis will be contingent upon approval of the faculty supervisor and two additional faculty members. The results of the student's research are to be presented orally in a departmental seminar.

**Internship Option:** Complete the minimum degree requirements, earn an overall QPA of 3.25 or more, and work as an intern for a professional consulting geologist or firm in the field of environmental geology while under the supervision of a faculty member from the Department of Geology and Planetary Science. A minimum of three credits of Internship (GEOL 1900) will culminate in written and oral reports documenting the project conducted by the student. Acceptance will be contingent upon approval of the faculty supervisor and two additional faculty members.

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