BACHELOR OF SCIENCE IN GEOLOGY

DEPARTMENT OF GEOLOGY AND PLANETARY SCIENCE

WWW/GEOLOGY/PITT.EDU **67 credits minimum** **Updated 08/04**

Visit the Department web page and click on "Undergraduate Programs" for complete advising information plus the latest version of the Geology Major requirements.

Core Courses (check each as completed) (30 credits)

____***Choose <u>one</u> 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 <u>pre</u>requisite for <u>all</u> core courses!**
____ GEOL 0060 History of the Earth (4) [Spring, Jones]
____ GEOL 1001 Mineralogy (4) [Fall, Stewart] **This is a <u>pre</u>requisite 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 1100 Structural Geology (4) [Fall, Anderson]
____ GEOL 1960 Field Camp (4-8) [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: Completion of both GEOL 0060 and GEOL 1020 fulfills 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 level or graduate GEOL courses): (9 credits)

____ GEOL 1051 Groundwater Geology (4) [Spring, TBA]
____ 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 1080 Geoarchaeology (3) [TBA]
____ GEOL 1200 Paleontology (4) [Alternate years, Fall, Jones]
____ GEOL 1313 W – Communication for Environmental Professionals (3) [Fall, Spring, Collins]
____ GEOL 1410 Exploration Geophysics (3) [Alternate years, Fall, Harbert]
____ 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]
____ GEOL 1640 Geologic and Environmental Hazards (3) [Alternate years, Fall, Ramsey]
____ GEOL 1701 Geology of the Planets (3) [TBA]
____ GEOL 1900 Internship (4-6) [staff]
____ GEOL 1901 Independent Study (1-12) [staff]
____ GEOL 1903 Undergraduate Research (1-12) [staff]
____ GEOL 1904 Directed Reading (1-12) [staff]
____ GEOL 1904 Research in Environmental Policy (3) [Spring, McElwaine]
____ 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 ____ Other upper level classes (GEOL 1000 or higher) may be approved by your advisor.

Co-requirements (take early; check each as completed): (28 credits)

____ MATH 0220 Analytical Geometry and Calculus 1 (4)
____ MATH 0230 Analytical Geometry and Calculus 2 (4)
____ MATH 0240 Analytical Geometry and Calculus 3 (4) **OR** MATH 0250 Matrix Theory and Differential Eqns (4) **OR** STAT 1000 Applied Statistical Methods (4)
____ CHEM 0110 General Chemistry 1 (4)
____ CHEM 0120 General Chemistry 2 (4)
____ PHYS 0174 Basic Physics for Science & Engineering 1 (4)
____ PHYS 0175 Basic Physics for Science & Engineering 2 (4)

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

1. Luxury Schedule: You picked the geology major early.

Fall, Sophomore Year	**Spring, Sophomore Year**
Geol 0040, 0800 or 0860 (an introductory class)	Geol 0060: History of the Earth (w/ lab)
Geol 0055: Geology Laboratory	Geology elective or Geol 0055 if necessary
Fall, Junior Year	**Spring, Junior Year**
Geol 1001: Mineralogy (w/ lab)	Geol 1003: Igneous and Metamorphic Petrology (w/ lab)
Geol 1020: Sedimentology and Stratigraphy (w/ lab)	Geology elective
Fall, Senior Year	**Spring, Senior Year**
Geol 1100: Structural Geology (w/ **Big** Lab)	Geology elective; Register for a **summer field camp**!
Geology elective	

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

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

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 from other formal GEOL courses (excluding the 0800 series) or from any of the following: BIOSC 0370; CHEM 0250, 0260, 0310, 0320, 1410, 1540; MATH 0250; PHYS 0160, 0577, 1150;
2. Include within the requirements listed above a minimum of three credits in either geochemistry (GEOL 1051, 1515, 2500, or 2520) or 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 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.

Suggested Elective Concentrations (grouped by interest):

Computer Methods in Geosciences:
GEOL 1410 Exploration Geophysics
GEOL 1445 GIS, GPS Surveying, and Computer Methods for Earth Scientists
GEOL 1460 Remote Sensing of the Earth

Economic Geology/Mineral Exploration:
GEOL 1050 Regional Geology of the U.S.
GEOL 1410 Exploration Geophysics
GEOL 1445 GIS, GPS Surveying, and Computer Methods for Earth Scientists
GEOL 1460 Remote Sensing of the Earth

Geochemistry:
GEOL 1051 Groundwater Geology
GEOL 1501 Analytical Geochemistry
GEOL 1515 Environmental Geochemistry

Planetary Science:
GEOL 1060 Geomorphology
GEOL 1460 Remote Sensing of the Earth
GEOL 1515 Environmental Geochemistry
GEOL 1701 Geology of the Planets