

MINOR IN GEOLOGY

DEPARTMENT OF GEOLOGY AND ENVIRONMENTAL SCIENCE

WWW.GEOLOGY.PITT.EDU

18 credits

Updated 03/24

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

The Geology Minor is designed for students who want to know more about how the Earth works. We offer three informal tracks to help guide your class choices (professional environmental geologist, Earth Sciences teacher, and to support a civil engineering degree), but many other options are available. To earn the minor, complete the three core classes listed below plus 9 credits (generally three classes) of electives. **Please note that at most 8 credits can overlap between your major and the geology minor.**

CORE COURSES (Check each as completed; 9 credits total)

- ___ **Choose one of these two:** GEOL 0800 Geology (3) **OR** GEOL 0820 Natural Disasters (3)
- ___ GEOL 0055 Geology Laboratory (2) [Fall, Spring, Jones]
- ___ GEOL 0060 History of the Earth (4) [Spring, Jones]

ELECTIVES: At least 9 credits of upper level or graduate GEOL courses (Check for pre-requisites!):

- ___ GEOL 1001 Mineralogy (4) [Fall, Capo] This is a prerequisite for GEOL 1003 & a co-req. for 1020!
- ___ GEOL 1003 Igneous and Metamorphic Petrology (4) [Spring, Stewart]
- ___ GEOL 1020 Sedimentology and Stratigraphy (4) [Fall, Jones]
- ___ GEOL 1050 Surface Water Hydrology (4) [Fall, Gardner]
- ___ GEOL 1051 Groundwater Geology (4) [Spring, Bain]
- ___ GEOL 1052 Paleoclimatology (3) [Alternate years, Abbott]
- ___ GEOL 1060 or GEOL 1062 Geomorphology (4) [Fall, Spring]
- ___ GEOL 1100 Structural Geology (4) [Spring, McQuarrie]
- ___ GEOL 1201 Invertebrate Paleontology (4) [Offered when there's enough interest, Spring, Jones]
- ___ GEOL 1240 Vertebrate Paleontology (3) [Every other fall, Jones]
- ___ GEOL 1410 Exploration Geophysics (3) [Spring of odd-numbered years, Harbert]
- ___ GEOL 1413 Geophysical Well Logging (3) [Spring of even-numbered years, Harbert]
- ___ GEOL 1510 Aquatic and Sedimentary Geochemistry (3) [Spring of odd-numbered years, Werne]
- ___ GEOL 1516 Environmental Geochemistry with Lab (4) [Fall, TBA]
- ___ GEOL 1701 Geology of the Planets (3) [TBA]
- ___ GEOL 1960 Field Camp (4-8) [Summer. In the fall, seek out programs run by other universities (see this [list of field camps](#)) and [transfer in the credits](#).]
- ___ GEOL 1xxx Other upper level classes (GEOL 1000 or higher) may be approved by your advisor.
- ___ GEOL 2xxx Graduate classes are numbered 2000 and up. **You must get instructor permission for graduate classes**, but undergraduates often take such classes as GEOL 2054 Soils, GEOL 2110 Plate Tectonics, and GEOL 2750: Volcanology.

How to Pick Your Electives

Example 1: Take whatever electives seem most interesting to you! Simply read the [course descriptions](#) and pick what you think is most appealing.

Example 2: If you want to be an environmental geologist, obtain a Professional Geologist's license, or get into graduate school in geology, you want to look as much like a geology major as possible. To do this, take as many of the core classes as you can:

- ___ GEOL 1001 Mineralogy (4) [Fall, Capo] **This is a prerequisite for GEOL 1003 and co-req. for 1020!**
- ___ GEOL 1003 Igneous and Metamorphic Petrology (4) [Spring, Stewart]
- ___ GEOL 1020 Sedimentology and Stratigraphy (4) [Fall, Jones]
- ___ GEOL 1100 Structural Geology (4) [Spring, McQuarrie]

____ GEOL 1960 Field Camp [Summer. Not offered at Pitt; see this [list of field camps](#) and [transfer in the credits](#).]

If you want to get the Professional Geologist's license, you must take GEOL 1100 and GEOL 1960. With regards to graduate school, you *might* consider substituting some core classes. For example, if you are moving toward paleoclimatology, you might take GEOL 1030 and 1052 instead of, say, GEOL 1003 and 1100. Consult your favorite geology and environmental science instructors for advice customized to your specific interests!

Example 3: To teach earth and space sciences, take classes that focus on the following (based on the Earth and Space pre-req's at Pitt's School of Education):

- ____ GEOL 1030 to fill the Earth System Science and oceanography requirements.
- ____ GEOL 0870 **OR** GEOL 1701 **OR** an astronomy class to fill the space requirement
- ____ GEOL 1510 or 1516 to fill the environmental science requirement. (Or take GEOL 0820 Environmental Science, but this will not count toward the minor.)
- ____ Be sure you have at least 9 total GEOL elective credits.

Please note that the University of Pittsburgh's School of Education Earth and Space program requires a total of 38 credits of GEOL classes, plus additional pre-requisites including two classes in chemistry with labs, an introduction to physics with lab, and the first semester of calculus. Other schools of education may have different requirements. Be sure to consult the requirements of your favorite schools of education to ensure you meet their full pre-requisites! If you are an environmental science or environmental studies major, again recall that only 8 GEOL credits can overlap between your major and minor.

Example 4: Civil Engineering. At least 9 credits of the following:

- ____ GEOL 1050 Surface Water Hydrology (4) [Fall]
 - ____ GEOL 1051 Groundwater Geology (4) [Spring]
 - ____ GEOL 1020 Sedimentology and Stratigraphy (4) [Fall]
 - ____ GEOL 1060 or GEOL 1062 Geomorphology (4) [Fall, Spring]
 - ____ GEOL 1100 Structural Geology (4) [Spring] (Gain insights into the mechanical behavior of rock units)
 - ____ GEOL 1410 Exploration Geophysics (3) [Alternate years, Harbert]
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