GEOLOGY GRADUATE MAJOR (MA, MS, PHD, MAIS)

Graduate Areas of Concentration

Solid Earth processes and history (volcanology, igneous petrology, economic geology); surface Earth processes and history (Earth system history, hydrogeology and hydrology, geomorphology and surface processes, climate and biogeochemical cycles)

Geology is the study of the materials, processes, and history of the solid Earth and its fluid envelopes. Geology is an integrative field, drawing on mathematics, chemistry, physics and biology to understand the interactions of the lithosphere, biosphere, atmosphere and hydrosphere. Studies in geology commonly combine observations and measurements from field, laboratory, and computational studies. Geology plays an important role in decisions about resource use, slope stability and the safety of building projects, natural hazards standards, mineral exploration and extraction, the basic workings of the Earth, and the understanding of the effects and rates of natural and human-induced change in the environment.

Most graduate research in the geology program includes field study. An approved field course of at least 9 quarter credits or equivalent experience is prerequisite to candidacy for a graduate degree. No foreign language is required.

Contact Program Director Ed Brook, 541-737-8197, brooke@geo.oregonstate.edu, for additional information.

Students who seek training in a combination of field and laboratory techniques applying a variety of scientific problems will find very few places with the number of opportunities or the variety of facilities that are available at Oregon State. Research in the department falls under three broad areas: Solid Earth Processes and History; Surface Earth Processes and History; and Human Interaction with the Earth.

Programs of study in the Geology graduate major lead to the Master of Science or Master of Arts and Doctor of Philosophy degrees

Master of Science (MS) and Master of Arts (MA) Degrees

The master's degree requires successful completion of at least 45 credits of appropriate courses including a thesis. The thesis presents a written summary of research findings and conclusions. All master's programs include a final oral examination. Each graduate program is supervised by a committee of at least three members of the graduate faculty who collaborate with the student in developing a program of study and research leading to the final oral examination. The examination is conducted and approved by the student's graduate committee.

The MA degree requires a foreign language proficiency equivalent to that attained at the end of a second-year university course in that language with a grade of C (2.00) or better.

Doctor of Philosophy (PhD) Degree

The doctor of philosophy (PhD) degree is granted for proven ability in research and mastery of an area within the discipline of geology. This is demonstrated through successful performance in at least 108 credits of appropriate course work and research. The pursuit of the PhD also requires passing qualifying exams that advance a student to candidacy. The doctoral program includes original research in a major topic in one of the department’s areas of specialization submitted as a dissertation that is presented and defended orally. A committee of at least four members of the graduate faculty assist the major professor in supervising and examining the PhD student. PhD candidates must complete at least three of four consecutive terms with at least 36 credits taken on the OSU campus.

Graduate Minor

Advanced degree programs in geology may include an optional minor subject area. It may be in a single discipline or an integrated grouping of courses organized around a theme. In developing minors, students commonly combine courses from several campus departments.

Major Code: 5500