

G 201: Earth Materials and Tectonics

Introduces physical geology which deals with minerals, rocks, internal structure of the earth, and plate tectonics. Includes a weekly lab.

Physical Geology G201 is intended for both geology majors and nonmajors, and is the first term of a year of beginning college geology. Physical Geology is concerned with earth materials and geologic processes acting on the earth. G201 deals mainly with rocks and minerals, and introduces students to internally-driven geologic processes. This course can be used to partly fulfill graduation requirements for the Associate Degree, and has been approved for block transfer. The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes the concepts of geologic time and the evolution of the Earth.

Course Student Learning Outcomes

Upon completion of the course students should be able to:

- Use an understanding of rock and mineral characterization and classification to infer the geologic processes which formed individual rock and mineral specimens.
- Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's earthquake and volcanic activity as well as the occurrence of common rocks, minerals, and economic deposits.
- Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of solid earth processes, identifying areas of congruence and discrepancy.
- Make field and laboratory-based observations and measurements of rocks and minerals and/or Earth's internal process, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of solid earth processes identifying areas of congruence and discrepancy.
- Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes and earthquakes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and risks, and effectively communicate the results of this analysis to their peers.
- Assess the contributions of physical geology to our evolving understanding of global change and sustainability while placing the development of physical geology in its historical and cultural context.

Credits: 4

Prerequisites: [WR 115](#) [RD 115](#) [MTH 95](#) [MTH 98](#) Equivalent placement test scores also accepted. MTH 95 or MTH98 accepted.

Program: [Geology](#)