

GEOLOGY MS

College of Science, Engineering & Technology
Department of Chemistry and Geology
242 Trafton Science Center N • 507-389-1963

Geology is the science of the earth. It concerns itself with the materials that constitute the earth, their disposition and structure; the processes of work both on and within the earth; and both the physical and biological history of the earth.

The following graduate courses are offered and may be used to supplement existing graduate programs or may be part of a cross-disciplinary studies program.

COURSE DESCRIPTIONS

GEOL 501 (1-3) Field Studies

This course is devoted to the study and practice of geological field investigations. Students will first learn basic field investigative methods. Students will then be appropriately versed in the geological history and importance of a region selected for in-depth study. Finally, students will participate in a field trip to a regional site of geological importance over an extended weekend (4-6 days). Potential study sites may include Minnesota's North Shore and Iron Range, the Badlands and Black Hills of South Dakota, the Ozarks, or the Rocky Mountains.

Prerequisite: GEOL 100 or 121 or 122 V

GEOL 550 (3) Hydrogeology

This course introduces physical and chemical studies of hydrogeology. The main area of discussion will include the physical and chemical attributes of aquifers, movement of groundwater and solute through soils and rocks, and reactions between earth materials and pollutants in groundwater systems. The class includes extensive use of MODFLOW and MT3D, the two most commonly used groundwater modeling programs currently available.

GEOL 590 (1-4) Workshop

GEOL 591 (1-6) In-Service

A course designed to upgrade the qualifications of a person on the job. Content is variable. The course can be repeated for credit.

GEOL 677 (1-4) Individual Study