Geological Sciences B.S.

Major
Bachelor of Science
Earth and Environmental Sciences
Swenson College of Science and Engineering

The study of geology provides ways of understanding and appreciating dynamic earth processes, our physical environment, and our place in the long and complex history of the planet and solar system. It is by nature interdisciplinary and attracts students with broad interest in earth science, archaeology, astronomy, biology, chemistry, engineering, environmental science, applied mathematics, oceanography, limnology and/or physics. The BS degree in geological sciences can lead to rewarding careers in industry, government, conservation, law, business, and academia.

Geology requires a solid base of knowledge in related sciences (chemistry and physics) and mathematics, as well as a solid core of geology courses. A summer course in field mapping is also required.

The BS degree with the exploration and mining track is designed for students interested in a career in the exploration and mining industries. The track includes a solid core of geoscience courses with a focus on courses related to exploration and mining geology. A summer course in field mapping is also required.

Why UMD

• Active learning environment
• Access to state-of-the-art instrumentation
• Focus on undergraduate teaching and research

Acquired Skills

• Comprehension - Students will know and be able to explain the basic definitions and core concepts of Geological Science
• Application - Students will be able to apply geological knowledge and techniques towards solutions to problems
• Analysis - Students will be able to determine an appropriate method for research, collect data and carry out the research using techniques and equipment specific to geology
• Communication - Students will be able to write about scientific ideas and present their ideas and findings to technical and non-technical audiences

Career Possibilities

Geologists work to understand the history of our planet. By better understanding Earth’s history, they are able to foresee how events and processes of the past might influence the future.

Geologists work in a variety of settings:

• Natural resource companies
• Environmental consulting companies
• Government agencies
• Non-profit organizations
• Universities

Many geologists do field work at least part of the time. Others spend time in laboratories, classrooms or offices.

Scholarships

In addition to the SCSE scholarships provided, our department offers many others including the UMD Stephen and Karen Brand Geological Sciences Field Camp Scholarship, the UMD Crain Family Scholarship,
the Frantes Graduate Fellowship, the Jill and Terry Swor Scholarship, the Department of Earth & Environmental Sciences Faculty Emeriti Scholarship, the Charlie Matsch Surficial Processes Fellowship, the Charlie Matsch Field Camp Scholarship, the James R. Frantes Graduate Fellowship, the Ralph and Ellen Marsden Scholarship, the Robert C. Bright Field Camp Scholarship, the Robert L. Heller Geology Field Camp Scholarship, the Lempi and John W. Pagnucco Scholarship, the Rip Rapp Geology Field Camp Scholarship, the New Millennium Geological Scholarship, the Richard Patelke Scholarship, and the Cleveland-Cliffs Scholarship. Additionally, each year awards are given for Outstanding Senior (Ellen and Ralph Marsden Scholarship Funds), Outstanding Junior (Hugh Roberts Scholarship Fund), Outstanding Graduate Student (Ellen & Ralph Marsden & Randy Seeling Scholarship Funds), Outstanding Graduate Teaching Assistant (Randy Seeling Scholarship Funds), Tools-of-the-Trade (New Millennium funds), Roderick Syck Outstanding Field Camp Performance, and the Estwing Geology Field Methods Award.

**Student Clubs**

We have two main clubs on campus. The Geology club is an academic organization with the goal of sharing our passion for geology and helping students make connections in the department and throughout the field. We want to show students what geology is really about.

UMD also has a Society of Economic Geologists student chapter (SEG) on campus. The Society of Economic Geologists is an international organization of individual members with interests in the field of economic geology. The Society's membership includes representatives from industry, academia, and government institutions. Annual meetings, publications, field conferences, and short courses ensure an active communication of economic geology-related concepts within the membership and with the economic geology profession at large.

**Graduate Report**

Recent UMD Graduates Job Placement Data & Employers

- Environmental Technician - Bay West, St. Paul, MN
- Geologist - Big Rock Exploration, Minneapolis, MN
- Environmental Technician - Intertech Ci, Hermantown, MN
- Graduate School, Geological Sciences, University of Nevada, Reno
- Graduate School, Water Resources Science, University of Minnesota Duluth

For more data see the Geological Sciences B.S. Graduate Follow-Up Report [1]. For ideas about Geological Sciences B.S. and other majors visit Career & Internship Services [2].