



Geology

Facts about a Geology degree:

- Geology is the study of Earth systems and their interactions, including:
 - The history of the Earth and the formation of natural resources
 - Natural hazards such as earthquakes, volcanoes, and mudslides
 - Classification of fossilized life forms, rocks and minerals
 - Scientific predictions of global climate change based on the study of past processes
- In Canada, geoscience is a regulated profession. Major and Honours (4-year) programs in Geology provide the breadth and depth of study needed to meet curriculum guidelines set by Geoscientists Canada .
- Major and Honours Geology students are introduced to geological field mapping techniques in an intensive course following their second year of study. A subsequent advanced field mapping course provides experience in regional scale geological and air photo mapping, and develops observational skills, data recording techniques, recording and project report mapping skills. Several other lecture/lab courses also incorporate one-day or weekend field trips.
- Geological field trips occur every 2 to 3 years to locations such as the Colorado Plateau and the Rocky Mountains.

Areas of Employment

- Mining/Mineral Resources Companies
- Environmental consulting firms
- Petroleum industry
- Government (Municipal, Provincial and Federal) e.g., Geological survey divisions
- Resource exploration companies
- Engineering firms
- Universities
- Science centres and museums
- Professional Geoscience Consulting
- Geological software development firms



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What Can I Do with a Geology Degree?

Sample Job Titles

- Exploration Geologist
 - Petroleum Geologist
 - Environmental Geologist
 - Mine Site Geologist
 - Mineralogist
 - Planetary Geologist
 - Hydrogeologist
 - Glaciologist
 - Paleontologist
 - Volcanologist
 - Hydrologist*
 - Development Geologist/Geomodeler
 - Project Geologist/Manager
 - Environmental Impact Analyst
 - Sustainable Development Manager
 - Seismologist*
 - Well Site Geologist
 - Contaminant Hydrogeologist*
 - Economic Geologist
 - Engineering Geologist
 - Field Geologist
 - Geochemist
 - Geomorphologist
 - Precambrian Geologist
 - Geoscience Consultant
 - Sedimentologist
 - Stratigrapher
 - Structural Geologist
 - Surficial Geologist
 - Oceanographer*
- *This job may require additional education, specific coursework, technical training or a graduate degree.

Skills Possessed by Geology Graduates

Many employers are interested in the skills possessed by Geology graduates, including:

- An understanding of the Earth and Earth materials, and a broad scientific background
- Skills used in the exploration for, and sustainable development of, natural resources including minerals, energy resources, and water
- Field mapping and sampling skills- including collection, analysis, and interpretation of rock samples and cores and geological information from: maps, reports, boreholes, well logs, sample repositories, air photos, satellite imagery, and geochemical surveys
- 3-D visualization, graphic presentation and computer skills
- Technical writing, communication, research, and analytical skills
- Preparation of geological maps, diagrams, technical reports from field work and analytical laboratory research
- Integration of field, geochemical, and petrological data
- Examination and interpretation of the effects of erosion, sedimentation, and tectonic deformation
- Interpersonal, teamwork and leadership skills

Resources

University of Manitoba Career Services - Check our website at: www.umanitoba.ca/student/careerservices
Click on "**Career Connect**" and register as a Student to view current job postings

University of Manitoba | Exploring Occupations | Geologist

<https://umanitoba.ca/career-services/career-planning/explore-occupations/geologists-geophysicists-geological-technologists>

University of Manitoba | Department of Earth Sciences

<https://umanitoba.ca/environment-earth-resources/earth-sciences>

Engineers Geoscientists Manitoba

www.apegm.mb.ca/CareerOpportunities.html

Earth Science Canada | www.earthsciencecanada.com/careers

Geology.com | www.geology.com/articles/what-is-geology.shtml

American Institute of Professional Geologists | www.aipg.org/education/pdf/AIPG%20Fact%20sheets.pdf

Environmental Careers Organization Canada | www.eco.ca