

Geology

University of Wisconsin-River Falls
www.uwrf.edu/pes/geol/

Goals and Objectives

- To provide a strong base of knowledge in geology
- To provide "hands-on" laboratory and field experience
- To provide a research experience
- To encourage strong communication skills
- To encourage lifelong learning and instill a commitment to use knowledge wisely and act as responsible citizens

Program In addition to the general education program of the university, the geology program includes required course work in physics, chemistry and mathematics and the core courses in geology:

- Historical Geology
- Mineralogy
- Petrology
- Geomorphology
- Structural Geology
- Sedimentology and Stratigraphy
- Paleontology
- Geophysics

Minors are available in hydrogeology, earth science and geology as well as several emphases such as environmental geology, engineering geology, oceanography, mineral exploration, and petroleum geology. Students may also tailor their program to prepare for entering graduate school.

Faculty There are five geologists in the plant and earth science department, and fifteen other faculty in the department with expertise in related fields such as soil science, hydrology, environmental science, environmental geochemistry, hazardous waste management, geographic information systems and remote sensing. Students will also do technical course work involving many science departments on campus, including chemistry, physics, biology, mathematics and geography/cartography.

What do Geologists Do? Geologists are involved in many exciting and important tasks, such as:

- searching for energy resources such as petroleum, coal, natural gas and geothermal energy;
- studying the movement and quality of ground water resources;
- the discovery, mining and reclamation of mineral deposits;
- studying earthquake faults and volcanoes, trying to predict their behavior and preventing the damage they do;
- excavating and evaluating dinosaur and other fossil sites;
- designing and monitoring dams, highways, and landfill sites;
- looking for meteorites in Antarctica.

Geologists' jobs may have them working on problems of their home town or traveling to the far corners of the earth. They may be doing basic field work in the wilderness one day and utilizing the most sophisticated analytical and computer equipment the next. Major employers include: engineering and geological consulting firms, hydrological and environmental consultants, state and federal agencies, mining companies, museums, universities and colleges, secondary schools, and petroleum exploration and production companies.

Meaningful careers are open to those with bachelor's degrees, with expanded opportunities for those who go on to receive graduate degrees.

Geology is the science of the earth. It is an applied and interdisciplinary field that uses a combination of field work, computer modeling and lab work in the solution of many environmental and resource-oriented problems. Geologists study the surface and interior of the earth and other planets. They work to understand the processes that have shaped our planet in the past, and which will be shaping it in the future.



GEOLOGY

Department of Plant and Earth Science
324 Agriculture Science Hall
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Bachelor of Science Degree. Academic Advising Plan.

Semester 1 (Fall)

GEOL 101/102	Introduction to Geology and Lab	4
ESM 105	Intro to Environmental Studies	3
ENGL 111	Academic Reading and Writing	3
CHEM 121	General Chemistry I and Lab	5
Social science course		3
Total semester credits		15

Semester 2 (Spring)

GEOL 150	Historical Geology	4
ENGL 112	Persuasive Reading and Writing	3
CHEM 122	General Chemistry II and Lab	5
MATH 149	College Algebra and Trigonometry	3
Total semester credits		15

Semester 3 (Fall)

BIOL 100	Introduction to Biology	3
GEOL 230	Mineralogy	4
MATH 166	Calculus I	4
P ED 108	Health and Fitness for Life	1
Humanities course		3
Total semester credits		15

Semester 4 (Spring)

GEOL 231	Petrology	4
GEOL 285	Sophomore Seminar	1
Humanities course		3
Social science course		3
Directive elective course		4
Total semester credits		15

Semester 5 (Fall)

GEOL 326	Structural Geology	4
PHYS 151/156	General Physics I and Lab	5
SCTA 101	Fundamentals of Oral Communication	3
Directed elective course		4
Total semester credits		16

Semester 6 (Spring)

GEOL 327	Geomorphology and Glacial Geology	4
GEOL 362	Stratigraphy and Sedimentation	4
PHYS 152/157	General Physics II and Lab	5
GEOL 371-376	Geology field trip course	1
Physical education activities courses (two)		1
Total semester credits		15

Semester 7 (Fall)

GEOL 450	Paleontology	4
GEOL 485	Senior Research Experience	1
Interdisciplinary senior capstone course		2
Directed elective courses		8
Total semester credits		15

Semester 8 (Spring)

GEOL 441	Geophysics	4
Humanities course		3
Directed elective course		4
General elective course		3
Total semester credits		14

Summary of Geology Degree Requirements

General Education	41-43 cr.
Required Geology Courses	37-38 cr.
Required Professional Courses	19 cr.
Directed Electives	20 cr.
Credits to Degree	120 cr.