



**GEOLOGY
at the
UNIVERSITY OF MAINE
AT FARMINGTON**



Top photo: Isle of Skye, Scotland, May Term 2004. Bottom photo: Green Gardens, Newfoundland, May Term 2003.

Major requirements

- 1) One of the following 100 level courses -
 - GEY 101 Environmental Geoscience (4)
 - GEY 102 The Dynamic Earth (4)
 - GEY 103 The Earth System (4)
 - GEY 104 Oceans: Modern & Ancient (4)

- 2) All of the following 200 level courses
 - GEY 201 Earth History (4)
 - GEY 202 Mineralogy (4)
 - GEY 203 Surficial Processes (4)

 - GEY 251 Stratigraphy & Sedimentation (4)
 - GEY 252 Petrology (4)
 - GEY 254 Structural Geology & Tectonics (4)

- 3) Two of the following 300 level courses
 - GEY 301 Terrain Analysis (4)
 - GEY 302 Igneous systems (4)
 - GEY 303 Climate Change (4)
 - GEY 304 Geochemistry (4)

- 4) All of the following courses –
 - GEY 390 Junior Seminar (1)
 - GEY 498 Senior Research Project I (3)
 - GEY 499 Senior Research Project II (2)

- 5) Ancillary Sciences –
 - MAT 141 Calculus I (4)
 - MAT 120 Statistics or MAT 272 Data Analysis(3)
 - CHY 141 General Chemistry I (4)
 - CHY 142 General Chemistry II (4)
 - PHY 141 General Physics I (4)

Total Credits =61

DEGREE EARNED

Bachelor of Arts: Geology

ABOUT THE PROGRAM

This program combines a variety of course work with opportunities for student research in the earth sciences, culminating with an original project during their senior year. It involves students in field, laboratory, and computer investigations in order to develop their understanding of earth materials, geochemical cycles, and the structure, energetics, and origin/evolution of the earth system.

Field trips in geology take advantage of the nearby mountains and coastal areas of Maine, as well as extended experiences in venues such as Scotland, Ireland, Newfoundland, the Grand Canyon, and the Pacific Northwest. Students focus on their own special areas of interest and work closely with faculty mentors. They are encouraged to design their own research, and apply classroom learning to their careers or preparation for graduate school. Recent graduates are employed in K-12 science education, the private sector, and government (e.g., Maine State Department of Environmental Protection and Office of G.I.S.).

The goal of the geological sciences is to understand the past, present, and future behavior of the whole earth system. From the environments where life evolves on the surface to the interaction between the crust and its fluid envelopes (atmosphere and hydrosphere), this interest extends through the mantle and the outer core to the inner core. A major challenge is to use this understanding to maintain an environment in which the biosphere and humankind will continue to flourish. —National Research Council, 1993.

Geology is the study of Earth — the entire physical-chemical-biological system. At a time when the impact of humans has never been greater, it is imperative that we understand the natural processes that control our environment. Solar energy drives climate, internal heat drives tectonics, and the interplay leads to the diverse and complex behavior inferred from geologic records.

Sample schedule (front-end loaded)

	Fall	Spring
First-year	100-level CHY 141	Earth History CHY 142 MAT 141
Sophomore	Surficial Processes Stratigraphy & Sedimentation PHY 141	Mineralogy MAT120 (or 272)
Junior	Petrography & Petrology Structure & Tectonics	300-level Junior seminar
Senior	Senior research	Senior research 300-level

GEOLOGY FACULTY

Dr. Julia Daly - Assistant Professor of Geology, B. A. Carleton College (1994), M. S. University of Delaware (1997), Ph.D., University of Maine (2002). Teaching/Research Interests: surficial geology, sea-level change, climate change, and glacial geology. (207) 778-7403
email: dalyj@maine.edu
homepage
<http://faculty.umf.maine.edu/~daly>

Dr. Thomas Eastler - Professor of Geology; B.Sc., Brown University (1966), M.A., Columbia University (1968), Ph.D., Columbia University (1971). Teaching/Research Interests - environmental geology, terrain analysis, GIS, remote sensing, rock mechanics and energy; (207) 778-7401;
email: eastler@maine.edu
homepage:
<http://faculty.umf.maine.edu/~eastler/>

Dr. David Gibson - Associate Professor of Geology; B.Sc., The Queen's University of Belfast (1977), Ph.D., The Queen's University of Belfast (1984); Teaching/Research Interests - mineralogy, petrology, geochemistry, and field mapping; (207) 778-7402;
email: dgibson@maine.edu

Dr. Douglas Reusch - Assistant Professor of Geology, B.A. Middlebury College (1976), M.S., Memorial University of Newfoundland (1983), Ph.D, University of Maine (1998); Teaching/Research Interests: earth system science, character and history of mountain belts, carbon cycle linkages between tectonics and climate. (207) 778-7463.
email: reusch@maine.edu
homepage:
<http://faculty.umf.maine.edu/~reusch>