

EARTH SCIENCES

Program of Study	<p>Master's and Ph.D. degrees are awarded by the Department of Earth Sciences. Faculty and graduate student research focus on four major areas: 1) climate change, glacial geology, glaciology and Quaternary studies, 2) environmental geosciences, hydrogeology and low-temperature geochemistry, 3) geodynamics, crustal studies and rheology of Earth materials, and 4) marine geology, coastal processes, sedimentology and sea-level studies.</p> <p>The Master's degree requires 30 credits, at least 18 of which are course work and 6 are thesis work. The Ph.D. requires the completion of at least 18 credits of course work beyond a Master's degree, and 33 credits if entering with a Bachelor's degree; all Ph.D. student must take at least 9 thesis credits. Ph.D. students must pass a written and oral comprehensive examination.</p>		
Financial Aid	<p>Seven teaching assistantships are available from the Department. These are awarded competitively based on transcripts, GRE scores, letters of recommendation, and match between student and faculty interests. TA's are preferentially awarded to students who are proficient in the English language and who have sufficient background in the Earth Sciences. Research assistantships are awarded by individual faculty members who have secured research funding.</p>		
Research Facilities	<p>Numerical/Computational Geodynamics Facility Computational Microdynamics Laboratory Rock Preparation Laboratory Analog Modeling Laboratory Departmental Computer Cluster Marine Geophysics Facilities Marine Sediments Laboratory Microstructures Laboratory Stable Isotope Laboratory X-ray Diffraction Laboratory Electron Microprobe Laboratory Scanning Electron Microscopy/Electron Backscatter Diffraction Mineral Separation Facilities Glacial Sediments Laboratory Mineral Weathering Laboratory Microanalytical Laboratory Geohydrology Facilities Near Surface Geophysics Affiliated with the Environmental Chemistry Laboratory</p>		
Students	<p>The Department has about 30 graduate students and about 40 undergraduate students. Graduate students come from many different countries. Undergraduate students are primarily from the northeastern U.S.A.</p>		
Applying	<p>Student applicants to our graduate program commonly have a Bachelor's degree in Earth Sciences or closely related discipline, but the multidisciplinary nature of our program allows for entry from other backgrounds as well. Students entering the graduate program in Earth Sciences typically have completed at least one year of chemistry, physics, and calculus, as well as several courses in the Earth/environmental sciences beyond the introductory level. Review of applications requesting TA support begins in February, but most of our students are supported on grants and applications are welcome at any time.</p>		
Correspondence	<table> <tr> <td data-bbox="410 1757 714 1936"> The Graduate School 5755 Stodder Hall Room 42 University of Maine Orono, ME 04469-5755 207-581-3291 graduate@maine.edu </td><td data-bbox="792 1757 1131 1936"> Department of Earth Sciences Bryand Global Sciences Center University of Maine Orono, ME 04469 207-581-2152 dianne.perro@umit.maine.edu </td></tr> </table>	The Graduate School 5755 Stodder Hall Room 42 University of Maine Orono, ME 04469-5755 207-581-3291 graduate@maine.edu	Department of Earth Sciences Bryand Global Sciences Center University of Maine Orono, ME 04469 207-581-2152 dianne.perro@umit.maine.edu
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Graduate Faculty

Daniel F. Belknap, Ph.D. (Delaware, 1979), Professor. Sedimentology, marine geology, stratigraphy.

George H. Denton, Ph.D. (Yale, 1965), Professor. Quaternary and Glacial Geology.

Christopher C. Gerbi, Ph.D. (Maine, 2004), Assistant Professor. Mineralogy, rheology, geochronology and tectonics.

Edward S. Grew, Ph.D. (Harvard, 1973), Research Professor. Metamorphic petrology.

Brenda L. Hall, Ph.D. (Maine, 1997), Associate Professor. Quaternary and Glacial Geology, millennial-scale climate change and ice sheet stability.

Gordon S. Hamilton, Ph.D. (Cambridge, 1992), Associate Professor. Polar glaciology, ice sheet mass balance, and the role of ice sheets in modulating global sea levels.

Scott E. Johnson, Ph.D. (James Cook, 1989), Professor. Structural geology, microstructural processes, Earth rheology, tectonics, coupling of deformation and metamorphism.

Alice R. Kelley, Ph.D. (Maine, 2007), Instructor. Geoarcheology, surficial processes.

Joseph T. Kelley, Ph.D. (Lehigh, 1980), Professor. Marine geology, sedimentology.

Peter O. Koons, (E.T.H., 1983), Professor. Mechanics of mountain building, interaction of surface processes and plate tectonics, the evolution of active continental margins, mantle deformation, atmosphere-topography interactions.

Karl J. Kreutz, Ph.D. (New Hampshire, 1998), Associate Professor. Stable isotope geochemistry, paleoceanography, ice core geochemistry.

Andrei Kurbatov, Ph.D. (SUNY Buffalo, 2001), Research Assistant Professor. Explosive volcanism, tephrochronology, glaciochemistry.

Daniel R. Lux, Ph.D. (Ohio State, 1981), Professor. Isotope geochemistry, geochronometry.

Kirk A. Maasch, Ph.D. (Yale, 1989), Professor. Climate Modeling.

Paul A. Mayewski, Ph.D. (Ohio State, 1973), Professor. Glaciology, paleoclimatology, ice core geochemistry.

Stephen A. Norton, Ph.D. (Harvard, 1967), Professor Emeritus. Environmental geochemistry.

Amanda A. Olsen, Ph.D. (Virginia Tech, 2007), Assistant Professor. Environmental geochemistry.

Andrew S. Reeve, Ph.D. (Syracuse, 1996), Associate Professor. Hydrogeology.

Martin Yates, Ph.D. (Indiana, 1987), Associate Scientist. Electron beam and X-ray facilities, ore deposits.