

GEOLOGY

<http://www.uvm.edu/~geology/>

OVERVIEW

The Master of Science in geology is a rigorous research thesis program with grounding in related course work. Research programs include environmental geology; geomorphology; water resources; environmental (bio)geochemistry; mineralogy; sedimentary, igneous and metamorphic environments; geochronology and structural geology; tectonics; and the evolution of orogen. Examples of specific faculty interests include geologic history and recent sedimentation in the Lake Champlain Basin; processes and chronology of glaciation; stable and cosmogenic isotopic studies; water quality and pollutant transport; crystal chemistry and crystallography; mineral structure analysis; molecular-scale environmental mineralogy; (bio)geochemical cycling in the critical zone; the tectonic evolution of continental margins and interiors; petrofabric and structural analysis of deformed rocks; partial melting and deep crustal processes; timing of deformation and rates of tectonic processes; and stratigraphy and sedimentary environments of lower Paleozoic sandstones and carbonates.

DEGREES

Geology M.S.

FACULTY

Klepeis, Keith Andrew; Professor, Department of Geography and Geosciences; PHD, University of Texas Austin

Lini, Andrea; Associate Professor, Department of Geography and Geosciences; PHD, ETH-Zurich

Perdrial, Julia Nathalie; Assistant Professor, Department of Geography and Geosciences; PHD, Université Louis-Pasteur, Strasbourg, France

Perdrial, Nicolas; Research Assistant Professor, Department of Geography and Geosciences; PHD, Université Louis-Pasteur, Strasbourg, France

Schroth, Andrew W.; Research Associate Professor, Department of Geography and Geosciences; PHD, Dartmouth College

Webb, Laura E.; Associate Professor, Department of Geography and Geosciences; PHD, Stanford University

Courses

GEOL 5405. Gr Geochem of Natural Waters. 3 Credits.

Basic concepts of chemical equilibria applied to natural waters, including thermodynamics, pH, oxidation-reduction, weathering, and solution equilibria. Prerequisite: Graduate student.

GEOL 5990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

GEOL 6391. Master's Thesis Research. 1-9 Credits.

Research for the Master's Thesis.

GEOL 6400. Topics in Envt & Surface Geo. 1-3 Credits.

Exploration of geologic constraints on environmental problems such as groundwater flow, contaminant transport, slope stability, climate change, sedimentation, deforestation, and earthquake hazards.

Extensive readings and student-led discussions. May repeat for credit with different content. Topics vary by offering; periodic offering at intervals that may exceed four years. Prerequisite: Graduate student in science, natural resources, or engineering.

GEOL 6990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

GEOL 6991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

GEOL 6993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

GEOL 6994. Teaching Assistantship. 1-3 Credits.

Student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

GEOL 6995. Graduate Independent Research. 1-18 Credits.

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.