

MIAMI UNIVERSITY

GRADUATE PROGRAMS IN GEOLOGY



MIAMI'S Department of Geology offers three programs for advanced study (Ph.D., M.S., and M.A.). Both the Ph.D. and the M.S. degrees require a substantial component of original research culminating in a dissertation or thesis, respectively. The M.A. is a non-thesis degree.

RESEARCH EMPHASES

- Geomicrobiology and life in extreme environments
- Geophysics, seismology, and mantle dynamics
- Hydrogeology and contaminant transport
- Igneous petrology and volcanology
- Isotope Geochemistry
- Low-temperature and environmental geochemistry
- Mineralogy and crystallography
- Mineral surface geochemistry
- Paleobotany and Paleoecology
- Paleoclimatology and geomorphology
- Sedimentology and stratigraphy
- Tectonics and structural geology

RESEARCH FACILITIES

The Department of Geology houses research laboratories for the investigation of earth materials and processes. Many of the laboratories support material preparation and analysis using departmental instrumentation including: DC plasma spectrometer, multi-collector thermal ionization mass spectrometer, HPLC ion chromatograph, atomic force/scanning tunneling microscope, single-crystal and powder x-ray diffractometers, electrophoretic mobility analyzer, streaming potential analyzer, portable seismometers, and cathode luminescence. Additional shared facilities on campus include microbiology laboratories, scanning and transmission electron microscopy laboratories, ICP-MS laboratory, remote sensing and GIS computer laboratories, and an ecology research center. Collaborations with numerous research laboratories and institutions provide access to facilities not available on campus. The Department maintains active field programs around the world and a field station in Wyoming.

FINANCIAL ASSISTANCE

All current students are supported by nine-month teaching or research assistantships plus duty-free summer stipends. These awards carry full tuition waivers for the academic year and summer terms. Applications for graduate study and financial support should be received no later than February 1 for the following academic year.

FACULTY

Mark R. Boardman (professor)

Ph.D. University of North Carolina 1978
Carbonate sedimentology, geochemistry, climatology

Michael R. Brudzinski (assistant professor)

Ph.D. University of Illinois at Urbana 2002
Geophysics, seismology, mantle dynamics

Ellen Currano (assistant professor)

Ph.D. Pennsylvania State University 2008
Paleobiology, paleobotany, paleoecology

Brian S. Currie (associate professor)

Ph.D. University of Arizona 1998
Tectonics, sedimentology, basin analysis

Yildirim Dilek (distinguished professor)

Ph.D. University of California at Davis 1989
Tectonics, structural geology, tectonic geomorphology

Hailiang Dong (professor)

Ph.D. University of Michigan 1997
Geomicrobiology, geochemistry, mineralogy

William K. Hart (professor and chair)

Ph.D. Case Western Reserve University 1982
Volcanology, igneous petrology and geochemistry

Mark P. Krekeler (assistant professor)

Ph.D. University of Illinois at Chicago 2003
Clay mineralogy, environmental geochemistry

Jonathan Levy (associate professor)

Ph.D. University of Wisconsin at Madison 1993
Hydrogeology, contaminant transport

John F. Rakovan (associate professor)

Ph.D. SUNY at Stony Brook 1996
Mineral surface geochemistry, mineralogy

Jason A. Rech (associate professor)

Ph.D. University of Arizona 2001
Paleoclimatology, surficial processes, geochemistry

Elisabeth Widom (professor)

Ph.D. University of California at Santa Cruz 1991
Isotope geochemistry, crust/mantle processes

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