

UNDERGRADUATE PROGRAM IN GEOLOGICAL SCIENCES



Geoscientists are the caretakers of the Earth's resources and environment. They work to understand natural processes on Earth and other planets. Geoscientists enjoy the earth. It is an outdoor laboratory filled with opportunities to observe earth processes in action.

By applying their knowledge of physical, chemical and biological forces that shape the Earth, geoscientists seek to reconstruct the past and anticipate the future.

Careers opportunities in the geosciences are excellent, including an immediate hiring surge in the petroleum and mineral exploration industries, a continuing strong demand in the environmental industry, and a projected demand for certified geoscience educators.

Students can choose a B.Sc. degree, specifically designed for students preparing for graduate study and professional careers in the geosciences, or a B.A. degree, designed for careers in education, business, law, or science journalism. A new 5 year B.Sc./M.S. degree, offered in collaboration with the Marine Geology and Geophysics Division at the Rosenstiel School of Marine and Atmospheric Science, one of the country's leading oceanographic institutions, allows qualified students to complete a master's degree in just one additional year of study beyond the B.Sc.

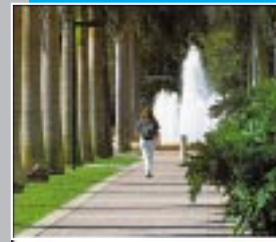


RESEARCH OPPORTUNITIES AT THE UNIVERSITY OF MIAMI



Undergraduate research opportunities are available with geoscience faculty both on the Coral Gables campus and at the Rosenstiel School of Marine and Atmospheric Science. Specialized facilities

include a Stable Isotope lab, Space Geodesy lab, SEM facility, Infrared Spectroscopy lab, GIS lab, Paleomagnetism lab, Seismic Reflection lab and Carbonate Sedimentology lab. Field opportunities are available in the Everglades, the Caribbean region, and coral reefs around Florida, the Bahamas, and Belize. Field trips are offered to Newfoundland and the US southwest.



FOR MORE INFORMATION ABOUT THE PROGRAM

On the Web: <http://www.as.miami.edu/geology>

Chairman
Dept. Of Geological Sciences
University of Miami
44 Cox Science Building
Coral Gables, FL 33124-0401

Admissions
University of Miami
Office of Admissions
P.O. Box 248025
Coral Gables, FL 33146

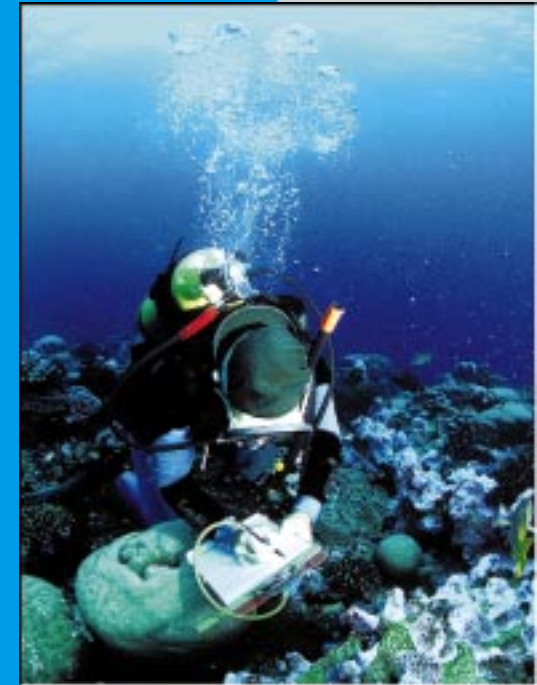
Application deadline is March 1

For U.S. Students
Phone: (305) 284-4323
Fax: (305) 284-2507
email: admission@miami.edu

For International Students
Phone: (305) 284-2271
Fax: (305) 284-6811
email: intladmis@admiss.ms.miami.edu

THE UNIVERSITY OF MIAMI COLLEGE OF ARTS AND SCIENCES

UNDERGRADUATE PROGRAM IN GEOLOGICAL SCIENCES



UNIVERSITY OF
Miami



Sedimentary Processes, Paleontology & Paleoecology: For students preparing for graduate study and professional careers in surficial processes; stratigraphy; coastal zone environments and processes; biotic-substrate interactions; paleoenvironmental reconstruction, historical evolution of environments, documentation of effects of pollution and anthropogenic changes on the environment, landscape and seascape evolution. Elective courses include: *Advanced Sedimentary Processes, Paleontology, Micropaleontology, Paleoclimatology, Paleoecology, Facies Models and Basin Analysis, Diagenesis of Carbonate Sediments, Environmental Remote Sensing, Fluxes of Energy and Matter in the Earth's System, and Scanning Electron Microscopy.*

Environmental Earth Science and Hydrogeology: For students preparing for graduate study, professional careers and management/policy careers in landscape/coastal-zone/ocean bottom management, geohazard mitigation, groundwater movement and resources, pollutant migration and containment, radioactive waste storage, and processes affecting water quality and quantity. Elective courses include: *Hydrogeology, Environmental Remote Sensing, Isotopes and Nuclear Geology, and Fluxes of Energy and Matter in the Earth's System.*



REQUIREMENTS FOR DEGREE IN GEOLOGICAL SCIENCES



Core Curriculum

| Course Title | Course # | Credit hours |
|---------------------------------------|--------------------|--------------|
| Physical Earth Systems | GSC 110 | 4 |
| Earth History | GSC 111 | 4 |
| Earth Materials | GSC 260 | 4 |
| Depositional Systems | GSC 360 | 4 |
| One of: Geochemistry or Geophysics | GSC 410 GSC 514 | 3 |
| Structure | GSC 480 | 4 |
| Field Methods | GSC 482 | 2 |
| Colloquium | GSC 574 | 1 |
| Core Courses | Total | 26 |

Additional requirement for B.Sc. Degree:
Field Geology GSC 580 4

Electives: Elective courses allow concentration in areas described on the side panels.

| | Credit Hours Electives | Total Credit Hours for Major |
|--|---------------------------|------------------------------------|
| For B.Sc. Degree | 9 | 39 |
| For Marine Science/Geological Science Double Major & 5 yr. B.Sc./M.S. | 6 | 36 |
| For B.A. | 3 | 29 |



Structure, Tectonics and Geophysics For students preparing for graduate study and professional careers in dynamics of the Earth's crust, detecting and monitoring active geologic processes, economic geology, and geohazard mitigation. Elective courses include: *Continental Structure and Tectonics, Igneous and Metamorphic Petrology, Applied Environmental Geophysics, Plate Tectonics, Environmental Remote Sensing, and Fluxes of Energy and Matter in the Earth's System.*

Petrology, Volcanology & Geochemistry For students preparing for graduate study and professional careers in studies of formation and differentiation of the Earth's interior, volcanology, economic geology, and high- and low-temperature geochemistry. Elective courses include: *Igneous and Metamorphic Petrology, Economic Geology, Isotopes and Nuclear Geology, Rock Forming Minerals, Volcanoes and Society, and Fluxes of Energy and Matter in the Earth's System.*

