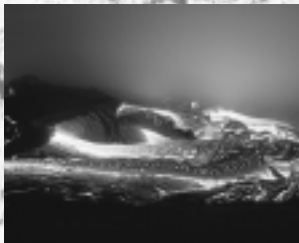


THE STATE UNIVERSITY OF NEW JERSEY

RUTGERS
NEWARK

Rutgers-Newark
**GEOLOGICAL
SCIENCES
AND
GEOSCIENCE
ENGINEERING**





Number of students in program	24
Average size of upper-level classes	18
Number of undergraduate courses	27

What Is Geological Sciences?

Geological Sciences, the science of the Earth, encompasses all of the other sciences (biology, chemistry, and physics) as they apply to the Earth and includes earthquakes, volcanoes, and dinosaurs among others. It has strong applications to the environmental industry, energy exploration, mining, gemology, and industrial minerals like abrasives, cement, catalysts, and strategic metals. Graduates find ready employment in these fields as well as careers in environmental law, industrial sales, and business.



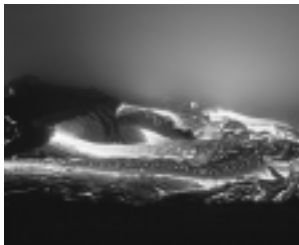
What Majors Are Offered by the Department?



The BA in Geological Sciences is designed to prepare students for careers in geology. There are two tracks in this major.

Track A is the classical track. It includes all of the standard courses in geology with emphasis on the physical processes.

Track C is the environmental sciences track. It includes some standard courses as well as courses that deal directly with the environment and surficial processes.



The BSE in Geoscience Engineering is offered collaboratively with the Department of Civil and Environmental Engineering at New Jersey Institute of Technology (NJIT). Geoscience Engineering is the application of technology to the study of the Earth. It is designed to prepare students for employment in the environmental industry. The curriculum is designed for Professional Engineer (PE) certification.

The BS in Environmental Sciences is a collaborative major among Geology, Biology and the Department of Chemical and Environmental Engineering at NJIT but administered through Geology. This program emphasizes the biochemical aspects of the environment in addition to the physical aspects.

What Minors Are Offered by the Department?

A 20 Credit minor in Geology is offered by the department.

What Does the Job Market Offer Graduates with a Major in Geological Sciences or Geoscience Engineering?

At present, all graduates in Geology are finding ready employment in the environmental industry. The demand for Geologists is high and has historically been high. Some graduates have been hired to work in industrial minerals, engineering companies, governmental regulatory agencies, education, and the energy industry. Several others combine Geology with business, law, or management among others to find excellent opportunities in those fields.

Considering a Minor Related to the Geology Major? What Does the Department Recommend?

Chemistry
Computer Science
Biological Sciences
Mathematics
Physics
Business

What Courses Are Offered by the Department?

Planet Earth and Lab
Environmental Geology and Lab
Meteorology
Oceanology
Geologic Field Problems
Geomorphology
Paleontology
Structural Geology
Mineralogy
Petrology
Stratigraphy
Geophysics
Optical Mineralogy
Geochemistry
Hydrogeology
Soil Chemistry
Geologic Research

What Courses in Geology Are Offered by Other Departments?

Paleobotany
Remote Sensing
GIS
Photogrammetry
Coastal Geomorphology

Can Undergraduates Get Involved in Research with Faculty Members?

Yes! Recent Topics Include:

Geoarcheology of Cyprus
Acid Mine Drainage in the Hudson Highlands
Radon Distribution in Glacial Deposits
Chemical Changes in the Zero Fault Zone
Strike-Slip Deformation on Venus
Geothermometry of the Manhattan Schist
Geochemistry of the Snake Hill Intrusion

For What Types of Graduate Programs Are Geological Sciences Students Qualified?

The BA program in Geological Sciences and BSE in Geoscience Engineering prepare students for graduate school in those disciplines as well as Environmental Sciences. Environmental Science majors can continue their education in that field. Graduate schools attended by our graduates include: California State, North Ridge, CUNY, Montclair State University, NJIT, Princeton University, Rutgers University, University of Massachusetts at Amherst, University of Virginia, and Virginia Tech.

FOR ADDITIONAL INFORMATION ABOUT GEOLOGICAL SCIENCES, GEOSCIENCE ENGINEERING, AND ENVIRONMENTAL SCIENCES CONTACT:

Dr. Alexander E. Gates
Department of Geological Sciences
Rutgers University-Newark
407 Boyden Hall
Newark, NJ 07102

FOR ADMISSION INFORMATION:

Rutgers University-Newark

Office of Admission
249 University Avenue
Newark, NJ 07102-1896
973-353-5205

Major Requirements listed in this brochure are subject to final department approval.

