THE PROFESSION OF GEOLOGY

Professional geologists are found in many fields, some of which are relatively new to the discipline. The largest single employer is the U.S. Geological Survey whose responsibilities are quite varied. Energy companies hire nearly half of all geologists as the search continues for new supplies of gas, oil, coal and uranium. Most states, including West Virginia, have geological surveys and many smaller government related districts including counties and municipalities are realizing the need for professional geological staffs.

The search for new rock and economic mineral deposits must continue as nations, ours included, continue to develop. Mining companies actively employ geologists for known ore body reserve evaluations and for the discovery of new deposits. Geologists are also employed by railroads, sand and gravel companies, chemical companies, cement and ceramics industries, by construction firms, and by geotechnical and engineering companies. Many financial institutions, such as banks, retain geological consultants.

Teaching and research are also active pursuits of geologists. Advanced degrees are usually required, but many college professors balance teaching with research. Public school systems frequently offer earth science as part of their curriculum creating a definite need for properly trained people in this area.

Fields relatively new to geology include: environmental geology, astrogeology, remote sensing, oceanography, forensic geology and geomedicine. The private business section also includes many geologists who serve as consultants to many and varied clients. According to recent analyses of the available job markets by private and governmental agencies the field of geology is one of the top professions for employment and is predicted to remain so for some time. Pay scales are above average to well above average for all degree levels. The need for basic energy supplies and raw materials for mineral based industries will continue to increase and thus the need for geologists will remain high.

As a discipline, the professional finds the field of geology very satisfying. Problems that geologists address and variables associated with them are often difficult to decipher, but challenging. Such problems may be completely field oriented or laboratory oriented or both. Successful completion of a project or problem is usually very rewarding.

FINANCIAL AID AND SCHOLARSHIPS

The Geology Department provides on a competitive basis, an academic scholarship, a tuition waiver, a field camp scholarship for undergraduates and a teaching assistantship for a graduate student.

For more information about the Geology Department at Marshall University, please visit:

www.marshall.edu/geology

Or you may contact or stop by our Office:

Marshall University
Geology Department
One John Marshall Drive
Science Building, Room 176
Huntington, WV 25575
Phone: (304) 696-6720
Email: geology@marshall.edu

GEOLoGY

Marshall University

We Are... Marshall™
We Are... Geology
GEOLOGY AT MARSHALL UNIVERSITY

Geology is the science which deals with the composition, structure and history of the earth and the processes that have contributed to them. As a discipline, Geology is both theoretical and practical, dealing with problems ranging from "How did the early earth differ from the earth today?" to "Can we safely put a dam across the river?" Often the role of the geologist is similar to that of a detective whereby the facts must be gathered, analyzed and interpreted.

Faculty of the Department of Geology are active geoscientists selected for their interests in undergraduate teaching, graduate teaching and research. Each has demonstrated competency in selected fields of specialization. Members of the faculty and their fields of specialization are:

Dr. Aley El-Shazly
Ph.D. Stanford University, 1991
Mineralogy, Petrography, Geochemistry

Dr. Ronald L. Martino
Ph.D. Rutgers University, 1980
Paleontology, Stratigraphy, Sedimentology

William L. Niemann, Chair
Ph.D. University of Missouri-Rolla, 1999
Engineering Geology, Geomorphology, Environmental Geology

Dr. Dewey D. Sanderson
Ph.D. Michigan State University, 1972
Structural Geology, Geophysics, Hydrogeology

Advanced class enrollments are limited to 25 students in order to maintain low faculty to student ratios. Senior majors are encouraged to participate in faculty-student research projects or conduct independent research of their own. Although the geology department does not have its own field camp, students are encouraged to attend approved summer field camps. Practical experience is gained from periodic field trips to geologic localities in the Appalachian Region. Faculty maintain a very flexible availability to students for consultation and informal talks.

PROGRAMS OF STUDY

The Department of Geology has academic programs designed to give students sound backgrounds in Geology and related sciences of Biology, Chemistry, Physics and Mathematics. The B.S. program will prepare the student for entry into industry or continued study on the graduate level. The department also has two areas of concentration available, engineering geology and environmental geology.

Geology has a CO-OP program with the U.S. Army Corps of Engineers. Those students enrolling in the CO-OP program can work part-time and gain practical experience while going to school.

GRADUATE PROGRAM

The Department of Geology offers the Master of Science Degree in Physical Science in cooperation with the departments of Chemistry, Mathematics, and Physics and Physical Science. The program is intended to provide a broadly based program for those students whose undergraduate science program lacks breadth or depth. Individual student needs and desires are of prime importance in designing programs.

FACILITIES

The Department of Geology is housed in the Science Building. Facilities include laboratories for rock and mineral preparations, sedimentation studies, paleontology, geochemistry, air photo interpretation, and geophysics. Equipment is available for mass spectrometry, X-ray diffraction and fluorescence, earth resistivity, atomic absorption, seismic refraction, magnetic susceptibility, spectroscopy, scanning electron microscope, rock compression testing, and stream flow analysis.