

WHAT CAN I DO WITH A MAJOR IN ... EARTH & PLANETARY SCIENCES

OCCUPATIONAL OVERVIEW:

Study composition, structure, and history of the earth's crust; examine rocks, minerals, and fossil remains to identify and determine the sequence of processes affecting the development of the earth; apply knowledge of chemistry, physics, biology, and mathematics to explain these phenomena and to help locate mineral and petroleum deposits and underground water resources; prepare geologic reports and maps; and interpret research data to recommend further action for study.

EMPLOYMENT REQUIREMENTS:

[Extensive Job Preparation Needed]

A bachelor's degree is the minimum formal education required. However, many employers also require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

EMPLOYERS & SUGGESTED STRATEGY:

Please ask your Career Advisor (CDF) for identifying employers or additional resources for your occupation of choice.

Resources: Consulting firms - Equipment suppliers - Federal government agencies such as: Department of Energy, Bureau of Land Management - Independent drilling companies - Petroleum industry including oil and gas exploration, production, storage, and waste disposal facilities - Private companies - State government

Suggested Strategy: Because geologists often work closely with engineers, obtain some knowledge in engineering to aid communication. Gain knowledge of computer modeling and Global Positioning System (GPS). Many geologists in this area of expertise work with oil and gas and may work in the geographic areas where deposits are found: Texas, Oklahoma, Louisiana, California, offshore sites, or overseas in oil-producing countries. This industry is subject to fluctuations, so be prepared to work on a contract basis. Develop excellent writing skills to publish reports and to solicit grants from government, industry, and private foundations. In order to manage projects, obtain management and leadership experience.

Minerals: Coal companies - Construction firms - Consulting Firms - Federal government agencies such as: Bureau of Mines, Office of Surface Mining, BLM - Mining Companies - Quarries - Railroad companies - Well services and drilling companies

Suggested Strategy: Become familiar with environmental regulations and government permit issues. Mining geologists rely heavily on the computerized Geologic Block Model to learn about a mineral deposit, so computer literacy is essential.

Landscape: Federal government agencies such as: Environmental Protection Agency, Forest Service, Army Corps of Engineers, US Geological Survey, Bureau of Land Management, Department of Defense

Suggested Strategy: Obtain a great deal of lab experience. Consider obtaining a double major in physics because of the geophysical nature of this concentration area. Gain a thorough understanding of federal and state government guidelines for the management of solid, liquid, and gaseous waste. Consider a law degree for work with land-use laws and legal matters.

Astrogeology & Space Sciences: Federal government agencies such as: National Aeronautics and Space Association (NASA) and the US Geological Survey

Suggested Strategy: Work in this area often requires many years of experience and developed research. A PhD is often required. Develop extraordinary analytical writing skills for grant writing and research.

STATE & NATIONAL WAGES (2006) FOR GEOSCIENTISTS, EXCEPT HYDROLOGISTS & GEOGRAPHERS:

	10 %	25 %	Median	75 %	90 %
New Mexico	\$ 43,100	\$ 49,100	\$ 66,400	\$ 81,300	\$ 107,200
United States	\$ 39,700	\$ 51,900	\$ 72,700	\$ 100,700	\$ 135,900

STATE & NATIONAL WAGES (2006) FOR MINING & GEOLOGICAL ENGINEERS:

	10 %	25 %	Median	75 %	90 %
New Mexico	\$ 51,400	\$ 56,600	\$ 65,200	\$ 82,500	\$ 121,000
United States	\$ 42,000	\$ 54,400	\$ 72,200	\$ 94,100	\$ 128,400

NATIONAL WAGES (2006) FOR ASTRONOMERS:

	10 %	25 %	Median	75 %	90 %
United States	\$ 44,600	\$ 62,000	\$ 95,700	\$ 125,400	\$ 145,600+

NATIONAL WAGES (2006) FOR EARTH & PLANETARY SCIENCE POSTSECONDARY TEACHERS:

	10 %	25 %	Median	75 %	90 %
United States	\$ 32,900	\$ 46,500	\$ 64,800	\$ 89,700	\$ 119,300

INFORMATIONAL WEBSITES:

UNM Department of Earth & Planetary Sciences
 UNM Institute of Meteoritics
 NASA Planetary Datasystem
 NASA Astromaterials Curation
 NASA Astrobiology Institute
 Earth Impact Database

<http://epswww.unm.edu/>
<http://epswww.unm.edu/iom/home.html>
<http://pds.jpl.nasa.gov/>
<http://www-curator.jsc.nasa.gov/>
<http://astrobiology.nasa.gov/nai/>
<http://www.unb.ca/passc/ImpactDatabase/index.html>

OTHER INFORMATIONAL WEBSITES:



<http://online.onetcenter.org>



<http://www.bls.gov/oco/>