



Geological and Petroleum Technician Overview

The Field - Preparation - Day in the Life - Earnings -
Employment - Career Path Forecast - Professional Organizations

The Field

Geological and petroleum technicians measure and record physical and geologic conditions in oil or gas wells, using advanced instruments lowered into the wells or analyzing the mud from the wells. In oil and gas exploration, technicians collect and examine geological data or test geological samples to determine their petroleum content and their mineral and element composition. Some petroleum technicians, called scouts, collect information about oil well and gas well drilling operations, geological and geophysical prospecting, and land or lease contracts.



Preparation

Most science technicians need an associate degree in applied science or science-related technology. Many employers prefer applicants who have at least 2 years of specialized training or an associate degree in applied science or science-related technology.

Many technical and community colleges offer associate degrees in a specific technology or more general education in science and mathematics. A number of associate degree programs are designed to provide easy transfer to bachelor's degree programs at colleges or universities.



Graduates of bachelor's degree programs in science who have considerable experience in laboratory-based courses, have completed internships, or have held summer jobs in laboratories also are well qualified for science technician positions and are preferred by some employers.

Some schools offer cooperative-education or internship programs, allowing students the opportunity to work at a local company or some other workplace while attending classes during alternate terms. Participation in such programs can significantly enhance a student's employment prospects.

"Geological and Petroleum Technician Overview"

Prepared as part of the Sloan Career Cornerstone Center (www.careercornerstone.org)

Note: Some resources in this section are provided by the US Department of Labor, Bureau of Labor Statistics.

Precollege Prep

People interested in careers as science technicians should take as many high school science and math courses as possible. Science courses taken beyond high school, in an associate or bachelor's degree program, should be laboratory oriented, with an emphasis on bench skills. A solid background in applied chemistry, physics, and math is vital.



Other Skills

Communication skills are important because technicians are often required to report their findings both orally and in writing. In addition, technicians should be able to work well with others. Because computers often are used in research and development laboratories, technicians should also have strong computer skills, especially in computer modeling. Organizational ability, an eye for detail, and skill in interpreting scientific results are important as well, as are a high mechanical aptitude, attention to detail, and analytical thinking.

Technicians usually begin work as trainees in routine positions under the direct supervision of a scientist or a more experienced technician. As they gain experience, technicians take on more responsibility and carry out assignments under only general supervision, and some eventually become supervisors. However, technicians employed at universities often have job prospects tied to those of particular professors; when those professors retire or leave, these technicians face uncertain employment prospects.

Day in the Life

Geological and petroleum technicians work under a wide variety of conditions. They perform much of their work outdoors sometimes in remote locations. Some occasionally work irregular hours to monitor experiments that cannot be completed during regular working hours.

Advances in automation and information technology require technicians to operate more sophisticated laboratory equipment. Science technicians make extensive use of computers, electronic measuring equipment, and traditional experimental apparatus.



Earnings

According to the U.S. Bureau of Labor Statistics, the median hourly earnings of geological and petroleum technicians are about \$22.19 per hour.

Employment

Geological and petroleum technicians hold about 12,000 jobs in the United States.

"Geological and Petroleum Technician Overview"

Prepared as part of the Sloan Career Cornerstone Center (www.careercornerstone.org)

Note: Some resources in this section are provided by the US Department of Labor, Bureau of Labor Statistics.

Career Path Forecast

Average employment growth is expected for geological and petroleum technicians through 2016. Job growth should be strongest in professional, scientific, and technical services firms because geological and petroleum technicians will be needed to assist environmental scientists and geoscientists as they provide consultation services for companies regarding environmental policy and Federal Government mandates, such as those requiring lower sulfur emissions.



In addition to job openings created by growth, many openings should arise from the need to replace technicians who retire or leave the labor force for other reasons. Geological and petroleum technicians should experience little competition for positions because of the relatively small number of new entrants.

Professional Organizations

Professional societies provide an excellent means of keeping current and in touch with other professionals in the field. These groups can play a key role in your development and keep you abreast of what is happening in your field. Associations promote the interests of their members and provide a network of contacts that can help you find jobs and move your career forward. They can offer a variety of services including job referral services, continuing education courses, insurance, travel benefits, periodicals, and meeting and conference opportunities. The following is a partial list of professional associations serving geological and petroleum technicians.



- ▶ **American Geological Institute (www.agiweb.org)**
- ▶ **Association for Women Geoscientists (www.awg.org)**
- ▶ **American Association of Petroleum Geologists (www.aapg.org)**
- ▶ **Society of Petroleum Engineers (www.spe.org)**

"Geological and Petroleum Technician Overview"

Prepared as part of the Sloan Career Cornerstone Center (www.careercornerstone.org)

Note: Some resources in this section are provided by the US Department of Labor, Bureau of Labor Statistics.