

DELTA COLLEGE
COUNSELING/ADVISING & CAREER SERVICES
CHEMICAL TECHNICIAN

Salary Range: \$24,250 - \$54,580 annually

Personal Interests: Activities using special machines, processes and techniques

Work Environment: Generally indoors in laboratories

Description

Chemical Technicians work with the direction of chemists and chemical engineers to use, sell, and develop chemical and related products and equipment. Most Chemical Technologists work with testing and quality control; research and development; pilot plant operations; and other laboratory work.

Chemical Technicians may conduct chemical and physical laboratory tests. They also set up, adjust, operate, and maintain laboratory equipment and instruments needed for tests, research, or process control. Chemical Technicians might prepare and standardize solutions for use as reagents. Some chemical technicians analyze soils, liquids, and gasses to develop new products and processing methods or to maintain health and safety standards. They also analyze finished products such as foods, drugs, plastics, dyes, and paints to determine composition, purity and other characteristics of chemical content. Some may test experimental products for potential use, ores, minerals, gases, and other materials for the presence and percentage of elements and substances such as carbon, tungsten, nitrogen, iron, gold, or nickel. One may prepare chemical solutions for use in processing materials such as textiles, detergents, paper, felt, and fertilizers following standard formulas or experimental procedures. They prepare technical reports including charts, tables, and graphs. Chemical technicians also

compute and analyze results of tests and experiments, and keep precise and detailed records of the results. They also contribute to the solution of chemical-related problems and assist in the design and installation of production equipment.

Working Conditions

Chemical technicians usually work under the direction of a chemist, chemical engineer, or laboratory supervisor. Some technicians supervise operation in the production of chemical products and may train and supervise several other workers. The work itself may range from uncomplicated, routine tasks to those that are highly complex and challenging.

Chemical technicians usually work under safe conditions in a well-lighted, well-ventilated, and comfortable environment. Modern laboratories manufacturing plants are well equipped to ensure that all operations are conducted safely. Exhaust systems remove unpleasant or dangerous fumes. The use of toxic chemicals is carefully regulated, and flammable or explosive chemicals are used only under maximum safety conditions. Safety precautions are taken in all activities. Technicians may be required to stand for long periods of time.

The hours of work usually follow the normal five day, forty hour week except when processes or tests must be completed without interruption. Large

industrial companies operating around-the-clock or research labs may employ technicians on more than one shift.

Technicians who conduct field tests or work as sales representatives are required to do some traveling.

Training, Other Qualifications

There are several ways to qualify for a job as a chemical technician. Many employers prefer applicants who have at least 2 years of specialized training or an Associate Degree in Applied Science or science-related technology. Because employers' preferences vary, however, some science technicians have a bachelor's degree in chemistry or biology or have taken several science and math courses at 4-year colleges.

Many technical and community colleges offer associate degrees in a specific technology or a more general education in science and mathematics. Technical institutes usually offer technician training, but provide less theory and general education than technical or community colleges. The length and programs at technical institutes varies, although 1-year certificate programs and 2-year associate degree programs are common. Some schools offer cooperative-education or internship programs, allowing students the opportunity to work at a local company or other workplace, while attending classes in alternate terms. Participation in such programs can significantly enhance a student's employment prospects.

The Chemical Technology program at Delta College includes core courses that allow flexibility in choosing a technical focus. Degrees in Water/Wastewater Treatment Technology, Chemistry, Biology, Physics or Engineering may

also be pursued using most of the credits from this program. The Chemical Process Technology program prepares you for employment as a process operator in the chemical/material processing industry.

Job Outlook

Employment of chemical technicians is expected to increase about as fast as average for all occupations in Michigan through the year 2014. Approximately 110 openings can be expected annually. Continued growth of scientific and medical research should stimulate demand for technicians.

Earnings

The earnings of chemical technicians vary depending on their education, ability, work experience, level of responsibility, employer, and geographic location. Average wages in May 2006:

Area	Average
National	\$40,970
Michigan	\$37,300
Detroit	\$39,740
Grand Rapids	\$44,470
Lansing	\$38,490

Related Occupations

Engineering Technician, Textile Science Technician, Environmental Technicians, and Health Technologists.

Chemical Technology.doc TK 10/01 updated 9/07
Sources: Occupational Outlook Handbook, MI Occupational Information System, Delta College Catalog, and the Michigan Department of Career Development, Employment and Wage Estimates.

Career Center, D 132
Bay City/Saginaw: (989) 686-9072
Midland/Auburn: (989) 495-4000, Ext. 9072
Frankenmuth, Birch Run, Reese & Vassar: (989) 758-3400, Ext. 9072
<http://www.delta.edu/careercenter>

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These materials were developed under a grant awarded by the Michigan Department of Labor & Economic Growth. (Project 7021-4)