

What do they do?

Chemical process technicians team with engineers to operate and maintain the equipment used to conduct chemical processes. Taking care of the equipment and controlling continuous and batch processes are their key responsibilities. They also handle, store, and transport chemical materials, and they operate and maintain equipment that is essential to the plant's operation. To perform these tasks, they typically are very familiar with the equipment, its design and operation. Equipment operation may include performing shift tasks, troubleshooting, making rounds, monitoring the process, and documenting process information. Taking samples, analyzing plant materials, and ensuring quality control are other important responsibilities. In addition, process technicians inspect the equipment, provide routine and preventative maintenance, and remove equipment from service or place it in service. Additional responsibilities include maintaining regulatory and environmental standards, preventing fires and accidents, and carrying out housekeeping duties. Process technicians play a critical role in all aspects of chemical manufacturing in the chemical process industry. They are very skilled technicians with a high level of responsibility.



Careers as Chemical Process Technicians



AMERICAN CHEMICAL SOCIETY



What is their work environment?

Chemical process technicians work in chemical manufacturing plants ranging from small pilot plants to very large facilities. Many plants run continuous and batch processes simultaneously, requiring different types of manufacturing equipment. Such equipment typically includes electrical motors, compressors, pumps, steam turbines, steam traps, valves, bearings, seals, and instruments. Larger equipment, such as reactors, distillation units, refrigeration units, water treatment systems, utilities, pressure relief equipment, boilers, furnaces, and heat exchangers, may also be used. In many cases, processes are monitored and controlled from a unit control room staffed by process technicians.

What skills do chemical companies expect them to have?

Chemical manufacturers spend millions of dollars on equipment, maintenance, process control, and waste management. Employers expect chemical process technicians to possess and practice the technical skills that are required for optimum performance. Employers value their process technicians, often providing additional in-plant training in specific areas to supplement their formal chemical technology training. In addition to technical knowledge, employers look for an individual's adaptability; personal motivation; customer focus; and communication, organizational, problem-solving, and teamwork skills.

Chemical Process Technicians

The chemical process industry plays a significant role in U.S. businesses and our economy, serving the pharmaceutical, food and beverage, textile, petroleum processing, plastic, paint, cosmetic, and other sectors. Every day you encounter products and services that are supported by the chemical process industry. Chemical process technicians play a key role in helping to provide products and services through chemical technology.



What kind of education do they need?

In today's chemical processing industry, companies demand technicians to have a solid foundation in applied chemical processing skills, and basic chemistry and math, along with experience using various kinds of manufacturing equipment and instrumentation. The best preparation is a two-year associate of applied science (AAS) degree program. Since a significant portion of the workforce in the chemical process industry will be retiring in the next decade, there is a large and growing demand for chemical process technicians. As a result, pay scales are very competitive with those offered for most entry-level jobs for B.S. degree holders.