Job Outlook

Employment of chemical engineers is projected to grow 6 percent from 2018 to 2028, about as fast as the average for all occupations. Demand for chemical engineers' services depends largely on demand for the products of various manufacturing industries.

State & Area Data

Explore resources for employment and wages by state and area for chemical engineers.

Similar Occupations

Compare the job duties, education, job growth, and pay of chemical engineers with similar occupations.

More Information, Including Links to O*NET

Learn more about chemical engineers by visiting additional resources, including O*NET, a source on key characteristics of workers and occupations.

What They Do ->

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Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Chemical Engineers,

on the Internet at https://www.bis.gov/ooh/architecture-and-engineering/chemical-engineers.htm (visited December 05, 2019).

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Chemical Engineers

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Chemical engineers develop and design chemical

manufacturing processes

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What Chemical Engineers Do

Chemical engineers apply the principles of chemistry, biology, physics, and math to solve problems that involve the production or use of chemicals, fuel, drugs, food, and many other products. They design processes and equipment for large-scale manufacturing, plan and test production methods and byproducts treatment, and direct facility operations.

Duties

Chemical engineers typically do the following:

- Conduct research to develop new and improved manufacturing processes
- Establish safety procedures for those working with dangerous chemicals
- Develop processes for separating components of liquids and gases, or for generating electrical currents, by using controlled chemical processes
- Design and plan the layout of equipment
- Conduct tests and monitor the performance of processes throughout production
- Troubleshoot problems with manufacturing processes
- Evaluate equipment and processes to ensure compliance with safety and environmental regulations
- Estimate production costs for management

Some chemical engineers, known as process engineers, specialize in a particular process, such as oxidation (a reaction of oxygen with chemicals to make other chamicale) or not gravitation (making plactice and racine), -, - chemicals) or polymerization (making plastics and resins).

Others specialize in a particular field, such as nanomaterials (extremely small substances) or biological engineering. Still others specialize in developing specific products.

In addition, chemical engineers work in the production of energy, electronics, food, clothing, and paper. They must understand how the manufacturing process affects the environment and the safety of workers and consumers.

Chemical engineers also conduct research in the life sciences, bictechnology, and business services.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Chemical Engineers,

on the Internet at https://www.bls.gov/ooh/architecture-and-engineering/chemical-engineers.htm (visited December 05, 2019).

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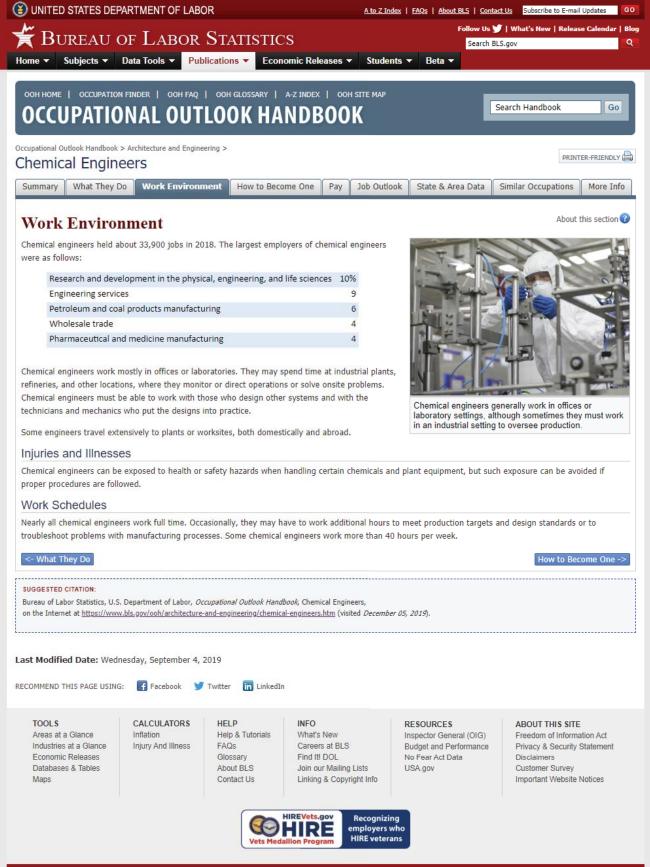
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U.S. Bureau of Labor Statistics | Office of Occupational Statistics and Employment Projections, PSB Suite 2135, 2 Massachusetts Avenue, NE Washington, DC 20212-0001

www.bls.gov/ooh | Telephone: 1-202-691-5700 | Contact OOH

