

# Chemical Engineering

## Bachelor of Science

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### What is Chemical Engineering?

Chemical engineering deals with the design and development of procedures to create products – products like food and fuel. It is essentially the application of chemistry, biology, physics, and math to solve problems.

### What does a chemical engineer do?

Chemical engineers take raw materials and create every day, usable products. They do this by applying the principles of chemistry, biology, physics, and math to solve the problems that occur during the production of chemicals, fuel, drugs, food, and a myriad of other products.

With a degree in chemical engineering from South Dakota Mines, you can work in jobs that increase crop yields to combat world hunger, create new materials, reduce pollution, and meet energy demands. Chemical engineers (and biological engineers) are instrumental in creating pharmaceuticals and lifesaving devices such as the artificial kidney. But they also produce such products as cosmetics, biofuels, and sandwich bags.

Some duties a chemical engineer might do include:

- Conduct research
- Manufacture pharmaceuticals
- Create renewable fuels and energy sources
- Establish safety procedures for those working with chemicals
- Design and plan out equipment
- Work in the production of energy, electronics, food, clothing, and paper.
- Conduct research in the life sciences, biotechnology, and business services.

Chemical engineers are in high demand, especially chemical engineering graduates from South Dakota Mines. The average starting salary for a Mines chemical engineering graduate is \$69,848. The job placement rate for 2018-19 South Dakota Mines chemical engineering graduates was 93%.

### Careers

South Dakota Mines chemical engineering graduates are in high demand due to the large number of industries that depend on the synthesis and processing of chemicals and materials. Our grads work in a variety of fields, including:

- Chemical, energy, and oil industries
- Biotechnology
- Environmental engineering
- Pharmaceuticals
- Electronic device fabrication
- Wine making
- Manufacturing of nanocomposites, polymers, materials, chemicals, or food

For more information: <https://www.sdsmt.edu/Academics/Degrees/Chemical-Engineering/>

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