

Chemical Engineering Student Outcomes

On completion of the chemical engineering program, our graduates will be able to:

- Apply knowledge of mathematics, science, and engineering.
- Design and conduct experiments, as well as analyze and interpret data.
- Design a system, component, or process to meet desired needs within economic, environmental, social, political, ethical, health and safety, manufacturing, and sustainability constraints.
- Function on multidisciplinary teams.
- Identify, formulate, and solve engineering problems.
- Understand professional and ethical responsibilities.
- Communicate effectively.
- Understand the impact of engineering solutions in a global economic, environmental, and societal context.
- Recognize the need and develop the skills required for lifelong learning.
- Demonstrate knowledge of contemporary issues.
- Demonstrate an ability to use techniques, skills, and modern engineering tools necessary for engineering practice.

The program provides the graduate with a thorough grounding and working knowledge of the chemical sciences, including:

- General, organic, and physical chemistry.
- Material and energy balances on chemical processes, including safety and environmental factors.

- Thermodynamics of physical and chemical equilibria.
- Heat, mass, and momentum transfer.
- Chemical reaction engineering.
- Continuous and staged separation operations.
- Process dynamics and control.
- Modern experimental and computing techniques.
- Process design.