

The following definitions are used for the Engineering programs educational outcomes and objectives. The definitions are from ABET (see <http://www.abet.org>).

Program Educational Objectives – Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.

Program Outcomes – Program outcomes are narrower statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire in their matriculation through the program.

Chemical Engineering

Chemical Engineers apply chemical and physical processes to convert materials to products that are more valuable in ways that are profitable, safe, efficient and environmentally acceptable. Chemical Engineering education emphasizes applying a system's approach to problem solving, synthesizing useful results, forming partnerships with other professions, and applying principles from a broad range of scientific disciplines. Our graduates have received graduate degrees from top programs and are in leadership positions in the pharmaceutical, energy, and food industries.

Chemical Engineering Program Objectives and Outcomes

Objectives – The program develops graduates who are effective problem solvers and:

- Demonstrate competencies basic to success in graduate study or function as a professional chemical engineer
- Demonstrate effective teamwork, leadership, and communication skills
- Demonstrate the ability to maintain professional competency through life-long learning
- Demonstrate knowledge of basic research methodology
- Develop a responsibility towards his or her community and to demonstrate this responsibility through service to the department, the profession, and the public

Outcomes – During the course of their time in the program, all students must demonstrate:

- an ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- an ability to communicate effectively with a range of audiences.

- an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.