

Program's Students Outcomes

Chemical Engineering

Engineering programs must demonstrate that their students attain the following outcomes:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Civil Engineering

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Computer Engineering

Thus, the student outcomes for the Computer Engineering Program are:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Electrical Engineering

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.”

Industrial Engineering

The Industrial Engineering Department with input from its constituents has established the following eleven student outcomes in addition to outcomes (a) through (k).

Our graduates will be able to:

1. Design a work facility or system.
2. Design and implement quality control systems.
3. Design computer-based control and information systems.
4. Plan and control a production system.
5. Evaluate the economics of engineering solutions.
6. Develop models to experiment, evaluate, or solve a problem.
7. Use engineering design process from IE point of view.
8. Use modern telecommunication and computer technology.
9. Present information to individuals or to an audience.
10. Establish goals and work to reach them.
11. Understand and practice leadership.

Mechanical Engineering

A total of 12 Student Outcomes have been established for the ME program. These outcomes are defined as the skills and competencies that students are required to have at the time of graduation, and are given below:

1. To have knowledge of basic chemistry and calculus-based physics.
2. To have the ability to apply knowledge of science, engineering, and advanced mathematics, including multivariate calculus and differential equations, to the solution of engineering problems.
3. To have the ability to work professionally in both thermal and mechanical systems areas, including the design and realization of such systems.
4. To have the ability to design and conduct experiments, as well as to analyze and interpret data.
5. To have the ability to design a system, component, or process to meet desired needs.
6. To have the ability to function on multi-disciplinary teams.
7. To have the ability to identify, formulate, and solve engineering problems.
8. To have an understanding of professional and ethical responsibility.
9. To have the ability to communicate effectively in both English and Spanish.
10. To have the broad education and the knowledge of contemporary issues necessary to understand the impact of engineering solutions in a global and societal context.

11. To have a recognition of the need for, and an ability to engage in, life-long learning.
12. To have the ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.