

**UNDERGRADUATE MISSION, EDUCATIONAL  
OBJECTIVES, AND EDUCATIONAL OUTCOMES**

**Mission**

The mission of the Department of Mechanical Engineering is to provide students with the fundamental background necessary for an active career in mechanical engineering, and for the continuation of their education through post-graduate studies; to conduct applied and basic research; and to provide service to the engineering profession and the community.

**Educational Objectives** (revised 4/07)

The faculty of the department has established three educational objectives:

1. **Career Contribution and Advancement:** To prepare graduates for significant contribution to their chosen field and/or leadership roles in mechanical engineering or allied disciplines by providing relevant knowledge, meaningful design and hands-on experiences, critical thinking skills, and training in teamwork and communication.
2. **Professionalism:** To produce graduates with a sense of professional and social responsibility, including a commitment to protect both occupational and public health and safety, through moral and ethical standards related to their chosen field of engineering.
3. **Life-Long Learning:** To produce graduates who believe, through exposure to problem solving and research, that their undergraduate education is just the beginning of their training, and who are continuing to develop their knowledge and skills through either graduate education, short courses, seminars, or participation in professional societies.

**Educational Outcomes for Student Performance**

The department will meet the above objectives by establishing the following educational outcomes for student performance.

Upon graduation, the students will be able to:

1. Formulate and analyze problems, and synthesize and develop appropriate solutions based on fundamental principles.
2. Design basic mechanical components or processes to meet desired specifications using appropriate engineering tools and techniques.
3. Prepare and perform experiments, evaluate and interpret data, as well as report and present the results.
4. Demonstrate an understanding of professional, societal and ethical responsibility.
5. Function effectively in teams and communicate their ideas to their peers.
6. Recognize the need to engage in life-long professional development and learning.