

Program Educational Objectives

Alumni of the ESG program should be engaged in the following activities:

1. Conducting careers in engineering or science-related disciplines or completing graduate studies in top ranked institutions.
2. Participating in interdisciplinary research, design, and/or policy-making teams in industrial, academic or government settings.
3. Participating in life-long learning activities including: professional society membership and support; conference attendance, presentations or organization; and knowledge-transfer or community-based outreach activities in their organizations.
4. Conducting themselves in the engineering professions in a manner which holds paramount the importance of public health, safety and welfare, as well as their own ethical responsibilities.

Student Outcomes

Students who graduate from the ESG program should possess the following skill sets:

- 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; and
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

