

## **Bachelor of Science in Mechatronics Engineering (BSMexE)**

### **Program Educational Objectives**

The mechatronics engineering alumni three to five years after graduation shall:

1. Apply knowledge, skills and abilities in mechanical engineering, electrical engineering, electronics engineering, and computing in solving inter-disciplinary problems.
2. Work and lead competently, efficiently and effectively in multi-disciplinary teams to achieve design and/or project objectives.
3. Participate in lifelong learning to maintain professional, ethical and societal responsibilities.

### **Student Outcomes**

The following skills, knowledge, and behaviors are expected to be attained by students as they progress through the program:

- a. Ability to apply knowledge of mathematics and science to solve engineering problems.
- b. Ability to design and conduct experiments, as well as to analyze and interpret data.
- c. 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, in accordance with standards.
- d. Ability to function on multidisciplinary teams.
- e. Ability to identify, formulate, and solve engineering problems.
- f. Understanding of professional and ethical responsibility.
- g. Ability to communicate effectively.
- h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i. Recognition of the need for, and an ability to engage in life-long learning.
- j. Knowledge of contemporary issues.
- k. Ability to use techniques, skills, and modern engineering tools necessary for engineering practice.
- l. Knowledge and understanding of engineering and management principles as a member and leader in a team, to manage projects and in multidisciplinary environments.