MECHANICAL ENGINEERING

Enrollment and Graduation Data

Fall 2018 Enrollment – 785

2017-18 Graduates – 169 BS degrees conferred

Program Educational Objectives

The Program Educational Objectives of the bachelor of science degree program in mechanical engineering at RIT are to have graduates who will:

- practice mechanical engineering through the application of the fundamental knowledge, skills, and tools of mechanical engineering.
- enhance their skills through formal education and training, independent inquiry, and professional development.
- work independently as well as collaboratively with others, while demonstrating the professional and ethical responsibilities of the engineering profession.
- successfully pursue graduate degrees at the Master’s and/or Ph.D. level, should they choose.

The mechanical engineering department achieves these objectives by:

- Integrating cooperative education into the program for all students,
- Providing a strong foundation in mathematics and science with a balance between liberal studies and technical courses,
- Establishing balance between the engineering science, an appropriate computational experience, experimental work, and engineering design components of the program,
- Incorporating a strong laboratory component in the program with outstanding laboratory facilities,
- Having a diverse faculty committed to engineering education,
- Making available a combined BS and master’s option to academically stronger students. This option allows a student to complete the requirements of both the BS and master’s degrees in a five-year period. A student in this option completes four co-op work-blocks, and three courses count toward both BS and master’s degrees.

Student Outcomes

Student outcomes identify 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. The student outcomes of the BS degree in mechanical engineering are such that the graduates of the program will have the following skills and attributes:

- *Engineering Foundations* An ability to apply knowledge of mathematics, science, and engineering.
- *Experimentation* An ability to design and conduct experiments, as well as to analyze and interpret data.
• **Design** 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.
• **Multidisciplinary Teamwork** An ability to function on multidisciplinary teams
• **Problem Solving** An ability to identify, formulate, and solve engineering problems.
• **Professional Responsibility** An understanding of professional and ethical responsibility.
• **Communication** An ability to communicate effectively.
• **Broad Education** The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
• **Life-Long Learning** A recognition of the need for, and an ability to engage in life-long learning.
• **Contemporary Issues** A knowledge of contemporary issues.
• **Modern Tools** An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
• **Experiential Education** Acquire experiential education (through co-op) to complement and enhance course work in Electrical Engineering.