

Mechanical and Automation Engineering (MAE) Programme

OUTCOMES-BASED APPROACH (OBA) TEACHING

Mission Statement

- Provide students with a solid education in the field of MAE emphasizing an integrative perspective and approach to problem solving; and
- Produce graduates with knowledge and character to contribute to the community as professional engineers, researchers and practitioners of diverse and evolving careers.

Educational Objectives

1. **Core knowledge and understanding** of engineering mathematics and sciences, and computing
2. **Application of relevant knowledge** in analyzing and solving engineering problems
3. **Experience in engineering design and product and system development**
4. **Experience in using engineering tools**
5. **Ability to pursue specialized areas** within the field of MAE
6. **Effective communication, management, and team skills**
7. **Ethical values and responsibilities** as professional engineer and member of local and world communities
8. **Motivation in professional development and life-long learning**

Desired Outcomes

General Criteria	Description of Desired Outcomes for MAE Programme
1	An ability to apply knowledge of engineering sciences and mathematics to the discipline of mechanical and automation engineering
2	An ability to design and conduct experiments , as well as to analyze and interpret data
3	An ability to design a system, component, or process to meet desired needs within social, environmental and technical constraints
4	An ability to function on teams
5	An ability to identify, formulate, and solve engineering problems
6	Recognition of professional and ethical responsibility
7	An ability to communicate effectively
8	An ability to understand the impact of engineering solutions in a global and societal context , especially the importance of health, safety and environmental considerations to both workers and the general public
9	An ability to recognize the need for and to engage in life-long learning
10	An ability to stay abreast of contemporary issues
11	An ability to use the techniques, skills and tools to practice in the mechanical and automation engineering discipline
12	An ability to use the computer/IT tools relevant to the discipline along with an understanding of their processes and limitations