

Program Learning Outcomes

1. Engineering Knowledge

An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

2. Problem Analysis

An ability to identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

3. Design / Development of Solutions

An ability to design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

4. Investigation

An ability to investigate complex engineering problems in a methodical way including literature survey, design and conduct of experiments, analysis and interpretation of experimental data, and synthesis of information to derive valid conclusions.

5. Modern Tool Usage

An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an understanding of the limitations.

6. The Engineer and Society

An ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solution to complex engineering problems.

7. Environment and Sustainability

An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

8. Ethics

Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

9. Individual and Teamwork

An ability to work effectively, as an individual or in a team, on multifaceted and /or multidisciplinary settings.

10. Communication

An ability to communicate effectively, orally as well as in writing, on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. Project Management

An ability to demonstrate management skills and apply engineering principles to one's own work, as a member and/or leader in a team, to manage projects in a multidisciplinary environment.

12. Lifelong Learning

An ability to recognize importance of and pursue lifelong learning in the broader context of innovation and technological developments.

Mapping of PLOs to PEOs

The twelve PLOs, defined for the Industrial Engineering and Management program, are mapped to the three PEOs. Mapping of the PLOs to PEOs is given Table 2.1.

Table: Mapping of PLOs and PEOs

PLOs	PEOs		
	PEO1	PEO2	PEO3
Engineering Knowledge	✓		
Problem Analysis	✓		
Design/Development of Solutions		✓	
Investigation		✓	
Modern Tool Usage	✓	✓	
The Engineer and Society	✓		✓
Environment and Sustainability			✓
Ethics			✓
Individual and Team Work	✓		
Communication			✓
Project Management		✓	
Lifelong Learning	✓		