**INSTITUTE OF ENGINEERING**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**PROGRAM: B.TECH.**

**PROGRAM OUTCOMES**

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| **PO-1** | Engineering knowledge: Apply the knowledge of mathematics, science, engineering and technology to the solution of complex mechanical engineering problems. |
| **PO-2** | Problem analysis: Identify, formulate, review existing literature, and analyse complex engineering problems to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. |
| **PO-3** | Design/Development of solutions: Design solutions for mechanical engineering problems and design system components or processes that meet the specified needs with appropriate consideration for societal, economical and environmental considerations. |
| **PO-4** | Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions. |
| **PO-5** | Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex mechanical engineering activities with an understanding of the limitations. |
| **PO-6** | The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice. |
| **PO-7** | Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. |
| **PO-8** | Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. |
| **PO-9** | Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. |
| **PO-10** | Communication: Communicate effectively with the engineering community and with society at large, including the ability to comprehend, create effective reports, make effective presentations, and give and receive clear instructions. |
| **PO-11** | Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. |
| **PO-12** | Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. |