

Mechanical Engineering Department

PEOs, POs and PSOs

Programme Educational Objectives (PEOs)

- I. Graduates will be prepared to become professional mechanical engineers through quality education.
- II. Graduates will grow in their career keeping sensitivity of engineering practices towards society and environment.
- III. Graduates will acquire art of effective communication.
- IV. Graduates will pursue life-long learning and maintain pace with rapidly changing technology.

Programme Outcomes(POs)

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review 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:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research based knowledge and research including design of methods experiments, analysis and of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and to complex engineering activities with an understanding of the limitations.

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 the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solution in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** - Communicate effectively on complex engineering activities with the engineering and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentation and give and receive clear instruction.
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 multi disciplinary environments.
12. **Lifelong 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.

Program Specific Outcomes (PSOs)

1. Student will understand the fundamentals of mechanical system design and will be able to manufacture the system for real life applications.
2. Student will recognize and understand the need of renewable energy principles and its real life applications.
3. Student will understand instrumentation and measurements in mechanical systems and will develop interdisciplinary systems.