



ESHAN COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi, Affiliated to Dr. A.P.J Abdul Kalam Technical University, Lucknow)
Sahzadpur Pauri, NH-2, Agra-Mathura Highway, Mathura-281122, Uttar Pradesh
Website: www.eshancollege.com

Department of Mechanical Engineering



Programme: B.Tech. Mechanical Engineering

Program Educational Objectives (PEOs)

The PEOs of B.Tech. Mechanical Engineering programme are:

1. To prepare students to apply the acquired knowledge of mechanical engineering in its core and allied fields to take industrial problems to create solutions and services considering safety, sustainability and cost effectiveness.
2. To prepare students of the program to be able to function effectively, professionally and ethically in multicultural and multidisciplinary groups practicing engineering by profession.
3. To motivate students to undertake higher studies to meet the diversified requirements of mechanical industry, academia and research.

Program Specific Objectives (PSOs)

At the completion of B.Tech Mechanical Engineering programme, our:

- PSO 1:** Graduates will be able to apply the acquired theoretical and practical skills to solve the industrial problems of mechanical as well as multidisciplinary nature considering safety, sustainability and cost effectiveness factors.

PSO 2: Graduates will be motivated enough for continuous self-learning in engineering profession and pursue research in advanced areas of mechanical & allied engineering to offer engineering services to the society, ethically.

Graduate Attributes (GAs)

The graduate attributes for students of Mechanical Engineering department are:

- Engineering knowledge
- Problem analysis
- Design/development of solutions
- Conduct investigations of complex problems
- Modern tool usage
- The engineer and society
- Environment and sustainability
- Ethics
- Individual and team work
- Communication
- Project management and finance
- Life-long learning

Program Outcomes (POs)

No.	Program Outcomes (POs)
PO 1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 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.
PO 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.
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 modelling to complex 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 the 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 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.

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.

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