

Vision

To become an internationally acclaimed department for higher technical education that will serve as a centre of excellence of knowledge and expertise through learning for the society and be a preferred destination for undergraduate and postgraduate studies in the field of Mechanical Engineering.

Mission

1. To produce technically sound Mechanical engineers which will cater to the need of the Make in India environment.
2. To inculcate advanced recent trends in Mechanical engineering for creation of wealth and prosperity of humankind.
3. To promote technology leaders in teaching, research, collaborative activities and invention of eco-friendly and socio economically feasible systems.

Programme Educational Objectives (PEOs)

- PEO 1:** Excel in professional career and/or higher education by acquiring knowledge and skill in design, analysis, mathematical computing and engineering principles.
- PEO 2:** Analyze real life problems, design computing systems appropriate to its solutions that are technically sound, economically feasible and socially acceptable.
- PEO 3:** Exhibit professionalism, ethical attitude, communication skills, team work in their profession and adapt to current trends by engaging in lifelong learning.
- PEO 4:** Able to innovate programmatic, creative and economic solutions for real life problems with high degree of technical expertise and professional competency.

Program Specific Outcomes (PSOs)

- PSO 1:** To be the role model in applying Technology based skills in the Mechanical Engineering streams such as Design, Manufacturing, Thermal, Environmental and Industrial Engineering.
- PSO 2:** To develop a student to be a valuable technocrat to suit in the industry and to become a knowledge seeking person in higher level education.
- PSO 3:** To inculcate multi-disciplinary knowledge for protecting ecosystem, ethics and humanity with enabling entrepreneurship ability.

Program Outcomes as defined by NBA (PO) Engineering Graduates will be able to:

- 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: 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.
- PO 12: 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.

The Department of Mechanical Engineering is one of the earliest department established in 1981 . It has faculty specialized in the field of machine design and dynamics, production engg., industrial engineering & management, thermal engg. The Mechanical Lab is equipped with FFT analyzers, vibration and acoustic instrument from diagnostic instruments (UK). CAD/CAM lab has HP workstations, Core2Duo based computers, laser printers and scanners, software both for designing and programming like NISA, ANYSYS, MASTERCAM, AutoCAD2005, Tk Solver, MATLAB, CAFIMS. The mechanical lab has also facilitates in different domains like heat transfer, heat power, refrigeration & air conditioning, Hydraulic machines, IC engines, Machine dynamics and material testing etc. Mechanical workshop has various types of lathes (HMT, NC, CNC), Milling (HMT), Drilling, shaping, grinding machines, etc. Flexible manufacturing labs in incorporated CNC systems,

Robot and Machine vision system. The welding shop consists of gas welding, arc welding and TIG & MIG welding equipments. The material testing lab is equipped with universal testing machine, hardness testing machine, etc. The department has carried out number of AICTE funded projects.