

**The vision of the Department of Manufacturing Engineering and Industrial Management is:**

“To be recognized as an innovative and distinguished center, a preferred provider of Production Engineering students with interdisciplinary education, nurturing research & development and entrepreneur skills among students.”

**The Mission of the Department of Manufacturing Engineering and Industrial Management is:**

- M1. To create, develop and foster capacity amongst students to become future leaders in academia, government, industries and entrepreneurial pursuit through a rigorous curriculum of theory and application that advances their ability to solve problems individually and in teams
- M2. To create, develop and foster capacity amongst students to become future leaders in academia, government, industries and entrepreneurial pursuit through a rigorous curriculum of theory and application that advances their ability to solve problems individually and in teams.
- M3. To create, develop and foster capacity amongst students to become future leaders in academia, government, industries and entrepreneurial pursuit through a rigorous curriculum of theory and application that advances their ability to solve problems individually and in teams
- M4. To provide career guidance for higher education and to facilitate academics - industry interaction.
- M5. To strengthen global collaborations and inculcate research aptitude amongst students and faculty.

**Program Educational Objectives (PEOs)**

**PEO-1: Core Competency / Breadth:** Demonstrate professional engineering competence to real life problems and compete successfully using principles of manufacturing and time and quality management in the design and manufacture of products and services while working in multidisciplinary areas whose solutions lead to significant societal benefits.

**PEO-2: Preparation / Application:** Advance professionally and/or pursue higher education and /or turn entrepreneur based on knowledge of mathematics, basic sciences, engineering and humanities principles.

**PEO-3: Learning Environment / Professionalism:** Exhibit professionalism, ethical attitude, communication skills, soft skill, life skill, teamwork in their profession and adapt to current trends by engaging in lifelong learning.

### **Program Outcomes**

- PO1** Graduates will apply the basic knowledge of mathematics, science, engineering and humanities to Production Engineering field
- PO2** Graduates will have the ability to define the problems and provide solutions by designing and conducting experiments, interpreting and analyzing data for manufacturing
- PO3** Graduates will design manufacturing systems that would encompass machining science and technology, production processes, metal forming, tool and die design with the fully acquaintance with engineering thermodynamics and heat transfer, theory of machines, strength of material and would meet specifications and requirements as demanded by industries
- PO4** Graduates will apply concepts of design and tooling for manufacturing, Kinematics of Machine Elements, Quality Control, modelling of manufacturing systems to solve production engineering problems.
- PO5** Graduates understand manufacturing technologies like Computer Controlled Processes and Industrial Engineering, Production Management, SCLM, Total Quality Management concepts and Simulation tools.
- PO6** Graduates will be able to apply engineering solutions in global and societal contexts.
- PO7** Graduates will understand quantitative modeling and analysis of a broad array of system-level decision problems concerned with economic efficiency, work design, productivity and quality with environmental focus.
- PO8** Graduates will be capable of self-education and clearly understand the value of achieving perfection in their professional endeavours.
- PO9** Graduates will participate as members of engineering and science laboratory teams, as well as members of multidisciplinary design teams.
- PO10** Graduates will be proficient in English language in both verbal and written forms which will enable them to express their ideas and views in industry.
- PO11** Graduates will have the ability to choose and apply appropriate resource management technique/s so as to optimally utilize resources in manufacturing systems.
- PO12** Graduates will be broadly educated and will have an understanding of the impact of engineering on society and demonstrate awareness of contemporary issues.

### **Program Specific Outcomes**

- PSO1** Apply knowledge of Manufacturing Systems, Industrial Engineering and Analytical Techniques to solve real world problems.
- PSO2** Apply knowledge of Design, Machine Tools, Measurement Systems, Quality Control and Management Systems, Ergonomics and Reliability to identify, formulate and solve complex engineering problems.
- PSO3** Design, Develop and Manufacture innovative products/systems using emerging manufacturing and computing technologies like CAD/CAM/CIM, Additive Manufacturing, Robotics, Machine Learning, Artificial Intelligence, Enterprise Resource Planning (ERP)