



# **Department of Mechanical Engineering**

## **Delhi Technological University**

Shahbad Daulatpur, Main Bawana Road Delhi-110042,

### **B.Tech.**

## **Mechanical Engineering with Specialization in Automotive Engineering**

### **Program Educational Objectives (PEOs)**

**PEO 1:** Graduate shall have ability to understand and apply core subject knowledge to various Automobile engineering problems.

**PEO 2:** The graduates will be able to work in team, investigate the problem of automobile engineering and present an ecological sustainable solution.

**PEO 3:** The graduates shall be competent in engineering modelling and experimental capabilities to pursue research and higher education.

**PEO 4:** The graduates shall have good communication skill, high ethical and social values.

### **Program Specific Outcomes (PSOs):**

**PSO1:** An ability to identify industrial problems and to provide solutions with the help of production engineering tools.

**PSO2:** An ability of collaborative learning to find out sustainable, solution for social issues

**PSO3:** Apply the knowledge of Manufacturing Engineering and Engineering Management to the solution of complex Engineering Problems through empathy and creativity.

## **Mechanical Engineering**

### **Program Educational Objectives (PEOs)**

**PEO 1:** Graduate shall have ability to understand and apply core subject knowledge to various mechanical engineering problems.

**PEO 2:** The graduates will be able to work in team, investigate the problem and present an ecological sustainable solution.

**PEO 3:** The graduates shall be competent in engineering modelling and experimental capabilities to pursue research and higher education.

**PEO 4:** The graduates shall have good communication skill, high ethical and social values.

### **Program Specific Outcomes (PSOs):**

**PSO1:** An ability to identify industrial problems and to provide solutions with the help of production engineering tools.

**PSO2:** An ability of collaborative learning to find out sustainable, solution for social issues.

**PSO3:** Apply the knowledge of Manufacturing Engineering and Engineering Management to the solution of complex Engineering Problems through empathy and creativity.

# **Production & Industrial Engineering**

## **Program Educational Objectives (PEOs)**

**PEO 1:** Graduate shall have ability to understand and apply core subject knowledge to various production and industrial engineering problems.

**PEO 2:** The graduates will be able to work in team, investigate the problem of production engineering and present an ecological sustainable solution.

**PEO 3:** The graduates shall be competent in engineering modelling and experimental capabilities to pursue research and higher education in production and industrial engineering.

**PEO 4:** The graduates shall have good communication skill, high ethical and social values.

## **Program Specific Outcomes (PSOs)**

**PSO1:** An ability to identify industrial problems and to provide solutions with the help of production engineering tools.

**PSO2:** An ability of collaborative learning to find out sustainable, solution for social issues

**PSO3:** Apply the knowledge of Manufacturing Engineering and Engineering Management to the solution of complex Engineering Problems through empathy and creativity.

## Program Outcomes (POs)

### Engineering Graduates will be able to:

**POs1:** Engineering knowledge : Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**POs2:** 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.

**POs3:** 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.

**POs4:** 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.

**POs5:** Modern tool usage : Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**POs6:** 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.

**POs7:** 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.

**POs8:** Ethics : Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**POs9:** Individual and teamwork : Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**POs10:** 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.

**POs11:** 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.

**POs12:** 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.