

**PROGRAM EDUCATIONAL OBJECTIVES (PEO) STATEMENTS  
OF THE DEPARTMENT OF MECHANICAL ENGINEERING  
FACULTY OF ENGINEERING AND TECHNOLOGY  
JAMIA MILLIA ISLAMIA, NEW DELHI INDIA.**

**PEO-1:** The graduates will be well prepared for successful careers in industry/ consultancy/research & development/teaching/allied areas and will be academically prepared to lead organisations they join or start related to the subjects of mechanical engineering.

**PEO-2:** The graduates will engage in professional and extension activities in the field of mechanical engineering and its allied areas and contribute to the profession and society at large by pushing the frontiers in technology.

**PEO-3:** The graduates will be successful in higher education in mechanical and allied areas and management, if pursued, leading to masters and research programs.

**PEO-4:** The graduates will be, through this academic programme groomed as professional engineers enabling them to contribute effectively to the growth and development of the knowledge body.

**PROGRAM SPECIFIC OBJECTIVES (PSO) STATEMENTS  
OF THE DEPARTMENT OF MECHANICAL ENGINEERING  
FACULTY OF ENGINEERING AND TECHNOLOGY  
JAMIA MILLIA ISLAMIA, NEW DELHI INDIA.**

**PSO1:** Shall have acquired the ability of entrepreneurship to start an industry based on mechanical engineering in the areas of production, manufacturing and allied areas.

**PSO2:** After graduation the graduate shall have gained the experience to be attracted toward design and consultancy.

**PSO3:** Shall have gained the knowledge to pursue a higher level of understanding by way of research in relevant areas of mechanical engineering.

**PSO4:** Shall have gained the knowledge base to enable employment in infrastructure development.

**PROGRAM OUTCOMES (PO) STATEMENTS OF THE DEPARTMENT  
OF MECHANICAL ENGINEERING, FACULTY OF ENGINEERING  
AND TECHNOLOGY, JAMIA MILLIA ISLAMIA, NEW DELHI INDIA.**

- 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 engg 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 methods including design of experiments, analysis and interpretation 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 modeling 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 solutions 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 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.
- 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.
- 12. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.