

## 1.1.1 Mission of the Department of Mechanical Engineering

*[Reference to 4.1.1.1 of PEC Manual of Accreditation 2014 v1.1]*

Departments committed to prepare outstanding graduates who can work cooperatively and professionally with other scientists and engineers to develop innovative solutions to complex problems in the field of engineering. Mission is to verve the profession by providing high quality education. Intersection of science and technology has always been sole objective of the Department.

## 1.2 Program Education Objectives (PEOs) of the Program

*[Reference to 4.1.1.2 of PEC Manual of Accreditation 2014 v1.1]*

Program Educational Objectives (PEOs) have been defined by the faculty of Department of Mechanical Engineering in consultation with stakeholders, reviewed by the Departmental Board of Studies (DBS) and finally approved by Academic Council (AC). The PEOs have been widely publicized in and around the Department and are also available on the UOL website and Prospectus.

The PEOs for the B.Sc. Mechanical Engineering Program are to produce:

1. Graduates with in-depth knowledge and sound understanding of principles of Mechanical Engineering with a quest of lifelong learning.
2. Graduates demonstrating the capacity to assume social, environmental and ethical responsibility in the national and global perspective.
3. Graduates who can communicate and manage effectively with those inside and outside of Engineering Community.
4. Graduates with capability to be effective team members and take a leadership role in research, design, innovation, implementation and operation of Mechanical and related systems.

## 1.3 Defining and Publishing Program Learning Outcomes (PLOs)

### 1.3.1 Program Learning Outcomes (PLOs)

*[Reference to 4.1.2.1 of PEC Manual of Accreditation 2014 v1.1]*

The Department of Mechanical Engineering has adopted twelve PLOs. These PLOs are subject to change if PEC modifies these attributes by realigning them with the Washington Accord (WA) requirements. Statements of the PLOs for Mechanical Engineering Program are the following:

**PLO-1. Engineering Knowledge:** An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex mechanical engineering problems.

**PLO-2. Problem Analysis:** An ability to identify, formulate, research literature, and analyze complex mechanical engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

**PLO-3. Design/Development of Solutions:** An ability to design solutions for complex mechanical engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

**PLO-4. Investigation:** An ability to investigate complex mechanical engineering problems in a methodical way including literature survey, design and conduct of experiments, analysis and interpretation of experimental data, and synthesis of information to derive valid conclusions.

**PLO-5. Modern Tool Usage:** An ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex mechanical engineering activities, with an understanding of the limitations.

**PLO-6. The Engineer and Society:** An ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solution to complex mechanical engineering problems.

**PLO-7. Environment and Sustainability:** An ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

**PLO-8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

**PLO-9. Individual and Team Work:** An ability to work effectively, as an individual or in a team, on multifaceted and/or multidisciplinary settings.

**PLO-10. Communication:** An ability to communicate effectively, orally as well as in writing, on complex mechanical 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.

**PLO-11. Project Management:** An ability to demonstrate management skills and apply engineering principles to one's own work, as a member and/or leader in a team, to manage projects in a multidisciplinary environment.

**PLO-12. Lifelong Learning:** An ability to recognize importance of, and pursue lifelong learning in the broader context of innovation and technological developments.



## VISION & MISSION



The University of Lahore aspires to become a nationally and internationally recognized university that distinguishes itself as an imbedding center for outstanding ethical and moral values, teaching quality, learning outcomes, and richness of student experience. The University of Lahore envisions a transformative impact on society through its continual innovation in education, creativity, research and entrepreneurship.



The University of Lahore represents excellence in teaching, research, scholarship, creativity and engagement. Its mission is to produce professionals outfitted with highest standards in creativity, transfer and application of knowledge dissemination to address issues of our time. The UOL sculpts its graduates to become future leaders in their fields to inspire the next generation and to advance ideas that benefit the world



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## PROGRAM EDUCATION OBJECTIVES (PEOs)



Graduates with in-depth knowledge and sound understanding of principles of Mechanical Engineering with a quest of lifelong learning.



Graduates demonstrating the capacity to assume social, environmental and ethical responsibility in the national and global perspective



Graduates who can communicate and manage effectively with those inside and outside of Engineering Community



Graduates with capability to be effective team members and take a leadership role in research, design, innovation, implementation and operation of Mechanical and related systems.