# **Program Learning Outcomes (PLO)**

The Engineering graduates from UET Peshawar, Jalozai Campus will be able to demonstrate the following learning outcomes for their professional career, at the completion of their degrees

### 1. Engineering Knowledge

The graduates will be able to apply, knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems in the field of Engineering.

### 2. Problem Analysis

They will be able to identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences relating to Engineering.

### 3. Design/Development of Solutions

They will be able to design solutions for complex 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 with reference to the Construction industry and Engineering.

## 4. Investigation

They will be able to investigate complex 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.

## 5. Modern Tool Usage

They will be able to 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**

They will be able 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 engineering problems in the Engineering fields.

### 7. Environment & Sustainability

They will be able to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development, with special reference to achieving the Sustainable Development Goals.

#### 8. Ethics

They will be able to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice, with special reference to the Pakistan Engineering Code of Engineering Practice.

#### 9. Individual and Team Work

At the completion of their degrees, they will be able to work effectively, as an individual or in a team, on multifaceted and /or multidisciplinary settings in the related fields of Engineering.

#### 10. Communication

They will be able to communicate effectively, orally as well as in writing, 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.

## **10. Project Management**

They will be able 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 relating to Construction and Engineering.

#### 11. Lifelong Learning

Ability to recognize importance of, and pursue lifelong learning in the broader context of innovation and technological developments.