

# UNIVERSITY OF ENGINEERING AND TECHNOLOGY PESHAWAR (BANNU CAMPUS) DEPARTMENT OF ELECTRICAL ENGINEERING

Near 132 KV Grid Station, Main D.I Khan Road, Bannu Phone: 0928-613248, Fax: 0928-613267, Email: <a href="mailto:nkhan@uetpeshawar.edu.pk">nkhan@uetpeshawar.edu.pk</a>

### Mission of Electrical Engineering Department, Bannu Campus:

"To produce competent electrical engineers who can efficiently fulfill professional responsibilities in industrial, academic and research organizations."

## Program Educational Objectives (PEO's) for Electrical Engineering

The Program Educational Objectives (PEOs) were formulated in consultation with all stakeholders including faculty and members of the Program Industry Advisory Committee (PIAC). Electrical Engineering program at the university of Engineering and Technology Peshawar, Bannu Campus aims to produce graduates who are expected to possess the following capabilities 4 years after graduation:

**Table 1:** Program Educational Objectives (PEOs) of the Electrical Engineering program

Program Education Objectives (PEOs)	Description
PEO-1	The graduates will serve competently in national and international industry or academia by showing requisite knowledge and skills in the field of Electrical Engineering.
IPH ( )= /	The graduates will exhibit quest for learning and professional growth through inter personal and management skills.
PEO-3	The graduates will demonstrate commitment to ethical practices, community service and societal contribution.

## **Program Learning Outcomes (PLOs)**

Electrical Engineering Program UET Peshawar, Bannu Campus has adopted the twelve graduate attributes that should be attained by the students at the time of graduation as a learning outcome. The PEC Accreditation Manual 2014, based on Outcome Based Education and Assessment, has identified the 12 Program Learning Outcomes (PLOs) or Graduate Attributes (GAs) for engineering programs in line with *Washington Accord*. The Course Learning Outcomes (CLOs) for all courses/lectures have been aligned with the PLOs. Both direct and indirect assessment systems have been employed for measuring individual and cohort based performance of the students.

#### PLOs for Electrical Engineering Program at DEE, Bannu Campus.

The graduate engineers of UET Bannu Campus will be equipped with the following attributes in their professional career.



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**PLO1-Engineering Knowledge:** An ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

**PLO2-Problem Analysis:** An ability to identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

**PLO3-Design/Development of Solutions:** An ability 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.

**PLO4-Investigation:** An ability 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.

**PLO5-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 engineering activities, with an understanding of the limitations.

**PLO6-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 engineering problems.

**PLO7-Environment & 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.

**PLO8-Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

**PLO9-Individual and Team Work:** An ability to work effectively, as an individual or in a team, on multifaceted and /or multidisciplinary settings.

**PLO10-Communication:** An ability 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.

**PLO11-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.

**PLO12-Lifelong Learning:** An ability to recognize importance of, and pursue lifelong learning in the broader context of innovation and technological developments.

#### Mapping of PLOs to PEOs

The mapping of Program Learning Outcomes (PLOs) with the Program Educational Objectives (PEOs) of Electrical Engineering program addresses various PLOs leading to the achievement of PEOs progressively. This helps the students and faculty members to correlate various outcomes at the graduation (PLOs) and the program objectives which the graduates will be achieving four years after graduation, while serving in the field. The mapping in this regard is presented in **Table 2.** 



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Table 2: Mapping of PLOs with PEOs of Department of Electrical Engineering

S. No	Program Learning Outcome	Program Educational Objectives (PEOs)		
	(PLOs)	PEO-1	PEO-2	PEO-3
1	Engineering Knowledge	<b>/</b>		
2	Problem Analysis	<b>V</b>		
3	Design/Development of Solutions	✓		
4	Investigation	<b>V</b>		
5	Modern Tool Usage	<b>√</b>		
6	The Engineer and Society			✓
7	Environment and Sustainability			✓
8	Ethics			<b>√</b>
9	Individual and Team Work		√	
10	Communication		<b>√</b>	
11	Project Management		<b>√</b>	
12	Lifelong Learning		<b>√</b>	