



HITEC University Taxila

Biomedical Engineering Department

OBE Framework

University Vision	To be a premier institution to achieve academic excellence, innovative solutions in collaboration with industry for sustainable development and socio-economic growth with gender equality.
University Mission	To impart quality education to the students by equipping with knowledge, research, creativity and entrepreneurial skills to compete in the local and global market. We are committed on building strong linkages with the industry for innovative solutions, contribution to the challenge of socio-economic development and gender equality.
Department Mission	Our mission is to foster excellence in education, research, and innovation in biomedical engineering by equipping students with technical expertise, problem-solving abilities, entrepreneurial skills, ethics, and social responsibility. We are committed to addressing complex healthcare challenges and advancing sustainable development through collaborations with industry to improve quality of life and well-being.

Program Educational Objectives (PEOs)

PEO-1:	Our graduates will excel as biomedical engineers in academia , industry, or entrepreneurship while embracing lifelong learning .
PEO-2:	Our graduates will demonstrate the ability to design and develop innovative and sustainable solutions for global healthcare challenges .
PEO-3:	They will exhibit effective communication , teamwork , leadership skills , while demonstrating commitment to ethical values and social responsibilities .

Program Learning Outcomes

PLO-1	<p>Engineering Knowledge:</p> <p>Apply knowledge of mathematics, natural science, engineering fundamentals, and engineering specialization to the solution of complex engineering problems.</p>
PLO-2	<p>Problem Analysis:</p> <p>Identify, formulate, conduct research literature, and analyze complex engineering problems, reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences .</p>
PLO-3	<p>Design/Development of Solutions:</p> <p>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.</p>
PLO-4	<p>Investigation:</p> <p>Conduct investigations of complex engineering problems using research-based knowledge and research methods, including the design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.</p>
PLO-5	<p>Tool Usage:</p> <p>Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering problems, with an understanding of the limitations.</p>

PLO-6	<p>The Engineer and the World :</p> <p>Analyze and evaluate sustainable development impacts on society, the economy, sustainability, health and safety, legal frameworks, and the environment while solving complex engineering problems.</p>
PLO-7	<p>Ethics :</p> <p>Apply ethical principles and commit to professional ethics and norms of engineering practice, adhering to relevant national and international laws. Demonstrate an understanding of the need for diversity and inclusion.</p>
PLO-8	<p>Individual and Collaborative Teamwork:</p> <p>Function effectively as an individual, and as a member or leader in diverse and inclusive teams, in multi-disciplinary, face-to-face, remote, and distributed settings.</p>
PLO-9	<p>Communication:</p> <p>Communicate effectively and inclusively on complex engineering activities with the engineering community and with society at large, such as by being able to comprehend and write effective reports and design documentation, and make effective presentations, taking into account cultural, language, and learning differences .</p>
PLO-10	<p>Project Management and Finance:</p> <p>Demonstrate knowledge and understanding of engineering management principles and economic decision-making, and apply these to one's own work, as a member and leader in a team, to manage projects in multidisciplinary environments .</p>
PLO-11	<p>Lifelong Learning:</p> <p>Recognize the need for and have the preparation and ability for</p> <ul style="list-style-type: none"> i) independent and life-long learning, ii) adaptability to new and emerging technologies, and iii) critical thinking in the broadest context of technological change.

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	Vision and Mission	Program Educational Objectives (PEOs)		
		PEO-1	PEO-2	PEO-3
University Vision	To be a premier institution to achieve academic excellence, innovative solutions in collaboration with industry for sustainable development and socio-economic growth with gender equality.	✓	✓	✓
University Mission	To impart quality education to the students by equipping with knowledge, research, creativity and entrepreneurial skills to compete in the local and global market. We are committed on building strong linkages with the industry for innovative solutions, contribution to the challenge of socio-economic development and gender equality.	✓	✓	✓
Program's Mission	Our mission is to foster excellence in education, research, and innovation in biomedical engineering by equipping students with technical expertise, problem-solving abilities, entrepreneurial skills, ethics, and social responsibility. We are committed to addressing complex healthcare challenges and advancing sustainable development through collaborations with industry to improve quality of life and well-being.	✓	✓	✓

Program Learning Outcomes (PLOs)		PEO-1	PEO-2	PEO-3
PLO-1	Engineering Knowledge	✓		
PLO-2	Problem Analysis		✓	
PLO-3	Design/Development of Solutions		✓	
PLO-4	Investigation		✓	
PLO-5	Tool Usage		✓	
PLO-6	The Engineer and the World		✓	✓
PLO-7	Ethics			✓
PLO-8	Individual and Collaborative Teamwork			✓
PLO-9	Communication			✓
PLO-10	Project Management and Finance	✓		✓
PLO-11	Lifelong Learning	✓		