

**PEMETAAN MATLAMAT PENDIDIKAN INSTITUSI VS. OBJEKTIF PENDIDIKAN PROGRAM (PEO)
&
MATLAMAT PENDIDIKAN INSTITUSI VS. HASIL PEMBELAJARAN PROGRAM (PLO)**

PROGRAM: BACHELOR OF MECHATRONIC ENGINEERING WITH HONOURS

PTJ: P.P. KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK

a) Pemetaan PEO - IEG

PEO	PEO statement	THINKER (T)	BALANCED (B)	ENTREPRENEURIAL (E)	ARTICULATE (A)	HOLISTIC (H)
		IEG1	IEG2	IEG3	IEG4	IEG5
PEO1	Graduates who are employed in Mechatronic Engineering-related fields.	√	√		√	
PEO2	Graduates who are innovative, pursue continuous career development, and participate in society-related activities.	√	√	√	√	√
PEO3	Graduates who have leadership qualities, ethical values, and awareness in sustainability issues.	√	√	√	√	√

b) Pemetaan PLO - IEG

PLO	MQF 2.0 DOMAIN	PROGRAM LEARNING OUTCOMES, PLO	IEG ELEMENT	
PLO1	Knowledge and Understanding	Ability to apply knowledge of mathematics, natural science, computing and engineering fundamentals, and an engineering specialization as specified in WK1 to WK4 respectively to develop solutions to complex engineering problems.	IEG1	THINKER
PLO2	Cognitive Skills	<p>Ability to identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences with holistic considerations for sustainable development. (WK1 to WK4).</p> <p>Ability to design creative solutions for complex engineering problems and design systems, components or processes that meet identified needs with appropriate consideration for public health and safety, whole-life cost, net zero carbon as well as resource, cultural, societal, and environmental considerations as required. (WK5).</p> <p>Ability to conduct investigation of complex engineering problems using research method including research-based knowledge, including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions. (WK8).</p>	IEG1 IEG2	THINKER BALANCED
PLO3	Practical Skills	Ability to create, select and apply, and recognize limitation of appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems. (WK2 and WK6).	IEG1 IEG2	THINKER BALANCED
PLO4	Interpersonal Skills	Ability to function effectively as an individual, and as a member or leader in diverse and inclusive teams and in multi-disciplinary, face-to-face, remote and distributed settings. (WK9)	IEG4	ARTICULATE
PLO5	Communication Skills	Ability to communicate effectively and inclusively 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, taking into account cultural, language, and learning differences.	IEG4	ARTICULATE
PLO6	Digital Skills	Ability to identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences with holistic considerations for sustainable development. (WK1 to WK4).	IEG2	BALANCED
PLO7	Numeracy Skills	Ability to identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences with holistic considerations for sustainable development. (WK1 to WK4).	IEG1	THINKER

PLO8	Leadership, Autonomy & Responsibility	Ability to function effectively as an individual, and as a member or leader in diverse and inclusive teams and in multi-disciplinary, face-to-face, remote and distributed settings. (WK9).	IEG5	HOLISTIC
PLO9	Personal Skills	Ability to recognize the need for, and have the preparation and ability for i) independent and life-long learning, ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change (WK8).	IEG5	HOLISTIC
PLO10	Entrepreneurial Skills	Ability to apply 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, and to manage projects and in multidisciplinary environments.	IEG3	ENTREPRENEURIAL
PLO11	Ethics and Professionalism	<p>Ability to analyze and evaluate sustainable development impacts to: society, the economy, sustainability, health and safety, legal frameworks, and the environment, in solving complex engineering problems. (WK1, WK5 and WK7).</p> <p>Ability to apply ethical principles and commit to professional ethics and norms of engineering practice and adhere to relevant national and international laws. Demonstrate an understanding of the need for diversity and inclusion. (WK9)</p>	IEG2	BALANCED