

**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	
			IEG1	IEG2
PLO1	Knowledge and Understanding	Ability to apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialisation as specified in WK1 to WK4 respectively to the solution of complex engineering problems	IEG1	THINKER
PLO2	Practical Skills	Ability to create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems, with an understanding of the limitations (WK6)	IEG1 IEG2	THINKER BALANCED
PLO3	Cognitive Skills	<p>Ability to identify, formulate, conduct research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4)</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 (WK5)</p> <p>Ability to conduct investigation of complex engineering problems using research-based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions</p>	IEG1 IEG2	THINKER BALANCED
PLO4	Communication Skills	Ability to communicate effectively 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	IEG4	ARTICULATE
PLO5	Interpersonal Skills	Ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings	IEG4	ARTICULATE
PLO6	Ethics and Professionalism	<p>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 solutions to complex engineering problems (WK7)</p> <p>Ability to understand and evaluate the sustainability and impact of professional engineering work in the solutions of complex engineering problems in societal and environmental contexts (WK7)</p> <p>Ability to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7)</p>	IEG2	BALANCED

PLO7	Personal Skills	Ability to recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change	IEG5	HOLISTIC
PLO8	Entrepreneurial Skills	Ability to 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	IEG3	ENTREPRENEURIAL
PLO9	Leadership, Autonomy & Responsibility	Ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings	IEG5	HOLISTIC
PLO10	Digital Skills	Ability to identify, formulate, conduct research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4)	IEG2	BALANCED
PLO11	Numeracy Skills	Ability to identify, formulate, conduct research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4)	IEG1	THINKER