

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

PROGRAM: Doktor Falsafah (Doctor of Philosophy)

PTJ: PP Sains Kimia

a. PEO – IEG mapping

PEO	PEO statement	THINKER (T)	BALANCED (B)	ENTREPRENEURIAL (E)	ARTICULATE (A)	HOLISTIC (H)
	To produce graduants that fulfil the following objectives:	IEG1	IEG2	IEG3	IEG4	IEG5
PEO1	Capable of integrating the latest concepts, theories, methodologies and knowledge in carrying out quality and useful research for the well-being of local and global communities.	/	/			
PEO2	To produce experts who are skillful in analysing problems critically and accurately besides able to explore creative and innovative alternatives through various latest digital platforms.	/	/			
PEO3	Chemistry experts who practise professional codes and ethics in carrying out responsibilities to employers, society and country.		/			/
PEO4	To demonstrate effective and confident communication proficiency to convey knowledge orally and literally.				/	
PEO5	Capable of exploring new knowledge through high performance research and collaborating with stakeholders that bring impacts on the development and sustainability of the socio-economic of community and country.				/	/

b. PLO - IEG mapping

PLO	MQF 2.0 DOMAIN	PROGRAM LEARNING OUTCOMES, PLO	IEG ELEMENT		
			IEG 1	THINKER	T
PLO1	Knowledge and understanding	Master significant and latest knowledge in relevant fields.	IEG 1	THINKER	T
PLO2	Practical Skills	Demonstrate effective and innovative skills in conducting research with minimal supervision.	IEG 1 IEG 2	THINKER BALANCED	T, B
PLO3	Cognitive Skills	Analyse research findings effectively and accurately to solve the complex problems.	IEG 1 IEG 2	THINKER BALANCED	T, B
PLO4	Communication Skills	Demonstrate an ability to present and defend research outcomes in clear, confident and effective manners.	IEG 4	ARTICULATE	A
PLO5	Interpersonal Skills	Demonstrate an ability to collaborate with various stakeholders when carrying out research and have a good social ethical.	IEG 4	ARTICULATE	A
PLO6	Ethics and Professionalism	Comply with safety instructions and rules while showing professionalism and ethics in conducting research.	IEG 2	BALANCED	B
PLO7	Personal Skills	Exhibit high motivation in new knowledge exploration as well as good research resource management and information organisation in systematic and detail manner.	IEG 5	HOLISTIC	H
PLO8	Entrepreneurial Skills	Not applicable.	-	-	-
PLO9	Leadership, Autonomy and Responsibility	Show responsibility in conducting research with good judgment in decision making and able to cooperate in research management.	IEG 5	HOLISTIC	H
PLO10	Digital Skills	Analyse the research findings using various digital technologies and softwares that are appropriate with the research methodology.	IEG 2	BALANCED	B
PLO11	Numeracy Skills	Elaborate the experimental results by using analyses appropriate to research methods and findings to ensure accurate and impactful research conclusions.	IEG 1	THINKER	T