

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

PROGRAM: SARJANA MUDA TEKNOLOGI KEJURUTERAAN BIOPROSES DENGAN KEPUJIAN

PTJ: TEKNOLOGI INDUSTRI

a) Pemetaan PEO - IEG

PEO	PEO statement	THINKER (T) IEG1	BALANCED (B) IEG2	ENTREPRENEURIAL (E) IEG3	ARTICULATE (A) IEG4	HOLISTIC (H) IEG5
PEO1	Graduates who are competent, creative, innovative and capable of solving problems related to Bioprocess Engineering Technology at the global and society levels at the context of sustainable development.	√				√
PEO2	Graduates who have high leadership qualities and communication skills in addition to active involvement in engineering technology processes independently and in teams of different disciplines.		√		√	
PEO3	Graduates with professional and ethical qualities		√			
PEO4	Graduates who constantly strive to acquire new knowledge through research, continuing education and/or professional development activities.			√		√

b) Pemetaan PLO - IEG

PLO	MQF 2.0 DOMAIN	PROGRAM LEARNING OUTCOMES, PLO	IEG ELEMENT	
			IEG1	
PLO1	<p>Cluster 1 Knowledge and Understanding</p> <p>Knowledge & understanding (PLO1)</p>	Apply knowledge related to mathematics, science and fundamentals of bioprocess engineering to defined and applied bioprocess engineering technology procedures, processes, systems or methodologies (Knowledge).	IEG1	THINKER (T)
PLO2	<p>Cluster 2 Cognitive Skills</p> <p>Cognitive skills (PLO2)</p> <p>Cluster 3 Functional Works and Skills</p> <p>Digital skills (PLO3d)</p> <p>Cluster 3 Functional Works and Skills</p> <p>Numeracy skill (PLO3e)</p>	Identify, formulate, research literature reviews and analyse broadly defined engineering related problems reaching proven conclusions using analytical tools appropriate to Bioprocess Engineering Technology (Problem Analysis).	IEG1	THINKER (T)
PLO3	<p>Cluster 2 Cognitive Skills</p> <p>Cognitive skills (PLO2)</p>	Design solutions to problems related to Bioprocess Engineering Technology to meet the specific needs of public health and safety, culture, society and environment (Design/Development of Solutions).	IEG1	THINKER (T)
PLO4	<p>Cluster 2 Cognitive Skills</p>	Investigate problems using appropriate research knowledge and methods (Investigation).	IEG1	THINKER

	Cognitive skills (PLO2)			(T)
PLO5	Cluster 3 Functional Works and Skills Practical skills (PLO3a)	Produce, select and apply the use of modern technological equipment that is appropriate and essential for Bioprocess Engineering Technology activities based on an understanding of the limits of the activity (Modern Tool Usage) .	IEG1	THINKER (T)
PLO6	Cluster 5 Ethics and Professionalism Ethics and professionalism (PLO5)	Apply reasoning based on contextual knowledge to assess issues related to society, health, safety, law and culture and responsibilities related to the professional practice of Bioprocess Engineering Technology (The Engineer and Society) .	IEG2	BALANCED (B)
PLO7	Cluster 5 Ethics and Professionalism Ethics and professionalism (PLO5)	Professionally assess the impact of solutions by Bioprocess Engineering Technology on society, environmental contexts and sustainability development (Environment and Sustainability) .	IEG2	BALANCED (B)
PLO8	Cluster 5 Ethics and Professionalism Ethics and professionalism (PLO5)	Apply principles ethically and committed to professional ethics and the responsibilities and norms of Bioprocess Engineering Technology practice (Ethics) .	IEG2	BALANCED (B)
PLO9	Cluster 3 Functional Works and Skills Interpersonal skill (PLO3b) Cluster 4	Function effectively as an individual, and as a member or leader in a diverse and multidisciplinary team (Individual and Teamwork) .	IEG2	BALANCED (B)

	Leadership, Autonomy and Responsibility Leadership, autonomy and responsibility (PLO3f)			
PLO10	Cluster 3 Functional Works and Skills Communication skill (PLO3c)	Communicate effectively on Bioprocess Engineering Technology activities with the community of engineering technologists and society at large (Communications).	IEG4	ARTICULATE (A)
PLO11	Cluster 4 Leadership, Autonomy and Responsibility Entrepreneurial skill (PLO4b)	Demonstrate knowledge and understanding related to engineering and management principles while being able to apply these criteria to tasks, as a member and leader in a team, to manage projects and in environments involving various disciplines (Project Management and Finance).	IEG3	ENTREPRENEURIAL (E)
PLO12	Cluster 4 Leadership, Autonomy and Responsibility Personal skill (PLO4a)	Recognise needs and have the preparation and ability to engage in the lifelong learning process independently as technology shifts to a broader context (Life Long Learning).	IEG5	HOLISTIC (H)