

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

**PROGRAM: SARJANA TEKNOLOGI BIOPROSES (*Master in Bioprocess Technology*)**

**PTJ: TEKNOLOGI INDUSTRI**

**a) Pemetaan PEO - IEG**

| PEO  | PEO statement   | THINKER<br>(T)<br>IEG1 | BALANCED<br>(B)<br>IEG2 | ENTREPRENEURIAL<br>(E)<br>IEG3 | ARTICULATE<br>(A)<br>IEG4 | HOLISTIC<br>(H)<br>IEG5 |
|------|---|------------------------|-------------------------|--------------------------------|---------------------------|-------------------------|
| PEO1 | <p>Integrate knowledge and understanding of critical thinking using practical skills to produce innovative solutions in the field of Bioprocess Technology.</p> <p><i>(Mengintegrasikan pengetahuan dan pemahaman berfikir secara kritis menggunakan kemahiran praktikal bagi menghasilkan penyelesaian yang inovatif dalam bidang Teknologi Bioproses).</i></p>                      | √                      |                         |                                |                           |                         |
| PEO2 | <p>Able to effectively communicate current issues and challenges in leading peers and stakeholders while ensuring professional and ethical practices are maintained.</p> <p><i>(Mampu berkomunikasi dengan berkesan terhadap isu dan cabaran semasa dalam memimpin rakan sebaya dan pihak berkepentingan sambil memastikan amalan profesional dan etika sentiasa dipelihara).</i></p> |                        | √                       |                                | √                         |                         |

|      |   |  |  |   |  |   |
|------|---|--|--|---|--|---|
| PEO3 | <p>Manage personal skills efficiently in applying various digital and numerical technologies required in providing innovative solutions to the bioprocess industry.</p> <p><i>(Mengurus kemahiran personal dengan cekap dalam mengaplikasikan pelbagai teknologi digital dan numerasi yang diperlukan dalam menyediakan penyelesaian inovatif kepada industri bioproses).</i></p> |  |  | √ |  |   |
| PEO4 | <p>Organize lifelong learning resources through interpersonal skills and professionalism towards academic and career advancement in the bioprocess industry sector.</p> <p><i>(Mengatur sumber pembelajaran sepanjang hayat melalui kemahiran interpersonal dan profesionalisme ke arah kemajuan akademik dan kerjaya dalam bidang industri bioproses).</i></p>                   |  |  |   |  | √ |

**b) Pemetaan PLO - IEG**

| PLO   | MQF 2.0 DOMAIN                           | PROGRAM LEARNING OUTCOMES, PLO  | IEG ELEMENT  |   |
|-------|--|---|--------------|---|
|       |  |   | IEG          | IEG ELEMENT                               |
| PLO1  | Knowledge & Understanding                | Able to demonstrate knowledge and a comprehensive understanding of interdisciplinary concepts across various disciplines related to Bioprocess Technology.        | IEG1         | <b>THINKER (T)</b>                        |
| PLO2  | Cognitive Skills                         | Able to conduct related research independently using the appropriate technology tools in the field of Bioprocess Technology to produce consistent and valid data. | IEG1         | <b>THINKER (T)</b>                        |
| PLO3  | Praktikal Skills                         | Able to analyze and solve problems related to Bioprocess Technology critically and innovatively with using knowledge, skills, and appropriate research methods.   | IEG1<br>IEG2 | <b>THINKER (T)</b><br><b>BALANCED (B)</b> |
| PLO4  | Interpersonal Skills                     | Able to communicate effectively through the involvement of activities related to Bioprocess Technology with peers and other related communities.                  | IEG4         | <b>ARTICULATE (A)</b>                     |
| PLO5  | Communication Skills                     | Able to demonstrate interpersonal skills in resource management planning and solving problems in group activities.  | IEG4         | <b>ARTICULATE (A)</b>                     |
| PLO6  | Ethics and Professionalism               | Able to exhibit understanding, awareness, and compliance with biosafety, ethical, professional, social and legal issues related to Bioprocess Technology.         | IEG2         | <b>BALANCED (B)</b>                       |
| PLO7  | Leadership, Autonomy, and Responsibility | Able to integrate knowledge and skills across various related fields through a lifelong learning process along with technological change.                         | IEG5         | <b>HOLISTIC (H)</b>                       |
| PLO8  | Entrepreneurial Skills                   | Able to exhibit knowledge and skills related to entrepreneurship concepts in a Bioprocess Technology related environment setting.                                 | IEG3         | <b>ENTREPRENEURIAL (E)</b>                |
| PLO9  | Personal Skills                          | Able to function effectively as a responsible individual, either as a leader or member of a different team from various disciplines.                              | IEG5         | <b>HOLISTIC (H)</b>                       |
| PLO10 | Digital Skills                           | Able to apply various digital technology and appropriate software to improve the research quality.  | IEG2         | <b>BALANCED (B)</b>                       |
| PLO11 | Numeracy Skills                          | Able to analyze and evaluate the study data related to Bioprocess Technology effectively by using quantitative / qualitative methods.                             | IEG1         | <b>THINKER (T)</b>                        |