KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

POLITEKNIK MALAYSIA MERLIMAU

PROGRAMME EDUCATIONAL OBJECTIVE (PEO)

DIPLOMA IN MECHANICAL ENGINEERING (MANUFACTURING) - DTP
CURRICULUM 2024.
EFFECTIVE SESSION [SESI I: 2024/2025]

PEO 01 Proficient with industry-relevant knowledge and skills in mechanical and manufacturing engineering field.

PEO 02 Engaging on lifelong and continuous learning to enhance knowledge and skills.

PEO 03 Acquire with entrepreneurial skills and mindset in the real working environment.

PEO 04 Established links with society and players in the industry.

DTP V 2.0 JKM | PMM

PROGRAMME LEARNING OUTCOME (PLO)

PLO 01 Apply knowledge of applied mathematics, applied science, computer and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices in area of mechanical engineering specialized in manufacturing.

PLO 02 Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to mechanical engineering specialized in manufacturing (DK1 to DK4).

PLO 03 Design solutions for well-defined technical problems and assist with the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety as well as, cultural, societal and environmental considerations in area of mechanical engineeringspecialized in manufacturing (DK5).

PLO 04 Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements (DK8).

PLO 05 Apply appropriate techniques, resources, and modern engineering computing and IT tools to well-defined engineering problems, with an awareness of the limitations (DK2 and DK6).

PLO 06 Consider sustainable development impacts* to: society, the economy,sustainability, health and safety, legal frameworks, and the environment, in solving well- defined engineering problems (DK1, DK5 and DK7).

PLO 07 Understand and commit to professional ethics and responsibilities and norms of technician practice and including compliance with national and international laws. Demonstrate an understanding of the need for diversity and inclusion (DK9).

PLO 08 Function effectively as an individual, and as a member in diverse and inclusive teams in multidisciplinary, face-to-face, remote and distributed settings (DK9).

PLO 09 Communicate effectively and inclusively on well-defined engineering activities with the engineering community and with society at large, by being able to comprehend the work of others, document their own work, and give and receive clear instructions .

PLO 10 Demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments.

PLO 11 Recognise the need for, and have the ability for i) independent and lifelong learning and ii) critical thinking in the face of specialised technical knowledge (DK8).

*Represented by the 17 UN Sustainable Development Goals (UN-SDG)

Dublin Knowledge refers to the Knowledge Profile as listed in the Manual of Engineering Technician Education Programme Accreditation Standard (ETAC) for diploma programmes.

- **DK 1** - A descriptive, formula-based understanding of the natural sciences applicable in a sub-discipline and awareness of directly relevant social sciences.
- **DK 2** - A descriptive, formula-based understanding of the natural sciences applicable in a sub-discipline and awareness of directly relevant social sciences.
- **DK 3** - A coherent procedural formulation of engineering fundamentals required in an accepted sub-discipline.
- **DK 4** - Engineering specialist knowledge that provides the body of knowledge for an accepted sub-discipline.
- **DK 5** - Knowledge that supports engineering design and operations based on the techniques and procedures of a practice area.
- **DK 6** - Codified practical engineering knowledge in recognized practice area.
- **DK 7** - Knowledge of issues and approaches in engineering technician practice, such as public safety and sustainable development.
- **DK 8** - Engagement with the current technological literature of the practice area.
- **DK 9** - Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.