KEMENTERIAN PENDIDIKAN MALAYSIA

POLITEKNIK MALAYSIA IBRAHIM SULTAN

JUBLEMAS 50 POLITEKNIK MALAYSIA 1969 - 2019

DEPARTMENT OF MECHANICAL ENGINEERING
POLITEKNIK IBRAHIM SULTAN
DIPLOMA IN MECHATRONIC ENGINEERING DEM

PROGRAMME EDUCATIONAL OBJECTIVES PEO

The engineering programme should produce balanced TVET graduates who are:

PEO 1:
Apply knowledge of applied mathematics, applied science, engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices

PEO 2:
Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (DK1 to DK4)

PEO 3:
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, cultural, societal, and environmental considerations (DK5)

PEO 4:
Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements

PROGRAMME LEARNING OUTCOMES PLO

Upon completion of the programme, students should be able to:

PLO 1:
Apply knowledge of applied mathematics, applied science, engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices

PLO 2:
Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (DK1 to DK4)

PLO 3:
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, cultural, societal, and environmental considerations (DK5)

PLO 4:
Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements

PLO 5:
Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations (DK6)

PLO 6:
Demonstrate knowledge of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering technician practice and solutions to well-defined engineering problems (DK7)

PLO 7:
Understand and evaluate the sustainability and impact of engineering technician work in the solution of well-defined engineering problems in societal and environmental contexts (DK7)

PLO 8:
Understand and commit to professional ethics and responsibilities and norms of technician practice

PLO 9:
Function effectively as an individual, and as a member in diverse technical teams

PLO 10:
Communicate effectively 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 11:
Demonstrate knowledge and understanding of engineering management principles and apply these to one's own work, as a member or leader in a technical team and to manage projects in multidisciplinary environments

PLO 12:
Recognise the need for, and have the ability to engage in independent updating in the context of specialised technical knowledge

Knowledge Profile
DK 1: A descriptive, formula-based understanding of the natural sciences applicable in a sub-discipline
DK 2: Procedural mathematics, numerical analysis, statistics applicable in a subdiscipline
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 based on the techniques and procedures of a practice area
DK 6: Codified practical engineering knowledge in recognised practice area
DK 7: Knowledge of issues and approaches in engineering technician practice: ethics, financial, cultural, environmental and sustainability impacts