

# Bachelor of Mechanical Engineering

## Programme Outcomes

PO1	Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
PO2	Identify, formulate, research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
PO3	Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
PO4	Design and conduct experiment.
PO5	Investigate complex problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
PO6	Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities, with an understanding of the limitations.
PO7	Apply reasoning informed by contextual knowledge to access societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
PO8	Understand the impact of professional engineering solutions in societal and environmental context and demonstrate knowledge of and need for sustainable development.
PO9	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
PO10	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective report and design documentation, make effective presentations, and give and receive clear instructions.

PO11	Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary setting.
PO12	Demonstrate knowledge and understand of engineering and management principles and apply these to one's own work, to manage projects and in multidisciplinary environments.
PO13	Identify basics and opportunities in entrepreneurship related to engineering.
PO14	Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Department of Mechanical and Manufacturing Engineering

Faculty of Engineering

Universiti Putra Malaysia