



Bachelor of Engineering (Hons) Mechanical Engineering

The Mechanical Engineering programme focuses on the application of engineering principles in the design, development and manufacturing of mechanical devices and systems. The programme's objective is to produce competent mechanical engineering graduates who are creative and innovative in the design, analysis and operation management of mechanical design systems, with R&D and leadership capabilities.

The programme stresses on strong foundation in Mathematics and Physics followed by a thorough coverage of basic engineering courses such as engineering drawing, static and dynamics, fluid and solid mechanics, heat transfer, thermodynamics, manufacturing technology, and mechanical system design. Once completed their basic engineering courses, student will have the opportunity to choose one of the core specialisations, i.e. Energy Systems, Product Technology, Deepwater Technology, and Facilities Engineering.

Programme Duration
Full time, 4 years

Fields of Study



Energy System



Product Technology



Deepwater Technology



Facilities Engineering

CONTACT US

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Welcome to the Department of Mechanical Engineering, UTP!



Fadzil Harman Johar,
Senior Mechanical Engineer,
PETRONAS, Project Delivery
& Technology (PD&T)
Alumni, Mechanical Engineering, 2002

"A degree from UTP, in any field for that matter can serve as a foundation or general education to take you further to other areas."



Lokman Jusoh,
Recruiting Manager,
Southeast Asia, Schlumberger
Alumni, Mechanical Engineering, 2004

"Most of the lecturers and professors in UTP have strong backgrounds and relations with industry. This is a great advantage in preparing the students to be industry-ready while equipping them with current trends and knowledge."



"The department maintains more than fifteen modern laboratories for both undergraduate instructions and post graduate research works."

Under the recently launched **InMotion** framework, a new specialised course in Computer Modelling and Simulation Environment (CMSE) will be introduced for the 2018 cohort.

InMotion is a collaboration initiative between higher institutions in Europe and Malaysia, which is co-funded by Erasmus+ programme of European Union, to improve the level of competences and skills in CMSE by developing new and innovative education approaches and learning modules.

Highlights of CMSE for Mechanical Engineering courses includes:

- Student centred learning approach
- Hybrid learning technologies
- Project-oriented teaching methods
- Different visual modeling environments for solving wide range of applied engineering problems
- Modeling and simulation systems
- An adaptive learning environment that meets the current needs of industry, focused on future technologies
- Interaction with potential employers at various stages of the training process
- Modern communication systems (high resolution video-conferencing systems) supporting interaction on scientific and education projects
- International training opportunities within the **InMotion** team members (Interantional summer school, International collective mini projects, etc)



Funded by the Erasmus+ Programme of the European Union

Selected Courses

Core Specialisation

Energy conversion
Hybrid vehicle
Advanced manufacturing technology
Product design and development
Sub-sea engineering
Flow assurance in pipelines and flow-lines
Plant facilities and transport
Facilities operation and management

Mathematical and Applied Science

Ordinary differential equations
Vector calculus
Statics
Dynamics
Mechanics of machine
Vibrations
Fluid mechanics
Solid mechanics
Thermodynamics
Heat transfer
Probability and statistics
Engineering materials

Computer and Mathematical Modeling

Engineering drawing
Control system
Numerical methods
Computer aided engineering

International Partners



Advantages of programme

- Unique curriculum structure that builds student knowledge and competencies in core mechanical areas with a niche in Energy
- State-of-the-art research & teaching facilities that are relevant to the industries
- Close ties with industries through adjunct lectures, plant visits as well as through experienced lecturers.
- Highly employable graduates. UTP students come out top in 9 out of 10 in job interviews.
- Outbound programmes available for graduates to experience studying in different environment in other countries.
- Award winning architectural marvel campus

Engineering Tools

- Modern engineering laboratory supported by smart classroom for student centred learning experience
- Mechanical engineering software including ANSYS, Abaqus, CATIA, AutoCAD, Comsol Multiphysics, etc
- Modern CMSE software i.e. Rand Model designer, MATLAB/Simulink, Modelica

Industrial Partners

