MADE TO INVENT
GREATNESS

MSc Advanced
Mechanical Engineering
This programme aims to develop the knowledge and skills of a Bachelor’s-level graduate in Mechanical Engineering to Masters level through advanced teaching, design work and research. It provides an opportunity for candidates from a different Engineering background to develop key Mechanical Engineering knowledge and skills required for their professional development. A key objective of the programme is to be an alternative route to becoming a professional engineer.

This programme makes use of Masters-level courses in the Energy Sciences and Manufacture and Design complemented with specialist courses from relevant MSc courses offered by the Institute. There is a growing need for an advanced mechanical engineering programme from our industry partners and this programme has been specifically developed to meet this need and to encourage students into further learning. This programme also provides graduates with additional advanced level of knowledge and skills to be eligible as a chartered or a professional engineer registered with BEM.

In accordance with our normal practice our professionally orientated programmes are designed to meet the educational requirements for membership of relevant professional institutions. In addition to accreditation within Malaysia, we seek accreditation by the relevant UK or international professional bodies in accordance with their standard procedures.

**ENTRY REQUIREMENTS**

- A relevant first or second-class Honours degree in an Engineering* of Physical Sciences Discipline
- A degree qualification, or equivalent qualification recognised by the Malaysian or National government, acceptable to the University.
- In addition to meeting the required academic levels of achievement, students will also need to demonstrate an ability to speak, read and write in English (at level IELTS-6.5).

*Must be in Mechanical Engineering to apply for BEM registration
The programme aims to equip graduates with the latest and specialist technical knowledge in mechanical engineering through the advanced level courses offered. The courses are taught by collaborative teams across the three international campuses made entirely of PhD holders or registered professional engineers. This would provide graduates relevant and up-to-date industry global insights in the rapidly changing technology landscape.

**Compulsory Courses**
- Professional and Industrial Studies
- Specialist Engineering Technologies 1

**Elective Courses** (choose 2)
- Engineering Design
- Fluids 1
- Advanced Mechanics of Materials 1
- Dynamics 1
- Thermodynamics 1
- Oil and Gas Field Appraisal

**Compulsory Courses**
- Critical Analysis and Research Preparation
- Failure Accident Analysis
- Specialist Engineering Technologies 2

**Elective Courses** (choose 1)
- Engineering Manufacture
- Fluids 2
- Advanced Mechanics of Materials 2
- Dynamics 2
- Thermodynamics 2
- Oil and Gas Field Development

**SEMESTER 1**

**SEMESTER 2**

**SEMESTER 3**

**COURSE CONTENT**

**CAREER OPPORTUNITIES**

Mechanical Engineering is identified as one of the critical technical occupations in the next 5-years (TalentCorp). Recent data also ranked Masters level of Mechanical Engineering to be the top-three amongst all engineering disciplines.

Graduates will gain project management and research skills from the dissertation work invaluable for employment at a higher level career prospect. This is an individual project supervised by a research-active member of staff on a current research theme, often together with industrial advisory and project engagement, with the aim of leading to the production of a journal article. Students are required to complete the **Critical Analysis and Research Preparation course** in attendance with other MSc engineering candidates giving a broader view of an interdisciplinary approach of a more diversification seen in real industry applications.