

# MASTER OF **ENGINEERING IN MECHANICAL ENGINEERING**

Community-Driven University For a Sustainable World

FACULTY OF ENGINEERING

by coursework

**OCTOBER,  
FEBRUARY & JUNE**

Intakes

## INTRODUCTION

Master of Engineering in Mechanical Engineering programme by coursework is suitable for fresh graduates, practicing engineers and academicians with primary degrees in Mechanical Engineering who wish to extend in depth and breadth the knowledge and skills gain from their engineering graduate studies. The programme offers two specialization areas in mechanical engineering field which are Mechanical & Energy Sustainability and Design & Manufacturing in the elective courses that enable the students to choose their area of interest. These areas of specialization are in line with the current needs of the industry. The programme is based on a trimester system; October, February and June in an academic year.

## ENTRY REQUIREMENTS

- A Bachelor's Degree in Mechanical Engineering with a minimum CGPA of 2.50; or
- A Bachelor's Degree in Mechanical Engineering or equivalent but CGPA less than 2.50 may be admitted subject to a minimum of five years working experience in the relevant field; or
- Other equivalent qualifications approved by Senate
- For international students, a minimum IELTS score of 5.0 or its equivalent (e.g. MUET Band 3.5; TOEFL iBT 40; TOEFL Essential (Online) 7.5, Pearson Test of English 47, Cambridge English Qualifications and Tests 154)\* is required.

## ALTERNATIVE OPTION FOR ADMISSION

### **APEL. A for Access**

- APEL.A is applicable to local and international applicants who do not meet the regular entry requirements imposed by academic programmes at any MQF level
- Applicants applying for entry via the APEL.A must meet the minimum age requirements stipulated for the various level of qualifications
- Applicants must fulfil the minimum formal qualifications stipulated, for Master's and Doctorate level
- Applicants applying for entry via the APEL.A must have prior experiential learning

## POTENTIAL APPLICANTS

- Fresh graduates
- Practising engineers
- Academicians

## DURATION OF PROGRAMME

Full Time

**1-2 years**

# PROGRAMME SCHEDULE

The programme requires students to accumulate 40 credit hours in their studies. All teaching and learning activities are conducted during the weekends (Saturday & Sunday).

## FACILITIES & RESOURCES

- Perpustakaan Tun Abdul Rahman Ya'kub (PeTARY)
- Computing Facilities
- Online Learning Support
- Resources Rooms
- Laboratory Facilities

## PROGRAMME STRUCTURE

### Semester 1

KNJ6012	Research Methodology
KNJ6023	Computational Method in Solid Mechanics

- Elective 1
- Elective 2
- Elective 3

### Semester 2

KNJ6043	Engineering Management
KNJ6054	Project 1

- Elective 4
- Elective 5

### Semester 3

KNJ6033	Thermodynamics in Energy Conversion
KNJ6067	Project 2

- Elective 6

### Common elective courses for both area of specialization

KNJ6233	Computer Aided Design and Applications
KNJ6413	Occupational Safety and Health for Engineers
KNJ6213	Energy Optimization and Management
KNJ6403	Applied Data Analytics

## FAST TRACK OPTION

### APEL.C for Credit Transfer

Qualified individuals with relevant prior learning experiences could take APEL. C assessments (Portfolio/Challenge Test) for credit transfer in APEL Assessment Centre, UNIMAS.

## COURSE FEES

Full Time:

Malaysian student **RM18,726.00**

International student **RM30,900.00**

Fees include administrative, tuition and course materials for the duration of the programme. Further payment will be required if the students extend their studies.

## List of Elective Courses Mechanical & Energy Sustainability

KNJ6073	Tribology
KNJ6133	Mechanical Behaviour of Materials
KNJ6183	Combustion Engineering
KNJ6193	Advance Heat Transfer
KNJ6103	Vibration
KNJ6113	Applied Biomechanics
KNJ6163	Fracture Mechanics
KNJ6223	Solar Energy
KNJ6093	Acoustics
KNJ6203	Heat, Ventilation and Air Conditioning
KNJ6083	Structural Dynamics

## Design & Manufacturing

KNJ6243	Engineering Design Optimization
KNJ6253	Product Realization
KNJ6323	Reliability and Quality Control Engineering
KNJ6123	Characterisation of Materials
KNJ6273	Lean Manufacturing
KNJ6283	Industrial Ergonomics
KNJ6293	Industrial Automation
KNJ6153	Polymer and Composites
KNJ6263	Supply Chain Management
KNJ6343	Metal Cutting and High Speed Machining
KNJ6353	Computer Aided Manufacturing
KNJ6363	System Modelling and Simulation
KNJ6143	Materials Selection and Processing
KNJ6173	Corrosion and Prevention
KNJ6393	Additive Manufacturing

\*The elective courses offered in each semester are subject to the minimum number of students registering for the programme.

# CONTACT US

## **Assoc. Prof. Ir Dr Mohd Danial B. Ibrahim**

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## **For General Inquiries**

### **Centre for Graduate Studies**

Universiti Malaysia Sarawak (UNIMAS)  
94300 Kota Samarahan, Sarawak, Malaysia.  
Website: <http://www.postgrad.unimas.my>  
Phone: +6082 58 1067/1066/1069

### **UNIMAS Business School**

Level 4, UNIMAS City Campus  
Lot 77, Section 22, KTLD  
Jalan Tun Ahmad Zaidi Aduce  
93150 Kuching, Sarawak, Malaysia.  
Website: <https://www.business.unimas.my>  
Phone: +6082-222111  
Email: [ubs@unimas.my](mailto:ubs@unimas.my)

# APPLICATION PROCEDURE

Application must be submitted online at  
**<https://oas.ia.unimas.my>**

Application is open throughout the year.

#### **Disclaimer:**

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