

# 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**

Programme Coordinator

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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 581067/1066/1069

### **UNIMAS Business School**

Level 4, UNIMAS City Campus

Lot 77, Section 22, KTLD

Jalan Tun Ahmad Zaidi Adruce

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.aa.unimas.my>

Application is open throughout the year.



#### **Disclaimer:**

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