



MAHSA  
UNIVERSITY



# Master in Engineering (By Research)

[KPT/JPS (N/520/7/0120)](MQA/PA14960) 09/26

# Overview

**Master in Engineering by Research** programme is designed to prepare individuals for the generation of new knowledge in the advanced and applied aspects of Engineering Research by considering IR4.0, sustainability and green technology.

The programme has the objective of training its candidates through intensive research. Graduates will demonstrate a capacity to design, conduct and report sustained and original research with emphasis on current industry demands. While the research is conducted under the supervision of an eligible academic advisor, students are expected to demonstrate the ability to work independently.

- This Master in Engineering by Research programme has been conceived to focus on existing and future issues and matters in the various industrial sectors and services.
- The focus is to develop graduates who are capable of adapting to global changes and current developments, thus inculcating important values including:
  - leadership
  - social responsibility
  - scholarship
  - community involvement
  - ethical values
  - professionalism

The aim of the Master in Engineering by Research programme is to prepare individuals for the generation of new knowledge in the advanced and applied aspects of Engineering research by considering IR4.0 sustainability and green technology.

## PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

- PEO 1** Utilise innovative methodologies, models and techniques embedded with sustainability and modern technology to solve complex problems by applying modern research knowledge.
- PEO 2** Communicate efficiently to express information, problems and solutions within social, ethical and legal responsibilities.
- PEO 3** Demonstrate interpersonal and entrepreneurial skills for lifelong learning, research and sustainable development in line with green and modern industry demands.



## PROGRAMME LEARNING OUTCOMES (PLO)

	Key idea	<b>Programme Learning Outcome (PLO)</b> At the end of the programme, students should have the ability to:
<b>PLO 1</b>	<b>Advanced Knowledge</b>	Demonstrate continual and advanced knowledge and capabilities to further use these in new situations.
<b>PLO 2</b>	<b>Modern Tools Usage</b>	Provide solutions through the application of appropriate tools and practical skills in related fields.
<b>PLO 3</b>	<b>Society</b>	Evaluate information and relate ideas to societal issues in related fields.
<b>PLO 4</b>	<b>Ethics</b>	Plan and perform research with minimal supervision and adhere to legal, ethical and professional codes of practice.
<b>PLO 5</b>	<b>Individual and Team Work / Communication</b>	Demonstrate leadership qualities through communicating and working effectively with peers and stakeholders.
<b>PLO 6</b>	<b>Problem Solving</b>	Analyse critically problems in in related fields particularly to provide situations with limited information using scientific and critical thinking skills.
<b>PLO 7</b>	<b>Long Life learning</b>	Recognise the need for continuing professional and sustainable development and lifelong learning.



# Programme Structure

- Full research - based Programme
- The applicant needs to pass “Research Methodology”
- Students need to present their yearly research progress

## Progression Pathway

A Bachelor's degree in related field - Master of Engineering - PhD  
Graduate can continue their PhD studies in any related field

## Entry Requirements

- A Bachelor's degree with a minimum CGPA of 2.75 or an equivalent degree which is approved by the Senate or
- A Bachelor's degree or equivalent degree with a minimum CGPA of 2.50 but not achieving a CGPA of 2.75 can be accepted subject to vigorous internal assessment or
- A Bachelor's degree or equivalent degree not achieving a minimum CGPA of 2.50 but with a working experience of not less than five (5) years can be accepted into the relevant course with the approval of the Senate or
- Other equivalent qualifications approved by the Senate of MAHSA University

and international students must pass:

- IELTS 6.0 or
- TOEFL PBT (550) or; TOEFL IBT (79) or;
- MUET (Malaysian University English Test) (Band 4)

## Career Opportunities

Researcher, Industry R & D, Lecturer



# MAHSA 360

At MAHSA University, we provide our students with the opportunity to develop quality skills and understanding that go beyond their field of study which will prepare them for their next leap upon graduation.

MAHSA 360 is our specially designed ecosystem that works to ensure every student is nurtured and supported throughout their student journey.



## MAHSA's Passport to Success

Professional Industry-Driven Education (P.R.I.D.E) is MAHSA University's specially designed education pathway that give students the best of both academic and professional certifications. Students have the opportunity to gain professional skills through various programmes from MAHSA's collaborations with internationally recognised professional bodies. P.R.I.D.E increases the employability rate of our fresh graduates and puts them on par with the rest in the professional world.

### MASTERCLASS

Students of this programme are eligible to gain add-on certification in Masterclasses. There are more than fifty Masterclasses to choose from, and all are designed to further enhance the student's employability, in line with the Industrial Revolution 4.0.

### PROFESSIONAL COURSES

Through MAHSA's collaboration with internationally recognised professional bodies, students will earn certifications that will enhance their professional skills and increase their employability rate.

### MOBILITY PROGRAMME

This is a unique opportunity for students to study abroad for up to one year. This programme lets students experience different cultures and practices from around the world. Ask us about our university partners in over fifty different countries.



# MAHSA University



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