



MAHSA  
UNIVERSITY



Doctor of Philosophy in  
**Engineering**

KPT/JPS (N/520/8/0111)(MQA/PA14961) 09/28

# Overview

The PhD in Engineering 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 and sustainability and green technology.

The objective of this programme is to train its candidates through intensive research. Graduates will demonstrate the 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, candidates are expected to demonstrate the ability to work independently.

- The PhD in Engineering 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 development, thus inculcating important values including:
  - leadership
  - social responsibility
  - scholarship
  - community involvement
  - ethical values
  - professionalism

The programme aims to provide graduates with the ability to carry out advanced research in their fields and solve complex problems. At the same time, it aims to facilitate discovery and contribute to modern knowledge and sustainable solutions.

## PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

- PEO 1** Utilise innovative methodologies, models and techniques embedded with sustainability and modern technology to generate new ideas by applying modern research knowledge.
- PEO 2** Communicate professionally to express information to generate solutions for complex problems within social, ethical and legal responsibilities.
- PEO 3** Possess 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	Programme Learning Outcome (PLO) At the end of the programme, students should have the ability to:
PLO 1	Advanced Knowledge	Synthesise knowledge and contribute to original research that broadens the frontier of knowledge in engineering-related fields.
PLO 2	Modern Tools Usage	Adapt practical skills leading to innovative ideas in the relevant engineering fields.
PLO 3	Society	Provide expert advice to society in the engineering-related fields.
PLO 4	Ethics	Conduct research independently and adhere to legal, ethical and professional codes of engineering practice.
PLO 5	Individual and Team Work / Communication	Conduct research independently and adhere to legal, ethical and professional codes of engineering practice.
PLO 6	Problem Solving	Critically appraise problems in engineering-related fields using scientific skills.
PLO 7	Long Life learning	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 master's degree accepted by the HEP Senate; or
- Other qualifications equivalent to a master's degree that are accepted by the HEP Senate.

## Note:

- There shall be no direct entry from bachelor's degree level to doctoral degree level.
- Candidates with bachelor's degrees who are registered for master's degree programmes may apply to convert their candidacy to the doctoral degree programme within ONE (1) year after their master's degree registration, subjected to:
  - having shown competency and capability in conducting research at doctoral degree level.
  - rigorous internal evaluation by the HEP.
  - approval by the HEP Senate.

# 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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