R/523/6/0096(MQA/FA13340)11/24

BACHELOR OF TECHNOLOGY (HONOURS) IN MECHATRONICS

PROGRAMME OVERVIEW

The programme delivers the principles and practices that integrate disciplines in mechanical and electronic engineering. It facilitates the application of theoretical knowledge to defined and applied engineering procedures, processes, systems or methodologies. Hence, the students will be equipped with the required skills to resolve engineering problems systematically to reach substantiated conclusions, using tools and techniques appropriate to mechatronic engineering technology. The students will also be exposed to different types of advanced manufacturing and industrial revolution technologies to develop sustainable mechatronics systems.

WHY BACHELOR IN MECHATRONICS

- Education and working experiences balance
- Flexible learning system
- Professional industrial players' platform for knowledge sharing
- Fully accredited programs
- Recognition from industrial players

PROGRAMME STRUCTURE & COURSES

The typical course units, totalling 126 Credits, are as follows:

Year 1

- Penghayatan Etika dan Peradaban OR
  Bahasa Melayu Komunikasi 2 (for international students)
- Philosophy and Current Issues
- Bahasa Kebangsaan A (for students without SPM credit in BM); OR
  Decision Making Skills (for students with SPM credit in BM and international students)
- Foundation Mathematics
- University Mathematics A
- Computers in a Networked Society
- Circuit Theory I
- Digital Electronics
- Fundamentals of Electronics

Year 2

- Co-curriculum
- Engineering Mathematics I
- Engineering Mathematics II
- Engineering Mathematics III
- Structured Programming
- Introduction to Electrical Machine and Power Systems
- Analogue Electronics
- Thermodynamics
- Process Control and Instrumentation

Year 3

- Engineering Mechanics - Statics
- Engineering Mechanics - Dynamics
- Fluid Mechanics
- Manufacturing Technology
- Engineering Management & Ethics
- Engineering Drawing and CAD
- Signals and Systems
- Microprocessor & Microcontroller
- Material Science

Year 4

- Technopreneurship
- Control Systems
- Mechanical Engineering Design
- Fluid Power Systems & Programmable Logic Controller (PLC)
- Automation and Robotics
- Computer Aided Design and Manufacturing
- Mechatronics System Design with IoT Application
- System Engineering and Simulation
- ME Project 1

Year 5

- ME Project 2
- ME Project 3
- Industrial Training
- Elective 1
- Elective 2

Elective (Choose Any 2)

- Principles & Practice of Management
- Basic Accounting
- Business Ethics
- Effective Leadership
- Operations Management
- Python Programming
- Power Electronics and Drives
- Additive Manufacturing
- Digital Manufacturing
- Industrial IoT

ASSESSMENT SYSTEM

Combination of assignments, projects, class tests, labs, presentations, quizzes and examinations.

DURATION OF STUDY

Intakes are available as follows:
January, May and September intakes
15 semesters over 5 years

AWARDING INSTITUTION

Wawasan Open University (WOU) Campus

STUDY PATHWAY

SPM / O-Level / IGCSE / UEC or equivalent

» Matriculation or Foundation in Arts / STPM (Science Stream or equivalent) / UEC / **DISTED Diploma**

» WOU WAWASAN OPEN UNIVERSITY Bachelor of Technology (Honours) in Mechatronics

MINIMUM ENTRY REQUIREMENTS

Matriculation / Foundation
Matriculation/Foundation in Science/Engineering qualification with a minimum CGPA of 2.00 out of 4.00, or any equivalent qualification.

STPM (Science Stream or equivalent)
A pass in STPM with a minimum Grade C (GP 2.0) in any 2 Mathematics or Science subjects or its equivalent.

A-Level
A-Level or HSC with minimum Grade D in any 2 Mathematics or Science subjects or its equivalent.

UEC
UEC III with a minimum 5 Grade B including any 2 Mathematics or Science subjects or its equivalent.

Diploma

A Diploma in Vocational/Technical/Skills in Engineering/Engineering Technology or equivalent with a minimum CGPA of 2.5, pass bridging courses*. OR

A Diploma in Engineering/Engineering Technology or equivalent with a minimum CGPA of 2.0

*Any other Diploma in Science or Business studies with a minimum CGPA of 2.5 may be admitted subject to a rigorous internal assessment** process and a credit in Mathematics at the SPM level or its equivalent.*

OR

Other equivalent qualifications recognised by the Malaysian Government.

** Bridging courses must be passed in the first year of studies.*

*** Internal assessment = Interview conducted by School*