



R2/010/3/0236(07/24) A 10301

Foundation in Engineering


Intakes	January, March, June and September
Duration	1 Year (Full-Time)
Course Location	 UOW Malaysia KDU University College, Utropolis, Glenmarie

The UOW Malaysia KDU Foundation in Engineering is ideal for those looking to gain admission into engineering degree programs, providing students with opportunities to develop fundamental knowledge and skills set in physical sciences, technical knowledge in engineering and language skills for tertiary education. Students are introduced to engineering- based subjects such as mechanics, electronics, and material science, enabling them to decide their specialised field of engineering to pursue upon completion.

COURSE STRUCTURE
MODULES
<ul style="list-style-type: none"> – Chemistry – Engineering Mathematics 1 – Engineering Mathematics 2 – Engineering Mathematics 3 – Fundamentals of Mechanics – Fundamentals of Physics – Fundamentals of Information Technology – Fundamentals of Electrical and Electronics – Introduction to Communication – Critical Writing and Referencing – Introduction to Robotics – Technical Drafting & CAD


R2/523/4/0185(07/24) A 3807

Diploma in Electrical & Electronics Engineering

Intakes	January, March, June and September
Duration	2 Years (Full-Time)
Course Location	 UOW Malaysia KDU University College, Utropolis, Glenmarie

With the Diploma in Electrical and Electronics Engineering, students gain understanding of engineering concepts and applications of power generation, transmission and distribution. The program grounds students with a strong foundation of knowledge and technical skills in the utilisation and control of electrical energy and technology. Students also gain hands-on training as they hone their technical skills in our cutting-edge laboratories.

COURSE STRUCTURE
YEAR 1
<ul style="list-style-type: none"> – Engineering Mathematics I – Engineering Physics and Electromagnetic Fields – Technical Drafting and CAD – Personal Development and Planning – Tertiary English 1 – Computer Programming – Engineering Mathematics II – Analogue Electronics – Electric Circuits – Electrical Wiring and Troubleshooting – Tertiary English 2 – Microcontroller Application – Digital Electronics – Electric Power System Fundamentals – Engineering Project
YEAR 2
<ul style="list-style-type: none"> – Engineering Mathematics III – Automation and Programmable Logic – Electric Machines – Power Electronics – Fundamental of System Modelling – Industrial Project – Industrial Training – Microcontroller System Design and Applications – Power Electronics – Modern Power Systems – Electronic Instrumentation and Control Systems – Engineering Management, Practices & Ethics – Bahasa Kebangsaan A – Bahasa Melayu Komunikasi 1 (International Students) – Co-Curricular Activities and Community – Malaysia Culture and Life – Pengajian Malaysia 2 (Malaysian Students)



N/521/4/0157(06/22) MQA/PA 8692

Diploma in Mechanical Engineering

Intakes	January, March, June and September
Duration	2 Years (Full-Time)
Course Location	 UOW Malaysia KDU University College, Utropolis, Glenmarie

The two-year Diploma in Mechanical Engineering program is designed to provide students with strong technical, analytical, and problem-solving skills necessary for a variety of careers in the field of mechanical engineering. This program is suitable for students who are interested in the design, technology, construction and development of solutions for engineering problems. Catering to the demands of the engineering industry, this diploma will produce graduates who are not only skilful but also well-equipped with current and relevant knowledge in the advancement of this engineering discipline.

COURSE STRUCTURE

YEAR 1

- | | |
|--|--|
| - Engineering Mathematics I | - Technical Drafting and CAD |
| - Engineering Physics | - Personal Development and Leadership Skills-1 |
| - Engineering Materials | - Tertiary English 2 |
| - Personal Development and Leadership Skills-2 | - Electric Circuits |
| - Tertiary English 1 | - Engineering Mathematics III |
| - Computer Programming | - Mechanical Design |
| - Engineering Mathematics II | - Strength of Materials |
| - Statics and Dynamics | - Fluid Mechanics |


YEAR 2

- | | |
|---------------------------|---|
| - Analogue Electronics | - Engineering Management, Practices & Ethics |
| - Mechanics of Machines | - Bahasa Kebangsaan A |
| - Thermodynamics | - Bahasa Melayu Komunikasi 1 (International Students) |
| - Workshop Technology 1 | - Co-Curricular Activities and Community |
| - Industrial Automation 1 | - Malaysia Culture and Life |
| - Electric Machines | - Pengajian Malaysia 2 (Malaysian Students) |
| - Industrial Training | |
| - Industrial Project | |
| - Workshop Technology 2 | |
| - Industrial Automation 2 | |



R/521/6/0047(02/25) MQA/FA 2023

Bachelor of Mechanical Engineering with Honours

Intakes	January, June and September
Duration	4 Years (Full-Time)
Course Location	 UOW Malaysia KDU University College, Utropolis, Glenmarie

Bachelor of Mechanical Engineering with Honours program enables students to apply the principles of physics and material science to design, produce and operate a wide variety of equipment and systems. Our approach is holistic learning to ensure graduates are well equipped with a solid platform for adaptation to ever-changing developments in science and technology, thus meeting the rigorous demands of global industries.

COURSE STRUCTURE

YEAR 1

- | | |
|--------------------------------------|--|
| - Engineering Mathematics 1 | - Industrial Design |
| - Statics | - Engineering Mathematics 2 |
| - Engineering Materials | - Dynamics |
| - Computer Programming for Engineers | - Mechanical Workshop Practices |
| - Engineering CAD | - Principles of Electrical and Electronics |

YEAR 2

- | | |
|--|-----------------------------------|
| - Fluid Mechanics 1 | - Solid Mechanics 2 |
| - Solid Mechanics 1 | - Fluid Mechanics 2 |
| - Electric Machines | - Engineering Thermodynamics |
| - Statistics | - Instrumentation and Measurement |
| - Engineering Ethics, Safety and Environment | - Engineering Mathematics 3 |
| - Numerical Methods | |

YEAR 3

- | | |
|---|----------------------------------|
| - Advanced Thermodynamics | - Engineering Project Management |
| - Control Systems | - Component Design |
| - Manufacturing Processes | - Capstone Project |
| - Mechanical Vibrations | - Heat Transfer |
| - Principles of Microcontroller Systems | - Computer Aided Engineering |

YEAR 4

- | | |
|--------------------------------|--|
| - Final Year Project 1 | - Corporate Social Responsibility |
| - Total Quality Management | - Hubungan Etnik (Malaysian Student) |
| - Industrial Training | - Life in Malaysia |
| - Final Year Project 2 | - Pengajian Malaysia 3 (International Students) |
| - Computer Aided Manufacturing | - Tamadun Islam dan Tamadun Asia (Malaysian Student) |
| - Elective (4 subjects) | |
| - Entrepreneurship | |
| - Bahasa Melayu Komunikasi 2 | |

ELECTIVES

- | | |
|---|------------------------------------|
| - Air Conditioning and Mechanical Ventilation | - Advance Materials Technology |
| - Energy Renewable Systems | - Engineering Ceramics and Polymer |
| - Internal Combustion Engines | - Fracture Mechanics |
| - Principles of Sustainable Engineering | - Materials Selection in Design |



R/523/6/0049(09/21) MQA/FA 0483

Bachelor of Electrical & Electronics Engineering with Honours

Technologies such as universal electric power, television, medical imaging are all examples of how electrical and electronics engineering play a strong role in modern society. UOW Malaysia KDU's Bachelor of Electrical and Electronics Engineering with Honours provides students with a broad-based education in electrical and electronics engineering, and equips them with the technical knowledge and skills through their specialisation.

Intakes

January, June and September

Duration

4 Years (Full-Time)

Course Location

 UOW Malaysia KDU University College,
Utropolis, Glenmarie

COURSE STRUCTURE

YEAR 1

- | | |
|--------------------------------------|---|
| - Engineering Mathematics 1 | - Analogue Electronics |
| - Circuit Theory | - Engineering Design Fundamentals |
| - Computer Programming for Engineers | - Digital Electronics |
| - Engineering CAD | - Introduction to Communication Systems |

YEAR 2

- | | |
|--|---|
| - Engineering Mathematics 3 | - Numerical Methods |
| - Circuit Theory and Analysis | - Electric Machines |
| - Principles of Microcontroller Systems | - Signals and Systems |
| - Object Oriented Programming | - Electromagnetic Field Theory and Applications |
| - Statistics | - Instrumentation and Measurement |
| - Engineering Ethics, Safety and Environment | |

YEAR 3

- | | |
|-------------------------|---------------------------------------|
| - Power Electronics | - Microcontroller System Design |
| - Advanced Electronics | - Electric Machines and Drive Systems |
| - Control Systems | - Engineering Project Management |
| - Power Systems | - Capstone Project |
| - Computer Networks | |
| - Digital Communication | |

YEAR 4

- | | |
|---|--|
| - Final Year Project 1 | - Corporate Social Responsibility |
| - Final Year Project 2 | - Hubungan Etnik (Malaysian Student) |
| - Digital Signal Processing | - Life in Malaysia |
| - Industrial Training | - Pengajian Malaysia 3 (International Students) |
| - Principles of Sustainable Engineering | - Tamadun Islam dan Tamadun Asia (Malaysian Student) |
| - Elective (5 Subjects) | |
| - Bahasa Melayu Komunikasi 2 | |
| - Entrepreneurship | |

ELECTIVES: ELECTRICAL POWER & RENEWABLE ENERGY

- | | |
|--|---------------------------------|
| - Advanced Power System Analysis | - Power System Protection |
| - Electrical Energy Utilisation | - Renewable Energy Systems |
| - Energy Storage | - Sustainable Power Generation |
| - Power Station and High Voltage Engineering | - Transmission and Distribution |

ELECTIVES: ELECTRONIC ENGINEERING

- | | |
|--|---|
| - Advanced Control Systems | - Introduction to Opto-Electronic Devices |
| - Advanced Digital Design with HDL | - Mixed Signals Circuit Design |
| - Fault Diagnosis of Integrated Circuits | - Real Time Embedded Systems |
| | - VLSI |

ELECTIVES: COMMUNICATION ENGINEERING

- | | |
|---|--------------------------------|
| - Advanced Digital Design with HDL | - Mixed Signals Circuit Design |
| - Internet Protocol for Mobile Network | - Optical Communication |
| - Introduction to Opto-Electronic Devices | - Radio Communication Systems |
| | - RF Systems Design |



N/521/6/0139(05/21) MQA/PA 8097

Bachelor of Mechatronics Engineering with Honours

Intakes

January, June and September

Duration

4 Years (Full-Time)

Course LocationUOW Malaysia KDU University College,
Utropolis, Glenmarie

The Bachelor of Mechatronics Engineering with Honours is a multidisciplinary field of science that includes a combination of mechanical engineering, electronics, computer engineering, telecommunications engineering, systems engineering and control engineering. This program is suitable for students who are passionate and interested in understanding new designs or developing new sensors, actuators, control algorithms and use advanced functional materials for the design of mechanical systems.

COURSE STRUCTURE

YEAR 1

- | | |
|--------------------------------------|-----------------------------------|
| - Engineering Mathematics 1 | - Engineering Design Fundamentals |
| - Statics | - Engineering Mathematics 2 |
| - Computer Programming for Engineers | - Circuit Theory |
| - Engineering Materials | - Dynamics |
| - Engineering CAD | - Analogue Electronics |

YEAR 2

- | | |
|---|--|
| - Engineering Mathematics 3 | - Engineering Ethics, Safety and Environment |
| - Digital Electronics | - Numerical Methods |
| - Principles of Microcontroller Systems | - Component Design |
| - Electric Machines | - Signals and Systems |
| - Engineering Thermodynamics | - Instrumentation and Measurement |
| - Statistics | |

YEAR 3

- | | |
|---------------------------|---------------------------------------|
| - Control Systems | - Engineering Project Management |
| - Manufacturing Processes | - Computer and Machine Vision |
| - Automation and Robotics | - Electric Machines and Drive Systems |
| - Artificial Intelligence | - Computer Aided Engineering |
| - Power Electronics | |
| - Capstone Project | |

YEAR 4

- | | |
|--------------------------------|--|
| - Final Year Project 1 | - Corporate Social Responsibility |
| - Advanced Control Systems | - Entrepreneurship |
| - Digital Signal Processing | - Hubungan Etnik (Malaysian Student) |
| - Industrial Training | - Life in Malaysia |
| - Final Year Project 2 | - Pengajian Malaysia 3 (International Students) |
| - Computer Aided Manufacturing | - Tamadun Islam dan Tamadun Asia (Malaysian Student) |
| - Elective (3 Subjects) | |
| - Bahasa Melayu Komunikasi 2 | |

ELECTIVES

- | | |
|-------------------------------|-----------------------------------|
| - Autonomous Robotics Systems | - Real Time Embedded Systems |
| - Digital Signal Processing | - Radio Communication System |
| - MEMS Sensors and Actuators | - Robotics Kinematics and Control |



N/520/8/0997(11/21) MQA/PA 8691

Doctor of Philosophy (Engineering)

Intakes

January, June and September

DurationMinimum 9 Semester, Maximum 18 Semester
(Full-Time/Part-Time)**Course Location**UOW Malaysia KDU University College,
Utropolis, Glenmarie

The Doctor of Philosophy in Engineering program provides innovative training which enhances professional knowledge in a specialisation area and develops a wide range of advanced transferable skills, ensuring the development of high calibre graduates.

The nature of the program ensures that students develop academically in their professional capability, intellectual creativity, innovation, scientific skill sets and become an independent researcher, as well enhance their personal attributes through personal confidence, leadership traits, communication and entrepreneurial skills. Graduating with a Ph.D. signifies a contribution of the graduate to the community of engineering scholars around the world.

COURSE STRUCTURE

RESEARCH PROPOSAL

Students will systematically structure and develop their research by developing a research proposal, which would guide the student through the entire research process.

PROPOSAL DEFENCE

A presentation session chaired by UOW Malaysia KDU with invited panel of examiners to ensure the candidate is able to articulate their research ideas and plans, as well as having the necessary skills to carry out research activities as proposed.

RESEARCH

Upon approval of the research proposal, students will be guided by their supervisors to begin their research, and will work independently on their research projects

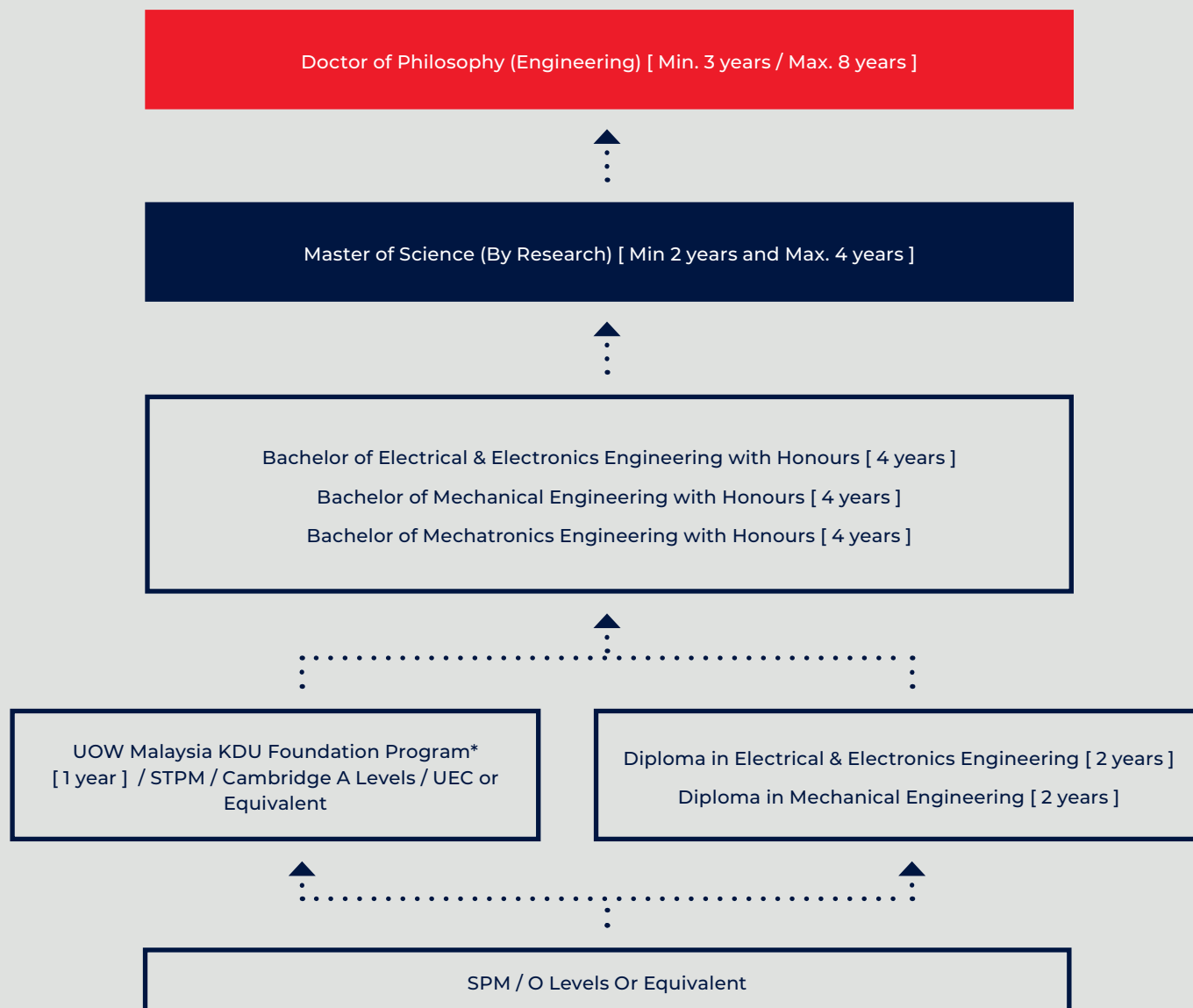
THESIS

Upon completion of their research, students will document the research project and process in a thesis. Typically, thesis for PhD should not be more than 80,000 words.

VIVA VOCE EXAMINATION

Upon completion of research and thesis, candidate will undergo an oral presentation, chaired by experts in the field.

Study Route



* Specific foundation programs that meet the entry requirement

Entry Requirement

– DIPLOMA IN ELECTRICAL & ELECTRONICS ENGINEERING – DIPLOMA IN MECHANICAL ENGINEERING

Academic Qualification	Requirement
SPM / O Levels	Min. 3 Credits (3Cs) inclusive of a Credit in Mathematics and Science and a “Pass” in English
UEC	Min. 3 Credits (3Bs) inclusive of a Credit in Mathematics and Science and a “Pass” in English
Certificate in relevant field	Pass with minimum CGPA of 2.00
Home Schooling with SAT	Pass Year 11 and SAT score of 1050 over 1600 with minimum score of 550 for Mathematics and Physics

– BACHELOR OF MECHANICAL ENGINEERING WITH HONOURS – BACHELOR OF ELECTRICAL & ELECTRONICS ENGINEERING WITH HONOURS – BACHELOR OF MECHATRONICS ENGINEERING WITH HONOURS

Academic Qualification	Requirement
GCE A Levels	2 Principal Passes (2Es) for Mathematics and Physics
STPM	2 Principal Passes (2Cs) for Mathematics and Physics
UEC	5 Credits (5Bs) inclusive of a Credit in Mathematics and Physics
Diploma	Pass with minimum CGPA of 2.00
Foundation Studies	Pass with minimum CGPA of 2.00

– DOCTOR OF PHILOSOPHY (ENGINEERING)

Academic Qualification	Requirement
Master Degree	Completion of Master’s Degree or equivalent in a related field

* Any other qualifications is subject to review and approval of certified transcripts. For a full listing of the entry requirements and other details on the respective programs, please scan the QR Code above or check with the counsellor.

** Bahasa Kebangsaan A is compulsory for all Malaysian students that do not fulfil the following requirements:

- without a credit in SPM Bahasa Malaysia.
- without SPM Bahasa Malaysia (applicable to students from UEC, O Level, or other equivalent programs)