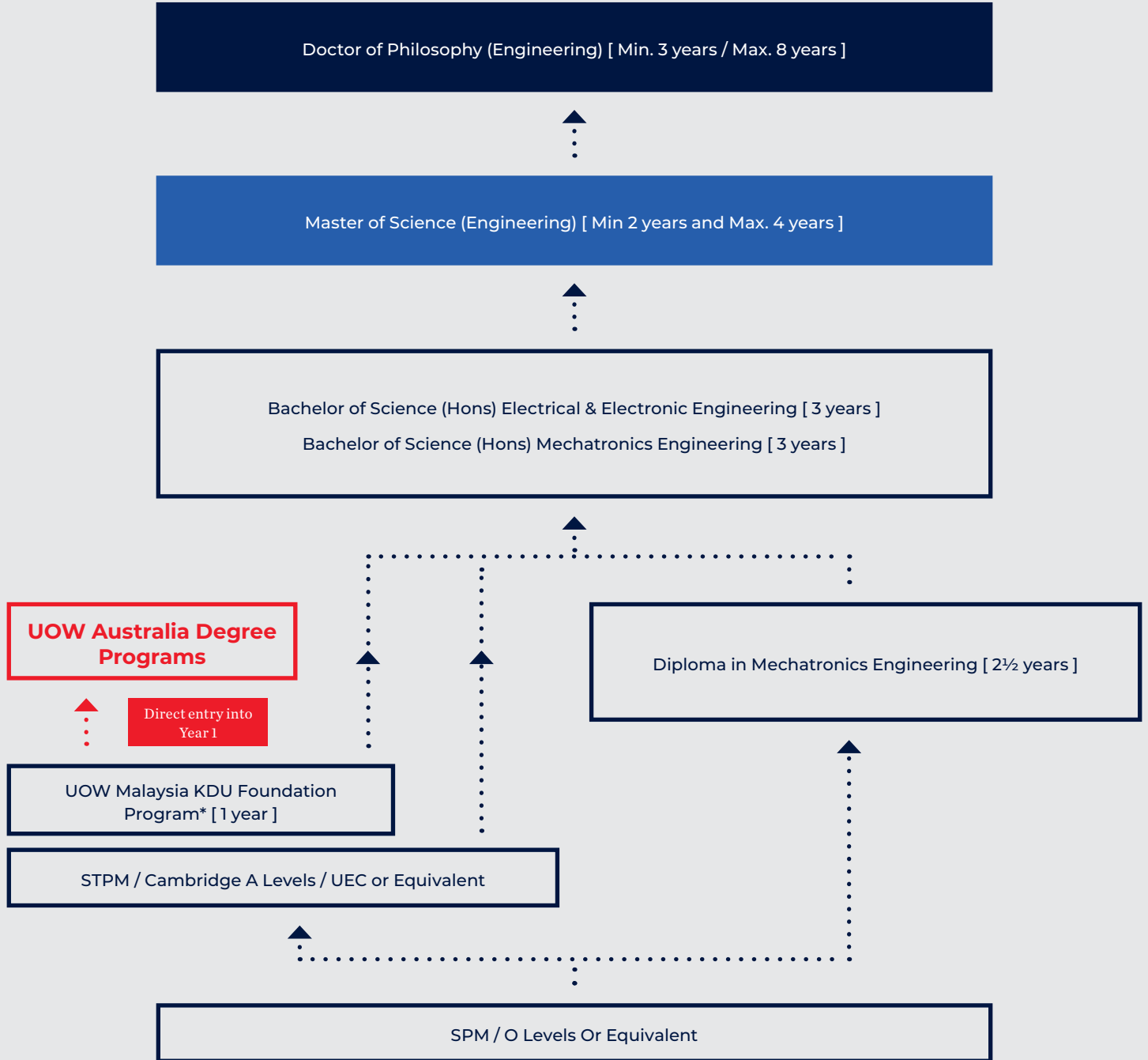




Study route

 **Penang**



* Specific foundation programs that meet the entry requirement.
For all Postgraduates programs, kindly refer to Postgraduates Brochure or website for more information.



R/523/4/0014(04/21) MQA/FA 0284

Diploma in Mechatronics Engineering

Intakes:

January, May and September

Duration:

2½ Years (Full-Time)

Course Location:

UOW Malaysia KDU Penang
University College, George Town

Mechatronics is a multidisciplinary field that focuses on mechanical, electronics and computing, in creating engineering solution.

This program is broad-based and specifically designed to integrate three major areas – electrical, electronics and mechanical engineering – into one stream. These courses give students theoretical and practical introduction to a career in electrical, electronics & mechanical engineering. This comprehensive, organized and focused program provides the students with more flexibility in choosing or tailoring their career paths and endeavors.

Career Opportunities:

Automation & Control Technician | CAD/CAM Technician | Clerk of Works | Failure Analysis and Reliability Technician | Material and Production Controller | Process Designer | Process Technician | QC Supervisor | Sales and Marketing Executive

COURSE STRUCTURE

Year 1

- Semiconductor Devices & Applications
- Electric Circuit I
- Engineering Mathematics I
- Fundamentals of Computer Systems
- Digital Electronics
- Writing and Referencing
- Engineering Mathematics II
- Basic Programming
- Electric Circuit II

Year 2

- Engineering Mathematics III
- Microcontroller System Design & Applications
- Analogue Electronics
- Introduction to Inventive Problem Solving in Engineering
- Computer Aided Design/Drafting
- Engineering Materials
- Mechatronic System Design
- Instrumentation and Control
- Robotics and Automation
- Project Lab 1
- Industrial Training

Year 3

- Project Lab 2
- Electric Machines
- Pneumatics and Hydraulics

MPU

- Pengajian Malaysia 2 (Malaysian Students) / Bahasa Melayu Komunikasi 1 (International Students)
 - Personal Development Skills
 - Society and Development in Malaysia
 - Teamwork and Community
 - Bahasa Kebangsaan A*
- * Bahasa Kebangsaan A is compulsory for all Malaysian students
- without a credit in SPM Bahasa Malaysia.
 - without SPM Bahasa Malaysia (applicable to students from UEC, O Level, or other equivalent programs)

ENTRY REQUIREMENT

Academic Qualification

Requirement

SPM / GCE O Level	3 Credits including Mathematics and 1 relevant Science subject
UEC	3 Credits including Credit in Mathematics and 1 Science subject
Sijil Kemahiran Malaysia (SKM)	Pass Level 3 in related field and Pass in SPM with a minimum of 1 Credit in any subject and Pass in Mathematics

ENGLISH REQUIREMENT

Local Student

Pass (English at SPM level or equivalent)

International Student

Band 5.0 in IELTS; or a min score of 42 (IBT) or 410 (PBT) in TOEFL; or Cambridge English CAE & CPE (from 2015) (154); or PTE Academic (47)

If English Language requirements are not fulfilled, additional English module(s) may be taken at UOW Malaysia KDU





Bachelor of Science (Hons) Electrical & Electronic Engineering

Intakes:

January, May and September

Duration:

3 Years (Full-Time)

Course Location:

UOW Malaysia KDU Penang
University College, George Town

Electrical And Electronic Engineering Course In Penang, Malaysia.

In industry 4.0, Electrical and Electronic Engineering would be fundamental in connectivity and communication section, human-machine interaction as well as advanced manufacturing since most smart systems would rely on numerous sensors for real time analysis. This program provides a well-established balance between theory and practical. Graduates of the program can be in a broad area of applications which include industries such as integrated circuit(IC), automotive, aerospace, power plants, telecommunication and many more.

Career Opportunities:

Appliances | Communication | Computer | Construction | Control | Electrical and Electronics | Instrumentation | Maintenance | Medical | Microelectronics | Network | Power | Project | Signal Processing | Software | Telecommunications | Test | Transmission

The accreditation of this programme is done by Malaysian Qualification Agency (MQA) and not Engineering Accreditation Council (EAC). Hence the programme are not recognized by Board of Engineers Malaysia (BEM). In order to register as Graduate Engineer with BEM, graduates have to top up their study with a master degree by instruction (master by coursework) in the relevant field from accredited universities / institutions.

COURSE STRUCTURE

Year 1

- Engineering Mathematics 1
- Semiconductor devices
- Circuit Theory
- Digital Electronics & Telecommunications
- Introduction to Inventive Problem Solving in Engineering
- Introduction to Engineering Design
- Engineering Skills in Experimentation and Presentation
- Engineering Mathematics 2
- Electric Power and Machines
- Electric Machine
- Computer Programming
- Electronic Devices

Year 2

- Engineering Mathematics 3
- Digital Systems
- Engineering Product Development
- Communication Systems
- Signals, Circuits and Systems
- Power Generation
- Sustainable Energy Systems
- Numerical Methods
- C Programming
- Microprocessors and Microcontrollers
- Instrumentation and Control
- Analogue Electronics

Year 3

- Final Year Project 1
- Project Management
- Digital Signal Processing
- Electronic Circuit Design
- Industrial Attachment
- Final Year Project 2
- Manufacturing Analysis
- Power Electronics and Drive Systems

Specialisations

- Very Large Scale Integration / High Voltage Engineering / Wireless and RF Communication System Design
- Digital System Design and Implementation / Industrial Instrumentation and Modern Control Systems / Optical Communication System Design
- Embedded Systems / Power System Analysis / Computer Networking and Security

MPU

- Hubungan Etnik and Tamadun Islam dan Tamadun Asia (Malaysian Students) / Bahasa Melayu Komunikasi 2 and Pengajian Malaysia 3 (International Students)
- Entrepreneurship
- Malaysia and Global Issues
- Global Social Responsibility
- Bahasa Kebangsaan A*
- * Bahasa Kebangsaan A is compulsory for all Malaysian students
 - without a credit in SPM Bahasa Malaysia.
 - without SPM Bahasa Malaysia (applicable to students from UEC, O Level, or other equivalent programs)

ENTRY REQUIREMENT

Academic

Qualification	Requirement
STPM	Pass with NGMP 2.00 and Grade C in Mathematics and Physical Science subject (Physics/ Chemistry)
GCE A Level	2 Principal Passes inclusive of Mathematics and 1 Physical Science subject (Physics/ Chemistry)
UEC	Min. 5 Credits inclusive of Mathematics and 1 Physical Science subject (Physics/Chemistry)
Foundation / Matriculation	Pass with min. CGPA of 2.00 inclusive of Mathematics and Science subject
Australian Matriculation / Foundation	ATAR score of 70
Diploma in Engineering	Pass with CGPA ≥ 2.00

ENGLISH REQUIREMENT

Local Student	MUET Band 3
International Student	Band 5.0 in IELTS; or a min score of 42 (IBT) or 410 (PBT) in TOEFL; or Cambridge English CAE & CPE (from 2015) (154); or PTE Academic (47)

If English Language requirements are not fulfilled, additional English module(s) may be taken at UOW Malaysia KDU



Bachelor of Science (Hons) Mechatronics Engineering

Intakes:

January, May and September

Duration:

3 Years (Full-Time)

Course Location:

UOW Malaysia KDU Penang
University College, George Town

Build smart and sustainable solutions.

Mechatronics is considered modern mechanical engineering, that it integrates mechanical system with electrical & electronics for better feedback and control into a complete system. Mechatronics is the discipline that connects machines for better operations, productivity, reliability maintainability; supported by smart system. This program provides a well-established balance between theory and practical, and you will be well-prepared to enter into the industry.

Career Opportunities:

Automotive | Aeronautical | Robotics | Biomedical | Automation | Process Control | Construction | Manufacturing | Semiconductor | Energy | Building Services Sectors | Electrical & Electronics

The accreditation of this programme is done by Malaysian Qualification Agency (MQA) and not Engineering Accreditation Council (EAC). Hence the programme are not recognized by Board of Engineers Malaysia (BEM). In order to register as Graduate Engineer with BEM, graduates have to top up their study with a master degree by instruction (master by coursework) in the relevant field from accredited universities / institutions.

COURSE STRUCTURE

Year 1

- Engineering Mathematics 1
- Electrical and Electronic Principles
- Engineering Statics and Dynamics
- Engineering Materials
- Introduction to Inventive Problem Solving in Engineering
- Introduction to Engineering Design
- Engineering Skills in Experimentation and Presentation
- Engineering Mathematics 2
- Electric Power and Machines
- Engineering Drawing
- Computer Programming
- Workshop Technology

Year 2

- Engineering Mathematics 3
- Strength of Materials
- Operational Management and Engineering Economics
- Engineers in Society
- Introduction to Robotics
- Thermo-Fluids Science
- Manufacturing Technology
- Numerical Methods
- Mechanical Engineering Design
- Microprocessors and Microcontrollers
- Instrumentation and Control
- Analogue Electronics

Year 3

- Final Year Project 1
- Project Management
- Robotics and Automation
- Signal Processing and System Identification
- Heat, Ventilation and Air Conditioning
- Industrial Attachment
- Final Year Project 2
- State-Space Control
- Industrial Automation
- Energy System and Conversion
- Dynamics of Machines / Mechanical Design and Analysis / Advanced Manufacturing Systems / Sustainable Energy Systems

MPU

- Hubungan Etnik and Tamadun Islam dan Tamadun Asia (Malaysian Students) / Bahasa Melayu Komunikasi 2 and Pengajian Malaysia 3 (International Students)
- Entrepreneurship
- Malaysia and Global Issues
- Global Social Responsibility
- Bahasa Kebangsaan A*
- * Bahasa Kebangsaan A is compulsory for all Malaysian students
 - without a credit in SPM Bahasa Malaysia.
 - without SPM Bahasa Malaysia (applicable to students from UEC, O Level, or other equivalent programs)

ENTRY REQUIREMENT

Academic Qualification	Requirement
STPM	Pass with NGMP 2.00 and Grade C in Mathematics and Physical Science subject (Physics/ Chemistry)
GCE A Level	2 Principal Passes inclusive of Mathematics and 1 Physical Science subject (Physics/ Chemistry)
UEC	Min. 5 Credits inclusive of Mathematics and 1 Physical Science subject (Physics/Chemistry)
Foundation / Matriculation	Pass with min. CGPA of 2.00 inclusive of Mathematics and Science subject
Australian Matriculation / Foundation	ATAR score of 70
Diploma in Engineering	Pass with CGPA \geq 2.00

ENGLISH REQUIREMENT

Local Student	MUET Band 3
International Student	Band 5.0 in IELTS; or a min score of 42 (IBT) or 410 (PBT) in TOEFL; or Cambridge English CAE & CPE (from 2015) (154); or PTE Academic (47)

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