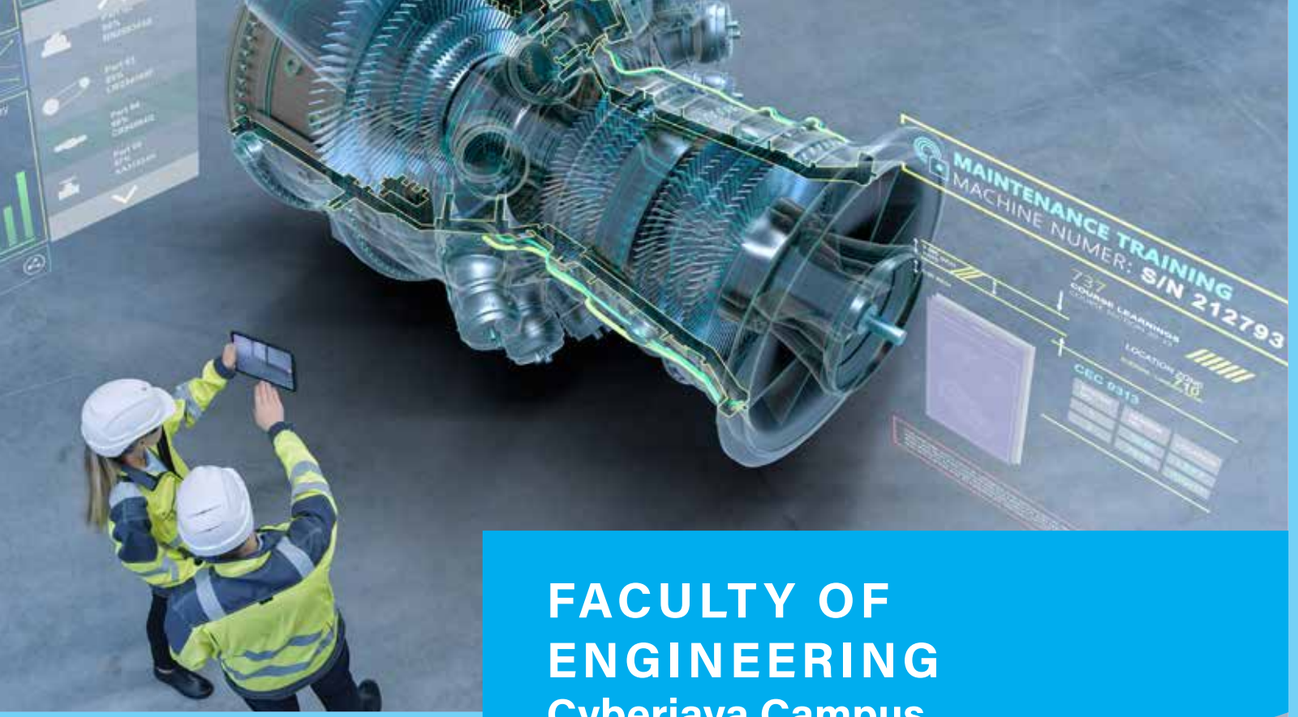
MMU®
MULTIMEDIA UNIVERSITY

TOGETHER WE LEAD THE
DIGITAL FUTURE

Abdulla Mahin Khan
MMU Engineering Student

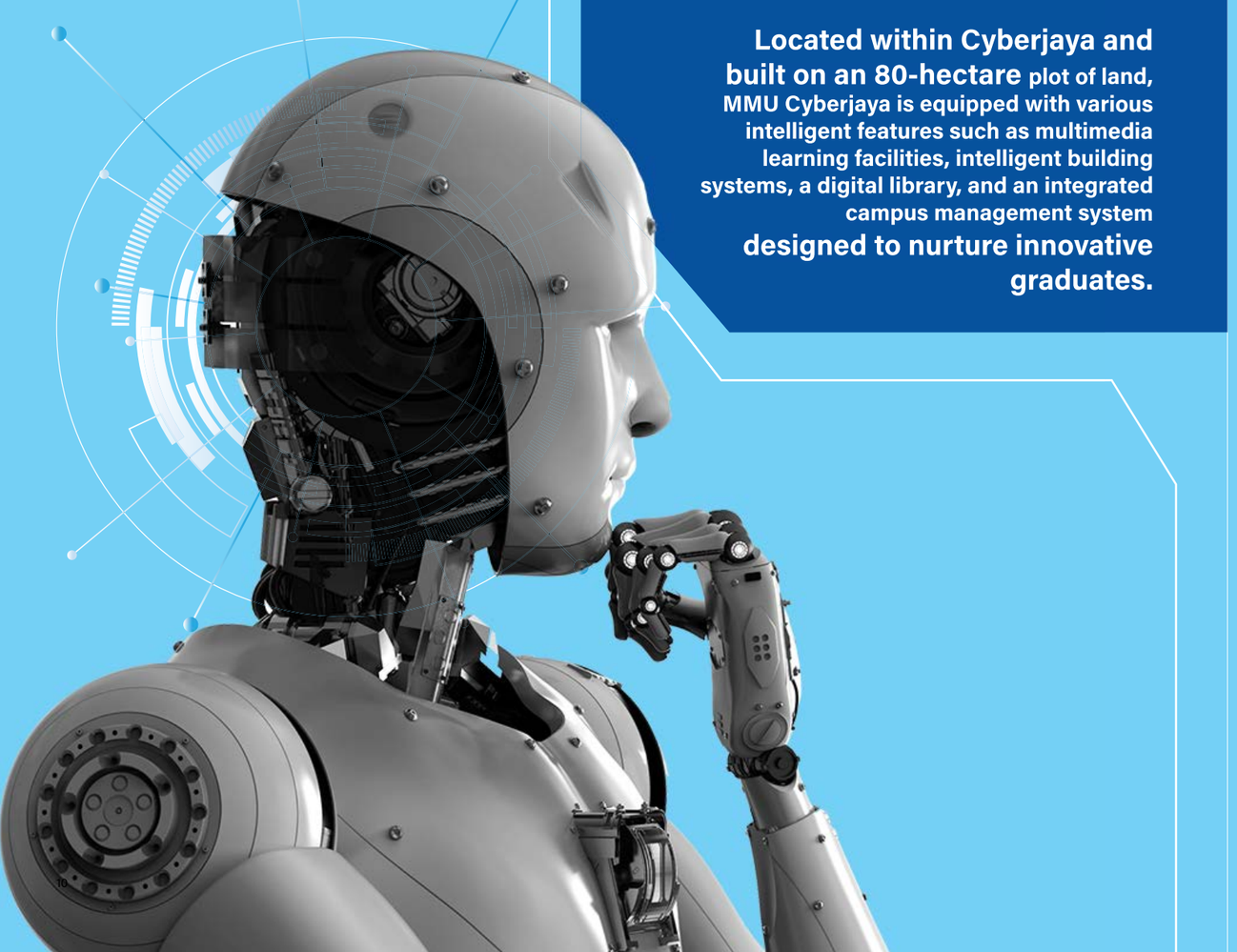
ENGINEERING

TM Group



FACULTY OF ENGINEERING
Cyberjaya Campus

Located within Cyberjaya and built on an 80-hectare plot of land, MMU Cyberjaya is equipped with various intelligent features such as multimedia learning facilities, intelligent building systems, a digital library, and an integrated campus management system designed to nurture innovative graduates.



Foundation in Engineering
(R2/010/3/0087) 12/22 (A8671)

The one-year Foundation in Engineering programme is the preferred route for many Malaysians and international students to access engineering courses in Multimedia University. Set in a campus environment that enriches their preparation for degree studies, the programme's curriculum focuses on delivering preparatory engineering subjects to equip students with strong fundamentals in order to excel with confidence. In addition to analytical and technical knowledge, the programme also focuses on equipping students with critical thinking and interpersonal skills to succeed not only in the undergraduate studies, but more importantly, as independent life-long learners. After completion of the foundation programme, you can opt for a degree programme from either Faculty of Engineering (FOE) or Faculty of Engineering & Technology (FET).

PROGRAMME STRUCTURE FOR FOUNDATION IN ENGINEERING | FOE

Trimester 1	Trimester 2	Trimester 3
• Basic Computing & Programming • Pre-Calculus • Trigonometry & Coordinate Geometry • Mechanics • Communicative English	• Calculus • Electricity & Magnetism • Chemistry • Introduction to Business Management • Critical Thinking • Essential English	• Introduction to Probability & Statistics • Modern Physics & Thermodynamics • Academic English

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

Bachelor of Engineering (Hons.) (Electrical)
(R2/522/6/0038) 06/26 (MQA/FA4863)

The B.Eng. (Hons.) Electrical programme is a four-year engineering course that prepares students with a broad foundation in a discipline that deals with the generation, transmission, and distribution of electricity. With the recent paradigm shift towards renewable and sustainable energy, the prospect for electrical engineers is even brighter. Additionally, electrical engineers are also responsible for the design of related devices such as transformers, generators, power electronics and electric motors. Students undertake fundamental engineering subjects such as mathematics, computing, electronics and circuit theory before progressing to core electrical subjects such as power generation, transmission and distribution, renewable energy, and energy conversion. Besides that, students are also equipped with knowledge on Artificial Intelligence (AI), Internet of Things (IoT), cybersecurity, robotics and automation, economics, accounting, management, law, and workplace communication. These skills are developed through a holistic combination of various forms of learning activities.

Career Prospects: Design Engineer, Project Engineer, Test Engineer, Protection Engineer, Power Engineer, Sales Engineer, High Voltage Engineer, Service Engineer, Electrical Production Engineer, Product Development Engineer, Electrical and Instrument Engineer, PCB Design Engineer, QC Engineer, Field Service Engineer, Electrical Engineering Manager, M&E Engineer, or Oil & Gas Process Engineer, etc.

PROGRAMME STRUCTURE

Year 1	Year 2	Year 3	Year 4
CORE			
• Engineering Mathematics I • Electronics I • Circuit Theory • Field Theory • Computer & Program Design • Engineering Mathematics II • Electronics II • Energy Conversion I • Instrumentation & Measurement Techniques • Algorithms and Data Structures • Digital Logic Design • Electronics III	• Engineering Mathematics III • Microcontroller and Microprocessor Systems • Circuits and Signals • Electromagnetic Theory • Electrical Engineering Materials • Power Transmission & Distribution • Energy Conversion II • Industrial Mathematics • Control Theory	• Analog and Digital Communications • Power System Analysis • Power Electronics • Switchgear & Protection • Electric Power Utilization & Installation • Power System Operation and Control • Capstone Project • Industrial Training	• Project • Power Stations • High Voltage Engineering • Electrical Drives • Renewable Energy Technology • Energy Management Competency Programme
ELECTIVES			
	• Embedded IoT Systems and Applications • Cybersecurity • Introductory Mobile Programming • Digital Signal Processing • Advanced Microprocessors • Design of On and Off Grid PV Systems • Energy Management in Industry • Energy Monitoring and Auditing		• Digital Signal Processing • Artificial Intelligence Systems & Applications • Cybersecurity • Advanced Microprocessors • Embedded IoT Systems and Applications
UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)			
	• MPU-U1: TITAS (Local)/Bahasa Melayu Komunikasi 2 (International) • Workplace Communications	• Law for Engineers • Engineer and Society • MPU-U1: Hubungan Etnik (Local)/ Pengajian Malaysia 3 (International) • Project Management	• MPU-U2: Bahasa Kebangsaan A/Foreign Language**/U2(FOM) Entrepreneurship in Cross Border E-Commerce/Business and Entrepreneurship in Malaysia • MPU-U4: Co-Curriculum • MPU-U3: Introduction to Multicultural Studies in Malaysia /Introduction to Malaysian Economy /Islamic Institutions In Malaysia / Stress and Well-Being among Malaysians

Note: The above programme structure serves as a guide. Courses may differ according to intakes.
***** Subject to be offered by faculty.***

****For PG-MEEE Track. students are required to complete two elective subjects under the PG-MEEE Track***

Bachelor of Engineering (Hons.) (Electronics)

(R2/523/6/0167) 06/26 (MQA/FA4864)

The four-year B.Eng. (Hons.) Electronics programme focuses on applying theory and technology to solve real-world engineering problems. In this programme, students start off with fundamental subjects such as circuit and signal analysis, computer programming, control theory, and microprocessors. These subjects form the bedrock for more advanced and specialised topics ranging from analogue electronics, physical electronics, and semiconductor devices to embedded Internet of Things (IoT) systems, artificial intelligence (AI) systems & applications, cybersecurity, robotic & automation and electromagnetic interference.

Engineering knowledge is further supplemented with professional development modules such as workplace communications, management, accounting and engineering ethics. The programme is also designed to provide students with opportunities to undergo practical training in the electronics industry and to obtain research experience through undergraduate research projects.

Career Prospects: Application Engineer, Design Solution Engineer, Research & Development Engineer, Firmware/Embedded Software Engineer, Test Application Developer, Product Engineer, PCB Design Engineer, Process Engineer, System Integration Engineer, Computer System Architect, AI Engineer, IoT Specialist, System Test Engineer or Technical Marketing Engineer.

PROGRAMME STRUCTURE

CORE

Year 1	Year 2	Year 3	Year 4
• Engineering Mathematics I • Electronics I • Circuit Theory • Field Theory • Computer & Program Design • Engineering Mathematics II • Electronics II • Introduction to Machines and Power Systems • Instrumentation & Measurement Techniques • Algorithms and Data Structures • Digital Logic Design • Electronics III	• Engineering Mathematics III • Circuits and Signals • Electromagnetic Theory • Microcontroller and Microprocessor Systems • Physical Electronics • Microelectronics Circuit Analysis and Design • Electromagnetic Interference • Computer Organization and Architecture • Industrial Mathematics • Control Theory	• Analog and Digital Communications • Digital System • Power Electronics • Integrated VLSI Systems • Advanced Microprocessors • Capstone Project • Industrial Training	• Project • Digital Integrated Circuits • Processing and Fabrication Technology • Data Communications and Computer Networking

ELECTIVES

IC Design
- VLSI System Design and Modelling Technique
- Analog Integrated Circuits
- Semiconductor Devices

Embedded Technology
- Embedded IoT Systems and Application
- AI System & Application
- Object Oriented Programming with C++

Multimedia Technology
- Software Engineering
- Object Oriented Programming with C++
- Advanced Object-oriented Design with Java
- Operating System
- Cybersecurity
- Multimedia Technology and Applications
- Digital Signal Processing
- Introductory Mobile Programming

Nanotechnology
- Diagnostic Technology
- N/MEMS
- Semiconductor Devices

Data Engineering
- Introductory Data Science
- Introductory Data Visualization
- AI System & Application

Note: Elective subjects are subject to change by the faculty. Choose any 3 subjects during year 3 and year 4.

UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)

	• MPU-U1: TITAS (Local)/Bahasa Melayu Komunikasi 2 (International) • Workplace Communications	• Law for Engineers • Engineer and Society • MPU-U1: Hubungan Etnik (Local)/ Pengajian Malaysia 3 (International) • Project Management	• MPU-U4: Co-Curriculum • MPU-U3: Introduction to Malaysian Economy/Islamic Institutions in Malaysia/Introduction to Multicultural Studies in Malaysia/ Stress and Well-Being among Malaysians • MPU-U2: Bahasa Kebangsaan A/ Foreign Language**/U2(FOM) Entrepreneurship in Cross Border E-Commerce/Business and Entrepreneurship in Malaysia

Note: The above programme structure serves as a guide. Courses may differ according to intakes.
***** Subject to be offered by faculty.***

Articulation Pathway:

Bachelor of Engineering (Hons.) (Electronics majoring in Telecommunications)

(R2/523/6/0168) 06/26 (MQA/FA4865)

With graduates' employability in mind, this four-year programme is designed in consultation with industry experts, who contribute to the ongoing development of the programme, keeping it current and relevant to prepare you for an exciting career in telecommunications and computing. Combining fundamental theories with practical experience, our programme equips graduates with competency in the design, implementation, and management of communication systems for information processing and transmission, as well as creation of applications for mobile devices and Internet-based services.

The programme focuses on mobile communications and computing, beginning with intensive, broad-based coverage of engineering mathematics, electronics, circuit and signals, networking, computer and microprocessor systems, and power systems, followed by advanced modules such as industrial mathematics, digital signal processing, communication systems and networks, object-oriented programming, embedded Internet of Things (IoT) systems, artificial intelligence (AI) and cybersecurity. Together with non-technical subjects such as project management, workplace communications and law, as well as the opportunity to undergo industrial training, capstone and graduate projects cultivate graduates with employable skills to address the challenges of the 5G and big data era.

Career Prospects: Wireless System Engineer, Cellular Systems Engineer, AI Engineer, IoT Specialist, Big Data Engineer, Network Engineer, System Test Engineer, Hardware Development Engineer, Radio Frequency Design Engineer, Embedded Wireless Software Engineer, Mobile Applications Developer.

PROGRAMME STRUCTURE

CORE

Year 1	Year 2	Year 3	Year 4
• Engineering Mathematics I • Circuit Theory • Electronics I • Computer & Program Design • Field Theory • Electronics II • Engineering Mathematics II • Algorithms & Data Structures • Introduction to Machines and Power Systems • Instrumentation & Measurement Techniques • Digital Logic Design • Electronics III	• Engineering Mathematics III • Microcontroller and Microprocessor Systems • Circuits & Signals • Electromagnetic Theory • Fundamental of Wireless Communications • Computer Organization & Architecture • Information Theory and Error Coding • Antenna & Propagation • Industrial Mathematics • Data Communications & Networking	• Digital Communications • Communications Networks • Digital Signal Processing • Embedded IoT Systems and Application • Capstone Project • Industrial Training	• Project • Analog Communications • Advanced Networking Techniques • Control Theory • Optoelectronics & Optical Communications

ELECTIVES

RF/RAN Network Planner/ Satellite Communications
- RF Measurement Techniques
- Random Signal and Network Analysis
- RF Circuit Design
- Electromagnetic Interference
- Radio Network Planning Towards 5G
- Satellite Communications

Multimedia Technology
- Object Oriented Programming with C++
- Cybersecurity
- Introductory Mobile Programming
- AI System & Application
- Java Technology
- Software Engineering
- Multimedia Technology and Applications

Data Engineering
- Introductory Data Science
- Introductory Data Visualization
- AI System & Application

IC Design
- Digital System
- VLSI System Design & Modeling Technique

Embedded Technology
- AI System & Application
- Object Oriented Programming with C++

Note: Elective subjects are subject to change by the faculty. Choose any 3 subjects during year 3 and year 4.

UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)

	• MPU-U1: TITAS (Local)/Bahasa Melayu Komunikasi 2 (International) • Workplace Communications	• Law for Engineers • Engineer and Society • MPU-U1: Hubungan Etnik (Local)/ Pengajian Malaysia 3 (International) • Project Management	• MPU-U2: Bahasa Kebangsaan A/ Foreign Language**/U2(FOM) Entrepreneurship in Cross Border E-Commerce/Business and Entrepreneurship in Malaysia • MPU-U4: Co-Curriculum • MPU-U3: Introduction to Malaysian Economy/Islamic Institutions In Malaysia/Introduction to Multicultural Studies in Malaysia/ Stress and Well-Being among Malaysians

Note: The above programme structure serves as a guide. Courses may differ according to intakes.
***** Subject to be offered by faculty.***

Bachelor of Engineering (Hons.) (Electronics majoring in Computer)

(R2/523/6/0166) 06/26 (MQA/FA4866)

For students aiming towards a professional career in computer systems and information technology, this four-year computer engineering programme provides a complete undergraduate training in the design and development of both hardware and software aspects of computers and digital systems. The curriculum encompasses specialised training in computer organisation and architecture, data science, operating systems, data communications and networking, high performance computing, artificial intelligence, microprocessor system, computer security, virtual reality and object-oriented programming.

Not neglected are rigorous grounding in engineering fundamentals such as circuit and signal analysis, field theory, electronics, control theory, power systems, machines and engineering mathematics. Courses in management, economics, accounting and law are included to ensure that graduates are well rounded and marketable to future employers. Capping off the programme in the third and fourth years are the industrial training, capstone and graduate projects, which serve to cultivate skills and capabilities in research, system design, practical problem solving and project management.

Career Prospects: Computer Software Engineer, Cybersecurity Engineer, Computer Network Architect, Big Data and Cloud-based Computing Engineer, Internet of Things (IoT) Expert, Systems Architecture Designer, or Robotics and Automation Engineer.

PROGRAMME STRUCTURE

Year 1	Year 2	Year 3	Year 4
CORE			
• Engineering Mathematics I • Electronics I • Circuit Theory • Field Theory • Computer & Program Design • Engineering Mathematics II • Electronics II • Introduction to Machines and Power Systems • Instrumentation & Measurement Techniques • Algorithms and Data Structures • Digital Logic Design • Electronics III	• Engineering Mathematics III • Microcontroller and Microprocessor Systems • Circuits and Signals • Electromagnetic Theory • Computer Organization and Architecture • Database Systems • Object Oriented Programming with C ++ • Digital Signal Processing • Industrial Mathematics • Data Communications and Networking	• Operating Systems • Advanced Microprocessors • Advanced Computer Architecture and Parallel Computing • Cybersecurity • Capstone Project • Software Engineering • Industrial Training	• Project • Control Theory • Digital Computer Design • Embedded IoT System and Application
ELECTIVES			
Computer Engineering • Multimedia Technology and Applications • Digital Image and Video Processing • Advanced Object-Oriented Design with Java	• Java Technology • Introductory Mobile Programming • AI Systems & Applications • Introductory Data Science • Introductory Data Visualization	**Electronics / Communications** • Power Electronics • Digital System	• VLSI System Design and Modelling Technique • Analog and Digital Communications
Note: Elective subjects are subject to change by the faculty. Choose any 3 subjects during year 3 and year 4.			
UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)			
	• MPU-U1: TITAS (Local)/Bahasa Melayu Komunikasi 2 (International) • Workplace Communications	• Law for Engineers • Engineer and Society • MPU-U1: Hubungan Etnik (Local)/ Pengajian Malaysia 3 (International) • Project Management	• MPU-U2: Bahasa Kebangsaan A/Foreign Language**/U2(FOM) Entrepreneurship in Cross Border E-Commerce/Business and Entrepreneurship in Malaysia • MPU-U4: Co-Curriculum • MPU-U3: Introduction to Malaysian Economy/Islamic Institutions In Malaysia/Introduction to Multicultural Studies in Malaysia/Stress and Well-Being among Malaysians

Note: The above programme structure serves as a guide. Courses may differ according to intakes.
***** Subject to be offered by faculty.***

Bachelor of Science (Honours) Intelligent Robotics

(N/523/6/0318) 01/26 (MQA/PSA14238)

The Bachelor of Science (Honours) Intelligent Robotics is a 3-year programme that strikes on exquisite balance between the fundamentals of engineering and hands-on, practical skills. This unique multi-disciplinary program combines electronics, robotics, artificial intelligence, automation, and computer programming. It adopts a modern learning approach with early exposure to real world applications. Graduates will be agile knowledge workers in the IR4.0 age and beyond, highly sought after by the industry.

Career Prospects: RRobotics System Designer/Programmers, AI and Machine Learning Developer, Embedded System Designer, Control and Automation Specialist, Field Application Technologist, Printed Circuit Board (PCB) Designer, Production and Planning Engineer, Industry 4.0 Technologist

PROGRAMME STRUCTURE

Year 1	Year 2	Year 3
CORE		
• Engineering calculus • Computer and programming • Micro-controllers & micrprocessors • Electrical circuits • Basic electronics • Differential equations • Digital design • Linear algebra and numerical methods • Rapid modelling • Analog electronics	• Linear systems & signals • Electromagnetics with applications • Electrical machines and power systems • Robotics – Machine design and mechanisms • Introduction to artificial intelligence • Actuators and sensors • Electronics instrumentation • Robotics – Modelling and control • Feedback control • Advanced programming • Internship	• Mobile robots and drones • Machine learning concepts and technologies • Project I • Project II • Machine vision & image processing
ELECTIVES		
Elective 1 **Elective 2** **Elective 3** **Elective 4** **Elective5**	**Hardware Track** • IOT systems & applications • Electronic prototyping and PCB layout • Making embedded systems • Industrial automation and digital control • Signal and power integrity	**Software Track** • Cybersecurity • Software engineering fundamentals • Introduction to data science • Neural networks and deep learning • Robot programming
UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)		
• MPU-U1: TITAS (local)/Bahasa Melayu komunikasi 2 (international) • Workplace communications • MPU-U1 Hubungan etnik (local)/Pengajian Malaysia 3 (international)	• MPU-U4 Co-curriculum	• MPU-U2 Bahasa kebangsaan A/Foreign language* / Entrepreneurship in cross border e-commerce/ Business and entrepreneurship in Malaysia • MPU-U3 Introduction to multicultural studies in Malaysia/ Introduction to Malaysian economy/ Islamic institutions in Malaysia/Introduction to multicultural studies in Malaysia/Stress and well-being among Malaysians

** Malaysians who have fulfilled the Bahasa Malaysia requirement (either having passed Bahasa Malaysia with a credit at SPM level; or having passed the MPU3213 Bahasa Kebangsaan A) shall be required to take a 3CH MPU U2 subject. Student who opt to take a foreign language course within the MPU U2 category must ensure that he/she does not have formal education in the chosen foreign language.*

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

FACULTY OF ENGINEERING & TECHNOLOGY

Melaka Campus

At the Faculty of Engineering & Technology, we inculcate a strong research culture and promote R&D collaborations with internal and external parties to enable learning innovation. We are creating a learned community that collects, preserves and disseminates knowledge in multimedia-related areas. 60% of our academic staff members are PhD holders. Our curriculum is consistently being improved after getting input from our industrial panel members. To-date we have close to 20 appointed industrial panel members from Huawei, ZTE, TMOne, Petronas, MIMOS, Motorola, EDOTCO, +Solar, INTOTEST, AFA Technologies, INCHZ IOT, Honda Assembly, Lenga Palmoil, Daikin, Steelcase Office Solutions, XEPA-Soul Pattison, WNA Consultant, BODIBASIXS MFG and many more. Our external examiners from renowned universities local and abroad are also constantly giving us feedback on best practices. All our programmes are recognised by accrediting bodies such as the Malaysian Qualifications Agency (MQA), Engineering Accreditation Council (EAC) and Engineering Technology Accreditation Council (ETAC). FET houses the ZTE-MMU Training Centre for 5G research and application which is one of its kind in South East Asia. The 5G-supported ZTE-MMU Training Centre will pave the way for more next generation mobile communication teaching and research activities to be conducted as well as build the pathway for more use case applications for IoT as well as smart manufacturing.

Foundation in Engineering

(R2/010/3/0450) 03/22 (A7857)

The one-year Foundation in Engineering programme is the preferred route for many Malaysians and international students to access engineering courses in Multimedia University. Set in a campus environment that enriches their preparation for degree studies, the programme's curriculum focuses on delivering preparatory engineering subjects to equip students with strong fundamentals in order to excel with confidence. In addition to analytical and technical knowledge, the programme also focuses on equipping students with critical thinking and interpersonal skills to succeed not only in the undergraduate studies, but more importantly, as independent life-long learners. After completion of the foundation programme, students can opt to pursue with bachelor's degree programme from Faculty of Engineering & Technology (FET) in Melaka campus or Faculty of Engineering (FOE) in Cyberjaya campus.

PROGRAMME STRUCTURE FOR FOUNDATION IN ENGINEERING | FET

Trimester 1

- Communicative English
- Algebra
- Mechanics
- Mechanics Laboratory
- Computer Applications and Programming
- General Chemistry
- Trigonometry and Geometry

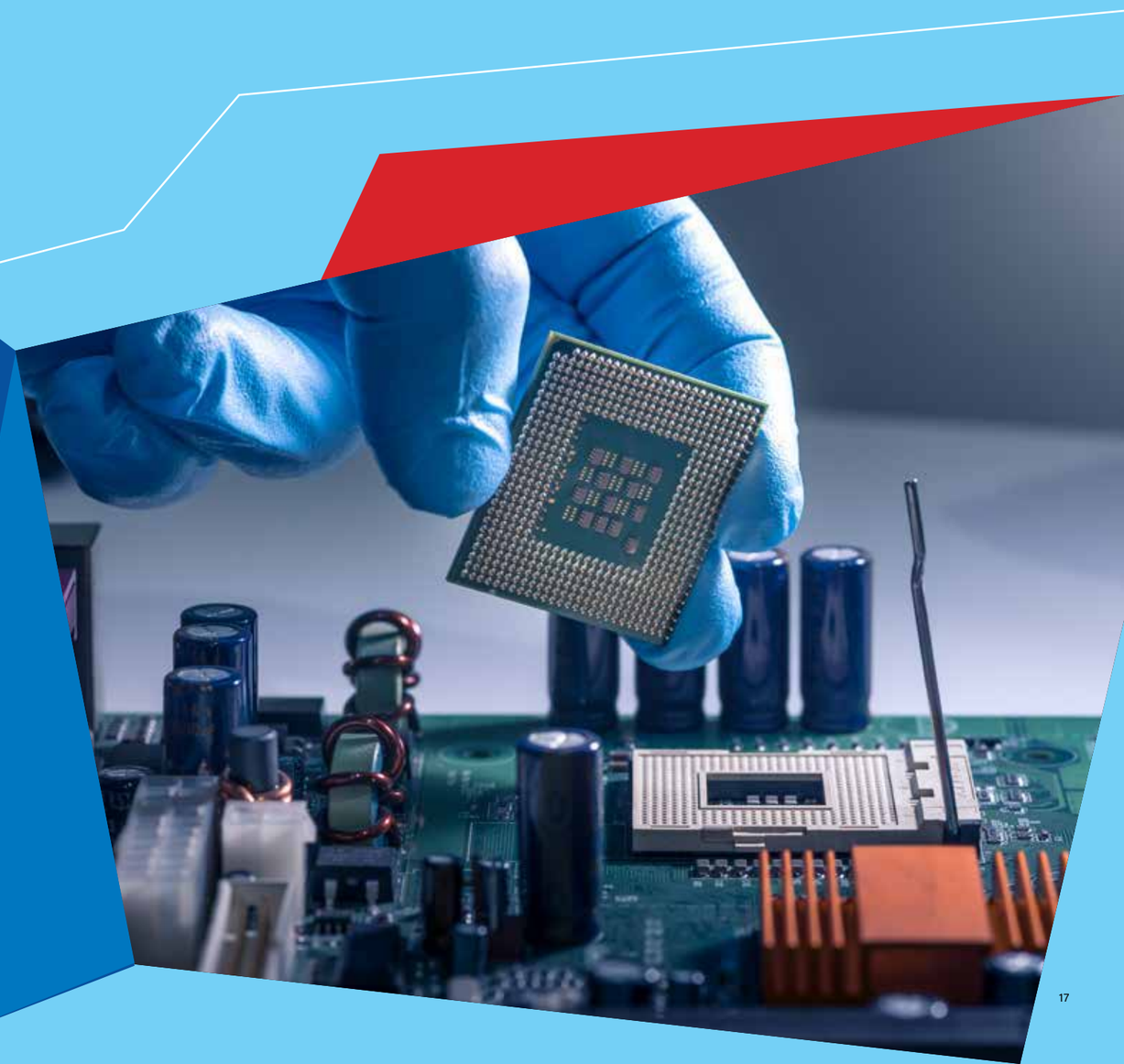
Trimester 2

- Essential English
- Electricity and Magnetism
- Electronics Laboratory
- Fundamentals of Business Management
- Critical Thinking
- Calculus

Trimester 3

- Academic English
- Modern Physics and Thermodynamics
- Introduction to Probability and Statistics

Note: The above programme structure serves as a guide. Courses may differ according to intakes.



Diploma in Mechanical Engineering

(N/521/4/0184) 03/25 (MQA/PA13460)

This newly introduced programme is designed to meet the expectations and needs of the industry. One of the main reasons for this new course to be offered was the favourable market survey responses from industries on the employability of diploma graduates from the mechanical engineering field. Mechanical engineering is one of the top in-demand disciplines of engineering due to the graduates being versatile and knowledgeable in many different fields.

The diploma programme is designed to provide students not only with the necessary academic and technical understanding of the related mechanical engineering-related fields but also challenge the students to experience invaluable practical training in the industry. Students are given the opportunity to obtain valuable hands-on experience through lab experiments, group projects and in their final year projects.

Upon completion of this Diploma in Mechanical Engineering programme, students can opt to pursue further studies in the Mechanical Engineering degree programme offered by the Faculty of Engineering and Technology (FET) or to join the workforce in the industry as a qualified diploma graduate. The programme is also recognized by the Engineering Technology Accreditation Council (ETAC) under Board of Engineers Malaysia. Graduates of this programme will qualify to apply for Inspector of Works (IoW) from BEM.

Career Prospects: Mechanical Technician, Manufacturing/Process Engineering Assistant, Equipment Supervisor, Oil & Gas Supervisor, HVAC Supervisor, Energy Engineering Assistant, Automotive Technician, Machine Design Supervisor, Project Engineering Assistant, R&D Technician etc.

PROGRAMME STRUCTURE

Trimester 1	Trimester 2	Trimester 3	Trimester 4
CORE			
• Basic Electrical Technology • Computer Applications • Engineering Workshop Technology • Physics for Engineering	• Algebra & Trigonometry • Chemistry for Engineering • Engineering Drawing	• Calculus • Engineering Mechanics I: Statics	• Engineering Mathematics • Program Design • Materials Science • Computer-Aided Drafting • Strength of Materials

Trimester 5	Trimester 6	Trimester 7	Trimester 8
CORE			
• Fluid Mechanics • Engineering Design • Engineering Mechanics II: Dynamics • Thermodynamics	• Final Year Project (Part 1) • Project Management	• Industrial Training	• Final Year Project (Part 2) • Engineering in Society • Measurement and Instrumentation • Introduction to Industrial Revolution 4.0

ELECTIVE MODULES (Choose 1 Subject)

▪ **Introduction To CAD/CAM** ▪ **Introduction To Quality Management** ▪ **Introduction To Operations Management**

UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)

- English
- Business communications in the Digital Age

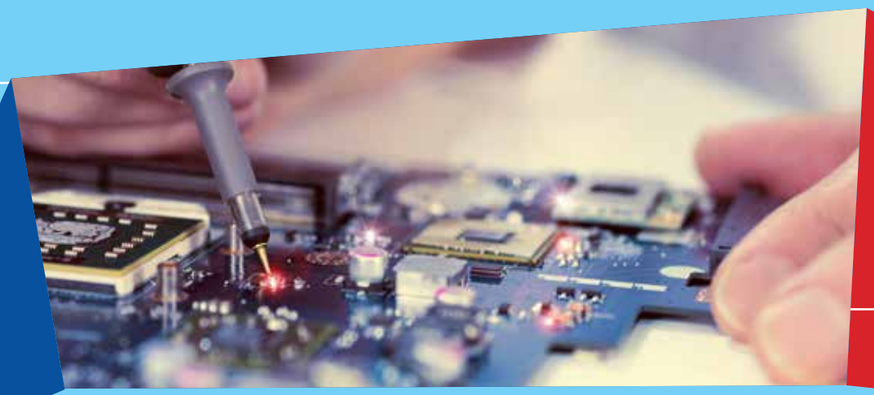
MPU U1
- Pengajian Malaysia 2 (for local student)
- Bahasa Melayu Komunikasi 1 (for international student)

MPU U2
- Bahasa Kebangsaan A/Any subjects in U2 (Local)
- Any subjects in U2 (International)

MPU U3
- Introduction to Cultural Practices in Malaysia
- Fundamental of Islamic Leadership in Malaysia
- Family and Society in Malaysia

MPU U4
- Co-Curriculum

Note: The above programme structure serves as a guide. Courses may differ according to intakes.



Diploma in Electronic Engineering

(R2/523/4/0263) 01/25 (A5832)

Diploma in Electronic Engineering programme suits those who are interested in mainstream electronic design and support. This program is designed to provide a balanced curriculum in terms of theoretical knowledge and hands-on practice in learning electronics-related courses. Towards the end of the programme, students are to undergo Industrial Training in gaining real life working experience, and expected to design their own prototype in solving real life problems through the Final Year Project.

Upon completion of this Diploma in Electronic Engineering programme, students can opt to pursue further studies in Bachelor's Degree programmes in Faculty of Engineering and Technology (FET) in Melaka campus or Faculty of Engineering (FOE) in Cyberjaya campus as well as to join the workforce in the industry as a qualified diploma graduate.

The programme is also recognized by the Engineering Technology Accreditation Council (ETAC) under Board of Engineers Malaysia. Graduates of this programme will qualify to apply for Inspector of Works (IoW) from BEM.

Career Prospects: Electronic Technician, Process Engineering Assistant, Equipment Supervisor, Energy Engineering Assistant, Laboratory Technician, Systems Design Supervisor, Project Engineering Assistant, R&D Technician etc.

PROGRAMME STRUCTURE

Trimester 1	Trimester 2	Trimester 3	Trimester 4
CORE			
• Engineering Workshop • Electronics 1 • Circuit Theory • Computer Applications	• Algebra & Trigonometry • Electronics 2 • Digital Fundamentals	• Calculus • Electronics 3	• Engineering Mathematics • Program Design • Power Electronics • Electrical Measurement & Instrumentation Techniques

Trimester 5	Trimester 6	Trimester 7	Trimester 8
CORE			
• Analog & Digital Communication Systems • Industrial Electronics • Field Theory • Microcontroller Technology	• Final Year Project (Part 1) • Project Management	Industrial Training	• Final Year Project (Part 2) • Introduction to Machines & Power Systems • Engineering in Society

ELECTIVE MODULES (Choose 1 Subject)

▪ **Control Systems** ▪ **Business Management** ▪ **Introduction to Multimedia** ▪ **E-Commerce**

UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)

- English
- Business communications in the Digital Age

MPU U1
- Pengajian Malaysia 2 (for local student)
- Bahasa Melayu Komunikasi 1 (for international student)

MPU U2
- Bahasa Kebangsaan A/Any subjects in U2 (Local)
- Any subjects in U2 (International)

MPU U3
- Introduction to Cultural Practices in Malaysia
- Fundamental of Islamic Leadership in Malaysia
- Family and Society in Malaysia

MPU U4
- Co-Curriculum

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

Bachelor of Engineering (Honours)
Electronics majoring in Telecommunications

(R2/523/6/0100) 12/22 (MQA/FA8758)

This four-year programme trains future engineers in the design, implementation and management of communication systems for processing and transmitting information, as well as creation of applications for mobile systems and Internet-based services. Students will be exposed to the technical fields of analogue and digital communications, antenna and propagation, mobile and satellite communications, telephony, information theory, data communications, electromagnetic waves, optical communications, Internet of Things (IoT), 4G and 5G technologies.

In addition, there will be intensive training in engineering mathematics, electronics, circuit and signals, computer and microprocessor systems, data communications and networking, electromagnetics, control theory, programming and power systems. A good coverage of subjects in management, economics, accounting and law is also emphasised.

Career Prospects: Telecommunications Network Engineer, Telephony Engineer, Switching and Transmission Engineer, Broadcast Engineer, Wireless Hardware Development Engineer, Radio Frequency Design Engineer, Embedded Wireless Software Engineer, Mobile Applications Developer, Telecommunication Equipment Engineer, Project Manager, or Sales & Customer Support Engineer.

PROGRAMME STRUCTURE

CORE

Year 1
- Algorithm & Data Structure
- Circuit Theory
- Computer and Program Design
- Digital Logic Design
- Engineering Mathematics I
- Engineering Mathematics II
- Electronics I
- Electronics II
- Field Theory
- Introduction to Machines & Power System

Year 2
- Circuits & Signals
- Computer Organization & Architecture
- Data Communications & Computer
- Electromagnetic Theory
- Electronics III
- Engineer & Society
- Engineering Mathematics III
- Fundamentals of Communications
- Information Theory & Error Control Coding
- Instrumentation & Measurement Techniques
- Microcontroller & Microprocessor Systems

Year 3
- Antenna & Propagation
- Communications Electronics
- Control Theory
- Design Project
- Digital Signal Processing
- Electromagnetic Interference
- Multimedia & Communications Networks
- Mobile & Satellite Communications
- Industrial Training
- Project Management for Engineers

Year 4
- Optoelectronics and Optical Communications
- Project (Part 1)
- Project (Part 2)

ELECTIVE MODULES (Choose 1 Subject)
- Advanced Microprocessors
- Digital Wireless Communications
- Embedded System Design
- Java Technology
- Knowledge-based Systems
- Practical FPGA Design & Interfacing
- Object Oriented Programming with C++
- Radar System Design & Analysis
- Random Processes & Queueing Theory
- Semiconductor Packaging & Test
- Telemedicine Technology
- Data & Multimedia Networking
- Imaging Radar System
- Parallel Processing & Programming
- Radio Network Planning towards 5G
- IoT Design and Interfacing
- Artificial Intelligence and Applications

UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)

Communication Skills/Law/Ethics
- Workplace Communications
- Law for Engineers
- Engineer and Society

MPU U1
- Tamadun Islam & Tamadun Asia (Local)
- Hubungan Etnik (Local)
- Bahasa Komunikasi 2 (International)
- Pengajian Malaysia 3 (International)

MPU U2
- Bahasa Kebangsaan A/Any subjects in U2 (Local)
- Any subjects in U2 (International)

MPU U3
- Introduction to Malaysian Economy or any subjects in U3

MPU U4
- Co-Curriculum

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

Bachelor of Engineering (Honours)
Electronics majoring in Robotics and Automation

(R2/523/6/0035) 11/21 (MQA/FA4749)

The Faculty of Engineering and Technology offers an undergraduate programme leading to the Bachelor of Engineering (Electronics) degree majoring in Robotics and Automation. For students planning on professional careers in the fields of industry automation, this four-year engineering programme provides complete undergraduate training in robotics and automation fields such as advanced robotics, machine vision, artificial intelligence, additive manufacturing, microprocessor system, automation, power technology and Internet of Things (IoT).

In addition, the students are also exposed to basic engineering training in circuit and signal analysis, field theory, electronics, control theory, power systems, machines, communications and engineering mathematics. To better prepare the students for a professional career in engineering, courses in basic management, economics, accounting and law are also included. This programme also provides students with industrial experience and research training by requiring them to complete industrial training and final year project geared towards making them industry ready in this era of Industry 4.0.

Career Prospects: Robotics Engineer, Industrial Automation Engineer, Control Engineer, Automotive Engineer, Manufacturing Engineer, Production Engineer, Mechatronics Engineer, Engineering Academician or Researcher.

PROGRAMME STRUCTURE

CORE

Year 1
- Algorithm & Data Structure
- Circuit Theory
- Computer and Program Design
- Digital Logic Design
- Engineering Mathematics I
- Engineering Mathematics II
- Electronics I
- Electronics II
- Field Theory
- Introduction to Machines & Power System

Year 2
- Analog & Digital Communications
- Circuits & Signals
- Control Theory
- Electromagnetic Theory
- Electronics III
- Engineering Mechanics
- Engineering Mathematics III
- Instrumentation & Measurement Techniques
- Microcontroller & Microprocessor Systems
- Power Technology

Year 3
- Automation
- Computer Organization & Architecture
- Design Project
- Digital Signal Processing
- Machine Vision
- Manufacturing & Operations Management
- Project Management for Engineers
- Robotics
- Industrial Training

Year 4
- Advanced Robotics
- Project (Part 1)
- Project (Part 2)

ELECTIVE MODULES (Choose 4 Subjects)
- Artificial Intelligence and Applications
- Communications Electronics
- Data Communications & Computer Networking
- Electromagnetic Interference
- Introduction to Computer Integrated Manufacturing
- Multimedia Technology & Application
- Semiconductor Packaging & Test
- Theory of Machines
- Additive Manufacturing
- Advanced Microprocessors
- Digital Control Systems
- Embedded System Design
- Java Technology
- Object Oriented Programming with C++
- Practical FPGA Design and Interfacing
- Quality Engineering
- IoT Design and Interfacing

UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)

Communication Skills/Law/Ethics
- Workplace Communications
- Law for Engineers
- Engineer and Society

MPU U1
- Tamadun Islam & Tamadun Asia (Local)
- Hubungan Etnik (Local)
- Bahasa Komunikasi 2 (International)
- Pengajian Malaysia 3 (International)

MPU U2
- Bahasa Kebangsaan A/Any subjects in U2 (Local)
- Any subjects in U2 (International)

MPU U3
- Introduction to Malaysian Economy or any subjects in U3

MPU U4
- Co-Curriculum

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

Bachelor of Engineering (Honours) Mechanical

(R3/521/6/0027)10/27 (MQA/FA8757)

"When the Mechanical rest, the World rust"

Mechanical engineering, one of the broadest and most versatile engineering disciplines, is the application of science and technology to create solutions to the real-world problems through the study of objects and systems using the principles of motion, force and energy. Mechanical engineers play the key role to solve today's problems and create tomorrow's solutions in various areas such as transportation, energy, semiconductor, agriculture, health care, climate change, and many more.

The four-year B.Eng (Hons.) Mechanical programme equips the students with fundamental knowledge and hands-on skills and experience necessary to meet the competitive market demand. The curriculum focuses on the thorough grounding in engineering mathematics, applied mechanics, thermofluids science, materials science, machine design and mechanisms, and control engineering. Third and fourth year of the study cover capstone design project, industrial training and final year project, which train the students with the capabilities and skills in system design, practical problem solving, research and project management.

Specialised electives expose the students to the knowledge and experience on the current research and technology trends encompassing renewable energy, composite materials, numerical analysis, machine design and tribology, HVAC, ergonomics, quality and operations research, and IR 4.0-related courses such as additive manufacturing, robotics and automation, IoT design and interfacing, and artificial intelligence and applications. In addition to the technical subjects, professional development courses such as workplace communication, engineering ethics, law, project management and economics are also emphasised in the programme to develop and supply well-rounded mechanical engineers to the market.

Career Prospects: Mechanical Engineer, R&D Engineer, M&E Consulting Engineer, Automotive Engineer, HVAC Engineer, Oil & Gas Engineer, Energy Engineer, Machine Design Engineer, Manufacturing Engineer, Process Engineer, Equipment Engineer, Automation Engineer, Project Engineer, Engineering Academician, Researcher, etc.

PROGRAMME STRUCTURE

CORE

Year 1	Year 2	Year 3	Year 4
• Engineering Graphics Communication • Workshop Technology • Engineering Mathematics I • Engineering Mathematics II • Applied Statics • Applied Dynamics • Strength of Materials • Principles of Thermodynamics • Basic Electrical Technology • Computer and Program Design	• Materials Science • Applied Thermodynamics • Engineering Mathematics III • Fluid Mechanics • Machine Component Design I • Mechanics of Materials • Theory of Machines • Measurement and Instrumentation • Introduction to Electrical Power and Machines • Microprocessor Systems and Interfacing	• Machine Component Design II • Fluid Dynamics • Heat Transfer • Computational Methods for Mechanical Engineering • CAD/CAM • Capstone Design Project • Industrial Management • Industrial Training • Manufacturing and Operations Management	• Mechanical Vibrations • Control Engineering • Project (Part 1) • Project (Part 2)

ELECTIVE MODULES (Choose 3 Subjects)

- Finite Element Method
- Computational Fluid Dynamics
- Application of Composite Materials in Structures
- Heating, Ventilation and Air Conditioning Systems
- Internal Combustion Engine
- Tribology
- Ergonomics and Human Factors
- Quality Engineering
- Operations Research
- Semiconductor Packaging and Test
- Additive Manufacturing
- Robotics and Automation
- Artificial Intelligence and Applications
- IoT Design and Interfacing
- Energy Technologies

UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU)

Communication Skills/Law/Ethics
- Workplace Communications
- Law for Engineers
- Engineer and Society

MPU U1
- Tamadun Islam & Tamadun Asia (Local)
- Hubungan Etnik (Local)
- Bahasa Komunikasi 2 (International)
- Pengajian Malaysia 3 (International)

MPU U2
- Bahasa Kebangsaan A/Any subjects in U2 (Local)
- Any subjects in U2 (International)

MPU U3
- Introduction to Malaysian Economy or any subjects in U3

MPU U4
- Co-Curriculum

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

University	Programme	Minimum Entry Requirements
Melaka	***Diploma*** • **Diploma in Electronic Engineering** • **Diploma in Mechanical Engineering**	I. Pass SPM/O-Level or its equivalent with a minimum of Grade C in at least three (3) subjects inclusive of Mathematics and one Science/Technical/Vocational subject and a Pass in English; **OR** II. Pass UEC with a minimum of Grade B in at least three (3) subjects inclusive of Mathematics and one Science/Technical/Vocational subject and a Pass in English; **OR** III. Pass STPM or its equivalent AND a Pass in Mathematics, English and one relevant Science/ Technical/Vocational subject at the SPM Level or its equivalent; **OR** IV. Recognised Certificate in Engineering/Engineering Technology or its equivalent.* *Note:* **One (1) year of relevant experience or a minimum of one (1) trimester of bridging programme is required for recognised related Vocational and Technical/Skills Certificate or its equivalent.*
CYBERJAYA MELAKA	***Foundation*** • **Foundation in Engineering**	I. Pass SPM/O-Level or its equivalent with a minimum of Grade C in at least five (5) subjects inclusive of English, Mathematics or Add. Mathematics and one Engineering-related subject; **OR** II. Pass UEC with a minimum of Grade B in at least three (3) subjects inclusive of Mathematics, English and one Engineering-related subject.
CYBERJAYA	***Bachelor*** • **Bachelor of Engineering (Hons) Electrical** • **Bachelor of Engineering (Hons) Electronics** • **Bachelor of Engineering (Hons) Electronics majoring in Computer** • **Bachelor of Engineering (Hons) Electronics majoring in Nanotechnology** • **Bachelor of Engineering (Hons) Electronics majoring in Telecommunications**	I. Pass Foundation/Matriculation studies in related field from a recognised institution; OR II. Pass STPM or its equivalent with a minimum of Grade C (GP 2.00) in Mathematics and Physics; OR III. Pass A-Level with a minimum of Grade D in Mathematics and Physics. OR IV. Pass UEC with a minimum of Grade B in at least five (5) subjects inclusive of Mathematics and Physics; OR V. Recognised Diploma in Engineering / Engineering Technology or its equivalent with minimum CGPA 2.00; OR VI. Pass DKM /DLKM/DVM with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 MUST have at least two (2) years of work experience in the related field.* *Note:* **DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.*
MELAKA	• **Bachelor of Engineering (Hons) Mechanical** • **Bachelor of Engineering (Hons) Electronics majoring in Telecommunications** • **Bachelor of Engineering (Hons) Electronics majoring in Robotics and Automation**	

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ENGINEERING

University	Programme	Minimum Entry Requirements	Duration	Estimated yearly tuition fee
CYBERJAYA MELAKA	**Foundation** • **Foundation in Engineering** (R3/010/3/0087) 12/27 (A8671) (R3/010/3/0450) 03/27 (A7857)	I. Pass SPM/O-Level or its equivalent with a minimum of Grade C in at least five (5) subjects inclusive of English, Mathematics or Add. Mathematics and one Engineering-related subject; **OR** II. Pass UEC with a minimum of Grade B in at least three (3) subjects inclusive of Mathematics, English and one Engineering-related subject.	1 year	RM6,000
MELAKA	**Diploma** • **Diploma in Electronic Engineering** (R2/523/4/0203) 01/25 (MQA/FA12837) • **Diploma in Mechanical Engineering** (N/521/4/0184) 03/25 (MQA/PA13460)	I. Pass SPM/O-Level or its equivalent with a minimum of Grade C in at least three (3) subjects inclusive of Mathematics and one Science/Technical/Vocational subject and a Pass in English; **OR** II. Pass UEC with a minimum of Grade B in at least three (3) subjects inclusive of Mathematics and one Science/ Technical/Vocational subject and a Pass in English; **OR** III. Pass STPM or its equivalent **AND** a Pass in Mathematics, English and one relevant Science/Technical/Vocational subject at the SPM Level or its equivalent; **OR** IV. Recognised Certificate in Engineering/Engineering Technology or its equivalent.* *Note:* **One (1) year of relevant experience or a minimum of one (1) trimester of bridging programme is required for recognised related Vocational and Technical/Skills Certificate or its equivalent.*	2 years 9 months	RM8,364
CYBERJAYA MELAKA	**Bachelor** • **Bachelor of Engineering (Hons) Electrical** (R2/522/6/0038) 06/26 (MQA/FA4863) • **Bachelor of Engineering (Hons) Electronics** (R2/523/6/0167) 06/26 (MQA/FA4864) • **Bachelor of Engineering (Hons) Electronics majoring in Computer** (R2/523/6/0166) 06/26 (MQA/FA4866) • **Bachelor of Engineering (Hons) Electronics majoring in Nanotechnology** (R3/523/6/0010) 05/27 (MQA/FA3563) • **Bachelor of Engineering (Hons) Electronics majoring in Telecommunications** (R2/523/6/0168) 06/26 (MQA/FA4865) • **Bachelor of Engineering (Hons) Mechanical** (R3/521/6/0027) 10/27 (MQA/FA8757) • **Bachelor of Engineering (Hons) Electronics majoring in Telecommunications** (R2/523/6/0100) 12/22 (MQA/FA8758) • **Bachelor of Engineering (Hons) Electronics majoring in Robotics and Automation** (R3/523/6/0035) 12/27 (MQA/FA4749)	I. Pass Foundation/Matriculation studies in related field from a recognised institution; **OR** II. Pass STPM or its equivalent with a minimum of Grade C (GP 2.00) in Mathematics and Physics; **OR** III. Pass A-Level with a minimum of Grade D in Mathematics and Physics. **OR** IV. Pass UEC with a minimum of Grade B in at least five (5) subjects inclusive of Mathematics and Physics; **OR** V. Recognised Diploma in Engineering / Engineering Technology or its equivalent with minimum CGPA 2.00; **OR** VI. Pass DKM /DLKM/DVM with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 **MUST** have at least two (2) years of work experience in the related field.* *Note:* **DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.*	4 years	RM18,250
CYBERJAYA	• **Bachelor of Science (Hons.) Intelligent Robotics** (N/523/6/0318) 01/26 (MQA/PSA14238)	I. Pass Foundation / Matriculation studies in related field from a recognised institution with a minimum CGPA of 2.50; **OR** II. Pass STPM or its equivalent with a minimum Grade C (GP 2.00) in any 3 subjects inclusive of Mathematics and Physics; **OR** III. Pass A-Level with a minimum of Grade D in any three (3) subjects inclusive of Mathematics and Physics; **OR** IV. Pass UEC with a minimum of Grade B in at least five (5) subjects inclusive of Mathematics and Physics; **OR** V. Recognised Diploma in the related field with a minimum CGPA of 2.50 or its equivalent;* **OR** VI. Pass DKM /DLKM/DVM with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 **MUST** have at least two (2) years of work experience in the related field.** *Note:* **Candidates with CGPA below 2.50 but above 2.0 may be admitted subject to a rigorous internal assessment process.* ***DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.*	3 years	RM20,000

Other Fees

One-time Fee		Student Activities Fee		Resource Fee		On Campus Residence Fee	
Admission Fee	RM570	**Long Trimester** **Short Trimester**	**RM200** **RM100**	**Long Trimester** **Short Trimester**	**RM600** **RM300**	**Cyberjaya Campus** **Melaka Campus** **Deposit** (upon registration) **Pre-payment** (each trimester)	**RM250 - RM350** **RM210 - RM270** **RM400** **RM400**
Deposit	RM500	**Student Activities Fee (ODL)**					
Total	**RM1,070**	**Long Trimester** **Short Trimester**	**RM120** **RM60**				

Note: 2 Long trimesters in a year

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