MMU®
MULTIMEDIA UNIVERSITY

PROSPECTUS

ENGINEERING

Global.
Entrepreneurial.
Trendsetter.

#GoForIT

Where Your Future Begins

www.mmu.edu.my

Life Made Easier™ | TM Group

“Education is the most powerful weapon used to change the world. Our greatest responsibility as educators is to teach our students to think both intensely and critically. By equipping our students with the right tools, knowledge and skills, they can go out into the world and shape their future.

As a Premier Digital Tech University and being a trendsetter of the private higher learning provider in Malaysia, we are steadfast in preparing our graduates for leadership roles in their respective disciplines and professions.”

—
PROFESSOR DATUK TS. DR. AHMAD RAFI MOHAMED ESHAQ
CEO/President, Multimedia University

Engineering at MMU

If you have your heart set on making engineering your career, MMU is the university for you. Listed in the **Top 350 QS World University Rankings by Subject** - Electrical and Electronics for four consecutive years in 2015, 2016, 2017 and 2018, MMU offers award-winning, practical and industry-ready degrees that will allow you to make a real and lasting impact as an engineer of the future.

Expertise and knowledge are what we seek to empower our students. We are committed to offer programmes that will enhance your depth and perception as well as employability in the field of Engineering.

With our industry-led curriculum, you will gain not only technical knowledge and skills, but also relevant management and soft skills. Many of your lecturers are professionals and specialists in their fields who will be able to impart real-life experience and solutions to your learning. We also have strong collaborations with global industry leaders who are ready to share their knowledge of cutting-edge innovative technologies to keep you up-to-the-minute with current and future industry needs.

PROMOTING **INNOVATION** AND **ENTREPRENEURSHIP**

MMU was the **first private university approved** by the Malaysian government. We adhere to the strictest requirements for a high quality degree; going beyond academic excellence to offer the best, complete and balanced university experience for our students.

A study by Gartner and MSC Malaysia found that MMU is among the **top five universities** preferred by major ICT players for graduate employment - a testament to the quality of our academicians, curriculum, student development programmes and our solid reputation with the industries.

One of the university's primary objectives is to be able to **inspire and innovate others**. We understand that the future lies in technology, and we are adamant to help shape people who will help make a better tomorrow.

MMU Alumni

"I'm grateful and deeply appreciate the exposure I've received as an MMU student. Without the inspiring opportunities and learning platform that was provided by MMU, I would not have found myself in the shoes of an entrepreneur in the clean energy industry today."

—
KO CHUAN ZHEN
Co-founder of +SOLAR (Plus Solar Systems Sdn. Bhd.)

AN AWARD-WINNING UNIVERSITY WITH A GLOBAL OUTLOOK

- Be part of a globally ranked university that is listed in the **QS World University Rankings** and continues to strive with solid breakthrough to be at the 175th spot in **QS Asia University Rankings 2019**.
- Study alongside 1,500 **international students** from more than 70 countries.
- Experience the best and latest technologies from our collaborations with **major ICT players** such as ZTE, Nokia, Intel, Microsoft, Cisco and Motorola.
- Get exposure to some of the **best practices of the world's best universities** such as MIT, Stanford, Carnegie Mellon, Harvard, USC and Tokyo University.

Top 200 in QS Asia University Rankings 2019

Top 3 - Most Entrepreneurial Private University
MOHE Entrepreneurial Award (MEA) 2016

Awarded Self-Accreditation Status, 2017
Malaysian Qualifications Agency (MQA) 2017

97% Employability within 6 months of graduation
Ministry of Higher Education (MoHE) Tracer Study & MOE Kemaskini Status Pekerjaan 2015

MMU's IT Graduates are the most preferred by Malaysian Firms
Frost & Sullivan Asia Pacific (MDEC's Malaysian Digital Talent Study 2017 Final Findings)

Premier Digital Tech University Status, 2017
Ministry of Higher Education (MoHE) and Malaysia Digital Economy Corporation (MDEC)

AN ENTREPRENEURIAL UNIVERSITY WITH INDUSTRY-READY PROGRAMMES

A Well-rounded Education

Be empowered with the fundamentals of your field of study that also incorporate entrepreneurial skills and expertise which are relevant to your respective industries and job markets.

Industry in Campus

Be connected and gain benefit from our state-of-the-art labs established by our industry collaboration with ZTE, Microsoft, Intel and many more.

Ready for Industry

Be enthused with Start-up Schemes from the Entrepreneur Development Centre (EDC) to encourage innovation and entrepreneurship ventures.

MMU Alumni

"MMU is where I dreamt of having my own business. I built the company together with my roommates in our hostel room and have now managed to expand it to what it is today. The exposure and hands-on experience that MMU graduates have are much better than any other local university graduates."

—
NOOR HELMI NONG HADZMI
CEO and Founder, IX Telecom Sdn. Bhd.

A UNIVERSITY THAT IS AN **INDUSTRY TRENDSETTER**

- We offer programmes which are tailored to industry's needs.
- Nearly 50% of our programmes are developed for fast growing industries.
- We produce graduates who are setting new standards in Malaysia's industries. Among our successful alumni are Mohd Nizam Abd Razak, the Creator of BoBoiBoy, who has boosted the animation industry in Malaysia and Tan Aik Keong, Director of Agmo Studio, a multi-award winning mobile app development company.

A **VIBRANT** AND **CONDUCIVE** CAMPUS LIFE

- Convenient and comfortable accommodation – on-campus and off-campus.
- Intelligent and high-tech labs.
- Digital libraries.
- Set studio and post-production suite.
- Over 100 clubs and societies.
- Extensive infrastructure – campus-wide Wi-Fi, health clinics, mosques, 24-hour security, food & beverage outlets and more.
- Comprehensive Sports Centre – track & field, indoor sports arena, gym as well as an olympic-sized swimming pool.

Scan this code to view more on our facilities.

TOP MALAYSIAN PRIVATE UNIVERSITY*

* Top 3 in QS Asia University Rankings 2019 among private universities in Malaysia.

Ground-breaking developments in engineering have revolutionised our lives. With exciting new areas as diverse as Telecommunications, Microelectronics, Nanotechnology, Multimedia, Optical Technologies and the dynamics of social media, the career prospects for engineering graduates have never been better. Whatever field of interest you may have in engineering, a degree from the MMU will unlock your potential and kickstart your career as an engineer of the future.

Our mission is to cultivate talents who embrace inquiry, inspiration and innovation via excellent engineering programmes, impactful research and strong industry support.

WHY ENGINEERING AT MMU

One of the **BEST teaching labs** in private universities, equipped with world-class research & teaching facilities

Among the **1st in Malaysia** to offer Nanotechnology

More than 50% of teaching staff are PhD holders and industry professionals

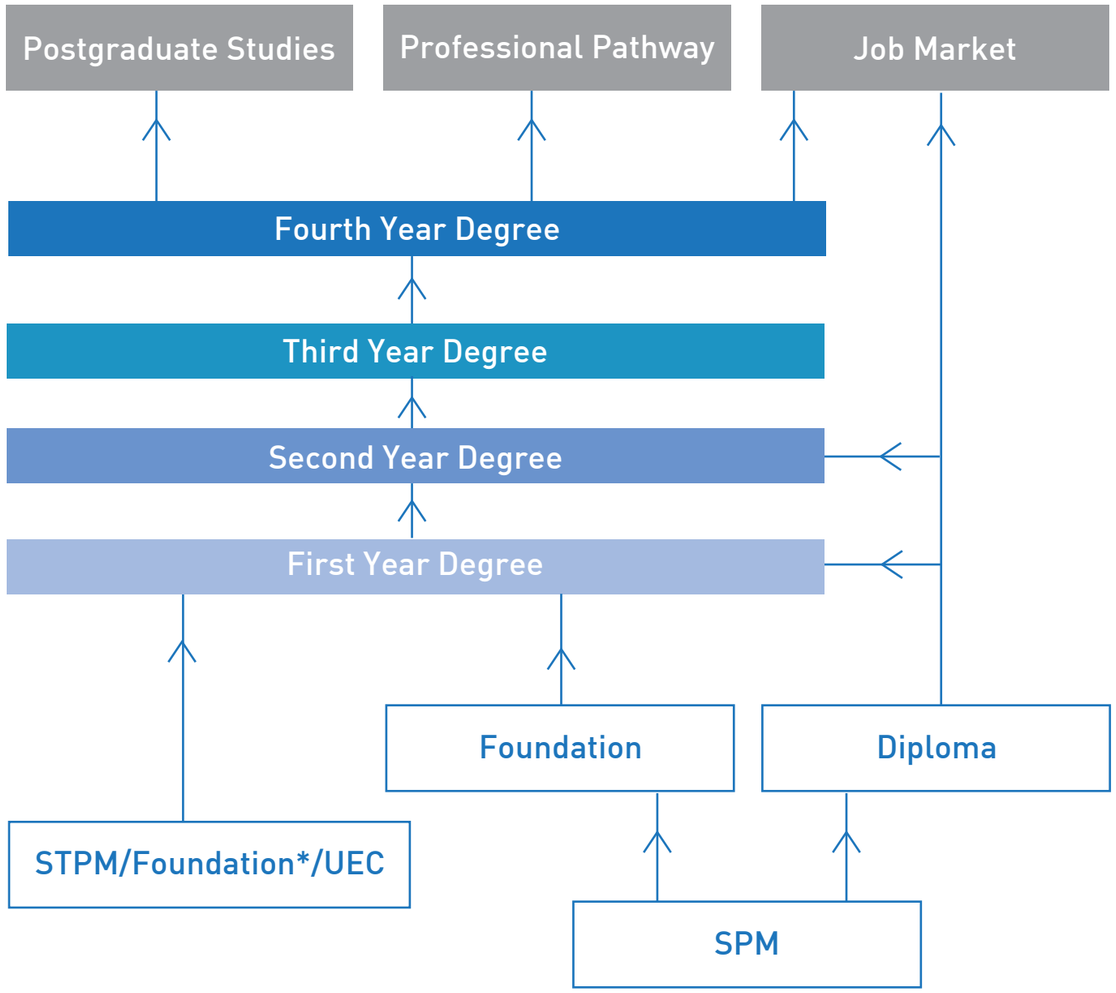
More than 40% of MMU Engineering students secure jobs **before** graduation and over 97% are employed within 6 months of graduation

Accreditation & Recognition by Malaysia Qualifications Agency (MQA), Engineering Accreditation Council and Board of Engineers Malaysia (BEM)

Partnerships with **Global Industry Players** – establishment of Intel Advanced Architecture Lab, Panasonic Computing Lab, Huawei Digital Lifestyle and Innovation Centre, Motorola Wireless Broadband Technology Lab and ZTE-MMU Regional Training Center

STUDY ROUTE

There isn't just one route to discover and develop your true potential. At MMU, we cater to nearly every possibility.



* *Foundation from a recognised institution*

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. Over 5,000 local and international students have successfully graduated from our Engineering Faculty.

Scan this code to view our faculty video.

Foundation in Engineering

(R/010/3/0087) 12/17 (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)

(R/522/6/0038) 06/19 (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. 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 economics, accounting, management, law, and workplace communication. These subjects are delivered through combined classroom and laboratory work.

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 • Renewable Energy Technology • Capstone Project • Industrial Training	• Project • Power Stations • High Voltage Engineering • Electrical Drives • Power System Operation & Control
Electives			
	• Advanced Microprocessors • Embedded IoT Systems and Applications		• Robotics & Automation • Digital Signal Processing • Artificial Intelligence Systems & Applications • Cybersecurity
University Subjects			
	• 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.

Bachelor of Engineering (Hons.) (Electronics)

(R/523/6/0167) 06/19 (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, or Technical Marketing 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 • Industrial Mathematics • Physical Electronics • Microelectronics Circuit Analysis and Design • Electronic Interference • Control Theory	• Analog and Digital Communications • Digital System • Power Electronics • Integrated VLSI Systems • Advanced Microprocessors • Capstone Project • Industrial Training	• Project • Digital Integrated Circuits • Data Communications and Computer Networking • Processing and Fabrication Technology
Electives			
		Elective 1 • Embedded IoT Systems and Applications • Semiconductor Devices • Object Oriented Programming with C++ • Artificial Intelligence Systems and Applications • Robotics & Automation	**Elective 2** • Operating Systems • Analog Integrated Circuits • Advanced Object-Oriented Design With Java • Software Engineering **Elective 3** • Mobile Application Development • Parallel Processing and Programming • VLSI System Design and Modelling Technique • Cybersecurity • Digital Signal Processing
University Subjects			
	• 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.

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

(R/523/6/0168) 06/19 (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), cybersecurity. Together with non-technical subjects such as project management, workplace communication 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

Year 1	Year 2	Year 3	Year 4
Core			
• 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 • Analog 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 • Mobile & Satellite Communications • Advanced Networking Techniques • Control Theory • Optoelectronics & Optical Communications
Electives			
		• Java Technology • Random Signal and Network Analysis • RF Measurement Techniques • Power Electronics • Artificial Intelligence Systems & Applications • Object Oriented Programming with C++ • Cybersecurity • Electromagnetic Interference • Mobile Application Development	• Parallel Processing and Programming • VLSI System Design & Modeling Technique • RF Circuit Design
University Subjects			
	• 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.

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

(R/523/6/0166) 06/19 (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 the 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	• Analog and Digital Communications • Operating Systems • Advanced Microprocessors • Advanced Computer Architecture and Parallel Computing • Cybersecurity • Capstone Project • Industrial Training	• Project • Multimedia Technology and Applications • Control Theory • Digital Computer Design
Electives			
		• Compiler Construction • Software Engineering • Computer Graphics and Virtual Reality • Artificial Intelligence Systems & Applications • Power Electronics	• Digital Image & Video Processing • Advanced Object-oriented Design with Java • Distributed Information Systems • Embedded IoT Systems and Application • Mobile Application Development • Parallel Processing and Programming
University Subjects			
	• 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.

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

(R2/523/6/0010) 05/20 (MQA/FA3563)

For students planning for professional careers in the fields of microelectronics and nanoelectronics, the four-year nanotechnology programme provides a complete undergraduate training in electronics and nanoelectronics-related fields, such as nanomaterials, nanosciences, nanofabrication technology, nanoelectronic devices, MEMS/NEMS, and diagnostic technology.

In addition, students are also exposed to basic engineering training in circuit and signal analysis, field theory, electronics, control theory, digital logic, communications and engineering mathematics. To better prepare the students for a professional career in engineering, courses in 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 graduate projects.

Career Prospects: Research Engineer/Scientist, Test and Characterisation Engineer, Process and Device Engineer, Product Reliability Engineer, Electronics Engineer, Process Engineer, Quality Control/Assurance Engineer, Failure Analysis Engineer, Field Application Engineer, Telecommunications Engineer, or R&D Engineer.

PROGRAMME STRUCTURE

Year 1	Year 2	Year 3	Year 4
Core			
• Engineering Mathematics I • Circuit Theory • Electronics I • Computer and Program Design • Field Theory • Electronics II • Engineering Mathematics II • Algorithm and Data Structure • Introduction to Machines and Power Systems • Instrumentation & Measurement Techniques • Digital Logic Design • Electronics III	• Engineering Mathematics III • Microcontroller and Microprocessor Systems • Circuits and Signals • Electromagnetic Theory • Solid State Electronics • Computer Organization and Architecture • Microelectronic Circuit Analysis and Design • Industrial Mathematics • Control Theory	• Analog & Digital Communications • Optoelectronics Devices • Semiconductor Devices • Advanced Fabrication Technology • Nano-Science • Capstone Project • Industrial Training	• Project • Digital Integrated Circuits • Diagnostic Technologies • Nanoelectronic Materials and Devices • N/MEMS • Data Communications and Computer Networking
Electives			
	• Advanced Microprocessors • Embedded IoT Systems and Application • Cybersecurity	• Multimedia Technology & Applications • Power Electronics • Artificial Intelligence Systems & Applications	
University Subjects			
	• 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.

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.

Scan this code to view our faculty video.

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, you can opt for a degree programme from either Faculty of Engineering (FOE) or Faculty of Engineering and Technology (FET).

PROGRAMME STRUCTURE FOR FOUNDATION IN ENGINEERING | FET

Trimester 1	Trimester 2	Trimester 3
• Communicative English • Algebra • Mechanics • Physics Lab 1 • Computer Applications & Programming • General Chemistry • Trigonometry & Geometry	• Essential English • Electricity & Magnetism • Physics Lab 2 • Fundamentals of Business Management • Critical Thinking • Calculus	• Academic English • Modern Physics & Thermodynamics • Introduction to Probability & Statistics

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

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

(R/523/6/0100) 12/17 (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, 4G technologies and beyond.

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
- Computer and Program Design
- Algorithm & Data Structure
- Circuit Theory
- Field Theory
- Engineering Mathematics I
- Engineering Mathematics II
- Electronics I
- Electronics II
- Electronics III
- Digital Logic Design
- Instrumentation & Measurement Techniques
- Introduction to Machines & Power Systems

Year 2
- Computer Organization & Architecture
- Data Communications & Computer Networking
- Microcontroller & Microprocessor Systems
- Circuits & Signals
- Engineering Mathematics III
- Electromagnetics Theory
- Control Theory
- Fundamentals of Communications
- Information Theory & Error Coding

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

Year 4
- Optoelectronics & Optical Communications
- Mobile & Satellite Communications
- Project

Elective Modules (Choose 3 Subjects)

- Advanced Microprocessors
- Embedded System Design
- Knowledge-based Systems
- Practical FPGA Design & Interfacing
- Random Processes & Queueing Theory
- Object Oriented Programming with C++
- Telemedicine Technology
- Java Technology
- Semiconductor Packaging & Test
- Imaging Radar System
- Digital Wireless Communications
- Data & Multimedia Networking
- Radar System Design & Analysis
- Parallel Processing & Programming
- Artificial Intelligence Fundamentals

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 Malaysia Economy or any subjects in MPU U3 category

MPU U4
- Co-Curriculum

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

Bachelor of Engineering (Hons.) (Electronics majoring in Robotics & 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, applied dynamics, knowledge system and neural computing, digital control system, microprocessor system, automation and power technology.

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 the engineering professional career, courses in basic management, economics, accounting and law are also included. This programme also provides students with industrial experience and research training by requiring students to complete industrial training and graduation projects.

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

PROGRAMME STRUCTURE

Core

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

Year 2
- Computer Organization & Architecture
- Microcontroller & Microprocessor Systems
- Circuits & Signals
- Engineering Mathematics III
- Power Technology
- Electromagnetic Theory
- Control Theory
- Engineering Mechanics
- Analog & Digital Communication

Year 3
- Multimedia Technology & Applications
- Project Management for Engineers
- Design Project
- Robotics
- Automation
- Machine Vision
- Industrial Training

Year 4
- Manufacturing & Operations Management
- Advanced Robotics
- Project

Elective Modules (Choose 4 Subjects)

Elective 1
- Data Communications & Computer Networking
- Knowledge-based Systems
- Communications Electronics
- Semiconductor Packaging & Test
- Theory of Machines
- Electromagnetic Interference
- Introduction to CIM
- Digital Signal Processing

Elective 2
- Java Technology
- Advanced Microprocessors
- Embedded System Design
- Object Oriented Programming with C++
- Practical FPGA Design and Interfacing
- Quality Engineering
- Digital Control Systems
- Artificial Intelligence Fundamentals

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 Malaysia Economy or any subjects in MPU U3 category

MPU U4 (FET)
- Co-Curriculum

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

Bachelor of Engineering (Hons.) (Mechanical)

(R2/521/6/0027) 10/20 (MQA/FA8758)

B.Eng (Hons.) Mechanical is one of the top in-demand disciplines of engineering. Mechanical engineers are relatively versatile and knowledgeable in various fields (both technical and managerial), which increase their value and demand in the job market. Students enrolling in this course will be equipped with the knowledge and skills to apply principles and fundamentals in Engineering Mathematics, Applied Mechanics, Thermal/Fluid Sciences, and Material Science to solve complex engineering problems. This programme also provides students with industrial experience and research training by requiring studens to complete industrial training and graduation projects geared towards making them industry ready in this era of Industry 4.0.

Career Prospects: Mechanical Engineer, Manufacturing/Operations Engineer, Equipment Engineer, Oil & Gas Engineer, Energy Engineer, Researcher Engineer, Project Engineer.

PROGRAMME STRUCTURE

Year 1

Core

- Computer & Program Design
- Engineering Mathematics I
- Engineering Mathematics II
- Engineering Graphics Communication
- Basic Electrical Technology
- Applied Statics
- Principles of Thermodynamics
- Strength of Materials
- Applied Dynamics
- Materials Sciences
- Workshop Technology
- Measurement and Instrumentation

Year 2

- Engineering Mathematics III
- Introduction to Electrical Power and Machines
- Fluid Mechanics
- Microprocessor Systems & Interfacing
- Mechanics of Materials
- Applied Thermodynamics
- Control Engineering
- Machine Component Design I
- Manufacturing and Operations Management

Year 3

- Fluid Dynamics
- CAD/CAM
- Machine Component Design II
- Heat Transfer
- Computational Method for Mechanical Engineering
- Industrial Management
- Capstone Design Project
- Industrial Training

Year 4

- Theory of Machines
- Mechanical Vibrations
- Project

Elective Modules (Choose 3 Subjects)

- Quality Engineering
- Energy Technologies
- Finite Element Method
- Tribology
- Operations Research
- Computational Fluid Dynamics
- Robotics and Automation
- Ergonomic and Human Factor
- Internal Combustion Engines
- Materials Engineering
- Quality Management
- Heating, Ventilation and Air Conditioning Systems
- Artificial Intelligence Fundamentals

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 Malaysia Economy or any subjects in MPU U3 category

MPU U4 (FET)
- Co-Curriculum

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

Diploma in Electronic Engineering

(R/523/4/0203) 01/20 (A5832)

This course suits those who are interested in mainstream electronic design and support. The diploma programme is designed to provide students with a good understanding of the electronics-related fields as well as offer opportunities to undergo practical training in the industry to obtain hands-on experience in the final year projects.

After completion of the diploma programme, you can opt for a related degree programme from either Faculty of Engineering (FOE) or Faculty of Engineering and Technology (FET).

PROGRAMME STRUCTURE

Trimester 1
- Engineering Mathematics 1
- Electric Circuit
- Computer Applications for Engineering
- English
- Analog Electronics 1

Trimester 2
- Engineering Mathematics 2
- Digital Electronics
- Analog Electronics 2
- Contemporary Management & Entrepreneurship
- U4

Trimester 3
- Analog Electronics 3
- Field Theory
- U2

Trimester 4
- Computer Programming
- Electrical Measurement and Instrumentation Technique
- Network Analysis
- Industrial Electronics
- U3

Trimester 5
- Microcontroller Technology
- Power Electronics
- Project - Part 1
- Effective Communication Skills
- U1

Trimester 6
- Industrial Training

Trimester 7
- Analog and Digital Communication System
- Electrical Machines and Power Systems
- Project - Part 2
- Elective

University Subjects

U1 – Pengajian Malaysia 2 (Local) / Bahasa Melayu Komunikasi 1 (International)
U2 – Basic Academic Writing / Grooming and Professional Etiquette / Chinese for Basic Communication / Korean for Basic Communication / French for Basic Communication / Bahasa Kebangsaan A
U3 – Introduction to Cultural Practices in Malaysia / Fundamental of Islamic Leadership in Malaysia / Family and Society in Malaysia
U4 – Personal Social Responsibility

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

MINIMUM ENTRY REQUIREMENTS

Foundation in Engineering

- Pass SPM / O-level or its equivalent with minimum grade C in at least five (5) subjects, inclusive of English, Mathematics and one Engineering-related subjects; OR
- Pass UEC with minimum grade B in at least four (4) subjects inclusive of Mathematics, English and one Engineering-related subjects; OR
- Other equivalent qualification recognised by the Malaysian Government.

Diploma in Electronic Engineering

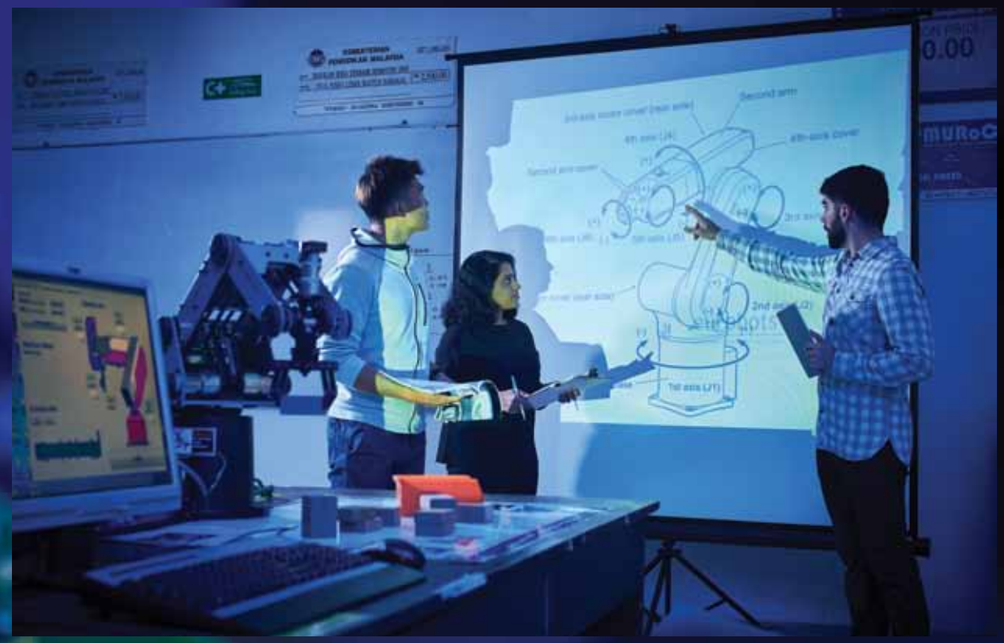
- Pass SPM/O-level or its equivalent with minimum of grade C in at least three (3) subjects, inclusive of Mathematics and one Science / Technical / Vocational subject, and a pass in English; OR
- Pass UEC with minimum of grade B in at least three (3) subjects inclusive of Mathematics and one Science / Technical / Vocational subject, and a pass in English; OR
- Pass Certificate in related field from recognised institution.
  **One year working experience in related field is required for Certificate in Vocational/ Technical/ Skills..*

Bachelor of Electrical (Hons.) / Electronics (Hons.) / Mechanical Engineering (Hons.)

- Pass Foundation / Matriculation in a related field from a recognised institution; OR
- Pass STPM / A-Level or its equivalent with three (3) Principals inclusive of Mathematics and Physics; OR
- Pass UEC with minimum grade B in at least five (5) subjects inclusive of Mathematics and Physics; OR
- Pass Diploma in a related field from a recognised institution.

English Entry Requirement for International Students:

- All programmes offered by Faculty of Engineering and Faculty of Engineering & Technology require a minimum score of 5.0 in IELTS or its equivalent.



MULTIMEDIA UNIVERSITY [DU001(B)]

Cyberjaya Campus
Jalan Multimedia
63100 Cyberjaya
Selangor

Melaka Campus
Jalan Ayer Keroh Lama
75450 Melaka

Johor Campus
Persiaran Canselor 1
Educity@Iskandar
79200 Iskandar Puteri, Johor

Get in touch

1 300 800 668

www.mmu.edu.my
info@mmu.edu.my

mmu.malaysia
mmumalaysia