Global.
Entrepreneurial.
Trendsetter.

#GoForIt with MMU
“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 DR. AHMAD RAFI MOHAMED ESHAQ
CEO/President, Multimedia University

If you have your heart set on making engineering your career, MMU is the university for you. Listed in the Top 200 QS World University Rankings in Electrical and Electronic Engineering for three consecutive years in 2015, 2016 and 2017, 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 soft and management 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.

KO CHUAN ZHEN
Bachelor of Engineering (Hons.) (Electrical) 2008
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 Top 200 QS World University Rankings and continues to strive with solid breakthrough to be at the 179th spot in QS Asia University Rankings.

• 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 2018

Top 300 - QS World University Rankings
Computer Science & Information Systems, 2017

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

Tier 5 (Excellent) in SETARA Rating
Ministry of Higher Education (MoHE), Malaysia

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

Ranked Top 200 QS World University Rankings in Electrical & Electronics Engineering

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% teaching staff are PhD holders and industry professionals

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

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

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

**STUDY ROUTE**

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<tr>
<th>STPM/Foundation/UEC</th>
<th>SPM</th>
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<td>Foundation</td>
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<td>First Year Degree</td>
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<td>Final Year Degree*</td>
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<td>Postgraduate Studies</td>
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* Final year might differ depending on programme
** Applicable only to Engineering courses

**FACULTY OF ENGINEERING**

Cyberjaya Campus

Located within Cyberjaya and built on an 80-hectare plot of land with all the advantages of high technology, 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.
Foundation in Engineering

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

<table>
<thead>
<tr>
<th>Trimester 1</th>
<th>Trimester 2</th>
<th>Trimester 3</th>
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</thead>
<tbody>
<tr>
<td>Basic Computing &amp; Programming</td>
<td>Calculus</td>
<td>Introduction to Probability &amp; Statistics</td>
</tr>
<tr>
<td>Pre-Calculus</td>
<td>Electricity &amp; Magnetism</td>
<td>Modern Physics &amp; Thermodynamics</td>
</tr>
<tr>
<td>Trigonometry &amp; Coordinate Geometry</td>
<td>Mechanics</td>
<td>Academic English</td>
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<tr>
<td>Communicative English</td>
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Bachelor of Engineering (Hons.) (Electrical)

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, PEB Design Engineer, QC Engineer, Field Service Engineer, Electrical Engineering Manager, M&E Engineer, or Oil & Gas Process Engineer, etc.

Programme Structure (Electrical)

<table>
<thead>
<tr>
<th>Year</th>
<th>Course</th>
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<tbody>
<tr>
<td>Year 1</td>
<td>Engineering Mathematics 1</td>
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<td>Electronics 1</td>
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<td>Circuit Theory</td>
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<td>Field Theory</td>
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<td>Computer &amp; Program Design</td>
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<td>Engineering Mathematics 2</td>
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<td>Electronics 2</td>
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<td>Energy Conversion 1</td>
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<td>Instrumentation &amp; Measurement Techniques</td>
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<td>Algorithm &amp; Data Structure</td>
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<td></td>
<td>Digital Logic Design</td>
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<td>Electrons 3</td>
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<tr>
<td>Year 2</td>
<td>Engineering Mathematics 3</td>
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<td>Microcontroller &amp; Microprocessor Systems</td>
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<td></td>
<td>Circuits &amp; Signals</td>
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<td></td>
<td>Electromagnetics Theory</td>
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<td>Electrical Engineering Materials</td>
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<td></td>
<td>Power Transmission &amp; Distribution</td>
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<td>Advanced Microprocessors</td>
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<td>Energy Conversion 2</td>
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<td></td>
<td>Engineering Mathematics 4</td>
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<td></td>
<td>Control Theory</td>
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<td>Year 3</td>
<td>Analog &amp; Digital Communications</td>
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<td>Power System Analysis</td>
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<td>Power Electronics</td>
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<td>Switchgear &amp; Protection</td>
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<td>Electric Power Utilisation &amp; Installation</td>
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<td>Renewable Energy Technology</td>
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<td>Capstone Project</td>
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<td>Industrial Training</td>
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<td>Year 4</td>
<td>Project</td>
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<td>Power Stations</td>
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<td>High Voltage Engineering</td>
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<td>Electrical Drives</td>
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<td>Power System Operation &amp; Control</td>
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</tbody>
</table>

Electives

- Feedback Control Analysis & Design
- Robotics & Automation
- Digital Signal Processing
- Embedded System Design
- Parallel Processing & Programming

University Subjects

- TITAS (Local)/Bahasa Melayu Komunikasi 2 (International)
- Workplace Communications
- Pengajian Malaysia 3

- Engineer & Society Law for Engineers
- Hubungan Etik (Local)/Pengajian Malaysia (International)
- Project Management

- Kebangsaan A/Foreign Language
- Co-Curriculum
- Business & Entrepreneurship in Malaysia
### Bachelor of Engineering (Hons.) (Electronics) (R/5236/0167) 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 systems 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

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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<tbody>
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<td><strong>Core</strong></td>
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<tr>
<td>Circuit Theory</td>
<td>Microcontroller and</td>
<td>Communications</td>
<td>Microcontroller and</td>
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<td>Electronics 1</td>
<td>Microprocessor Systems</td>
<td>Power Electronics</td>
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<td>Field Theory</td>
<td>Circuits and Signal</td>
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<td>Circuits and Signals</td>
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<td>Digital Logic Design</td>
<td>Electromagnetic Theory</td>
<td>Processing and Fabrication</td>
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<td>Engineering Mathematics 2</td>
<td>Physical Electronics</td>
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<td>Algorithms and Data Structures</td>
<td>Computer Organization and</td>
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<tr>
<td>Introduction to Machines &amp;</td>
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<td>Capstone Project</td>
<td>Antenna and Propagation</td>
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<td>Instrumentation and</td>
<td>Control Theory</td>
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<td>Measurement Techniques</td>
<td>Microelectronic Circuit</td>
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<td>Power Electronics</td>
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<td>Electromagnetic Interference</td>
<td>Analysis and Design</td>
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<td>Signal Processing</td>
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<td>Electives</td>
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<td>Embedded System Design</td>
<td>Analog Integrated Circuits</td>
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<td>Semiconductor Devices</td>
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<td>Object Oriented Programming</td>
<td>Advanced Object-oriented Design</td>
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<td>with C++</td>
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<td><strong>Electives</strong></td>
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<td>TITAS Local/Bahasa Melayu</td>
<td>Parallel Processing &amp;</td>
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<td>Kombinasi 2 International</td>
<td>Programming</td>
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<td>Law for Engineers</td>
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<td>Hubungan Elektrik (Local)</td>
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<td>Pengajian Malaysia 3</td>
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</table>

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

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### Bachelor of Engineering (Hons.) (Electronics majoring in Telecommunications) (R/5236/0168) 06/19 (MQA/FA4865)

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. Students are required to undergo industrial training, implement capstone and graduate projects to cultivate skills and capabilities in practical problem-solving, system design, project implementation and management. By so doing, graduates are better prepared to address the challenges of an increasingly complex and rapidly evolving telecommunications industry.

**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

<table>
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<tr>
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<tr>
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Note: The above programme structure serves as a guide. Courses may differ according to intakes.
Bachelor of Engineering (Hons.) (Electronics majoring in Computer)

Programme Structure

Year 1
- Engineering Mathematics 1
- Electronics 1
- Circuit Theory
- Field Theory
- Computer and Programme Design
- Engineering Mathematics 2
- Electronics 2
- Introduction to Machines and Power Systems
- Instrumentation and Measurement Techniques
- Algorithms and Data Structures
- Digital Logic Design
- Electronics 3

Year 2
- Engineering Maths 3
- Microcontroller and Microprocessor Systems
- Circuits and Signals
- Electromagnetic Theory
- Computer Organisation and Architecture
- Database Systems
- Object Oriented Programming with C++
- Digital Signal Processing
- Engineering Mathematics 4
- Data Communications and Networking

Year 3
- Analog and Digital Communications
- Operating Systems
- Advanced Microprocessors
- Advanced Computer Architecture and Parallel Computing
- Security and Cryptography
- Capstone Project
- Industrial Training

Year 4
- Multimedia Technology and Applications
- Control Theory
- Digital Computer Design
- Project

Electives
- Compiler Construction
- Software Engineering
- Computer Graphics and Virtual Reality
- Digital Image and Video Processing
- Advanced Object-oriented Design with Java
- Distributed Information Systems
- Embedded System Design
- Mobile Application Development
- Parallel Processing and Programming

University Subjects
- TITAS (Local)/Bahasa Melayu Komunikasi 2 (International)
- Workplace Communication
- Pengajian Malaysia 2
- Engineer & Society Law for Engineers
- Hubungan Etika (Local)/Pengajian Malaysia (International)
- Project Management
- Kebangsaan/A/Foreign Language
- Co-Curriculum
- Business & Entrepreneurship in Malaysia

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

Programme Structure

Year 1
- Engineering Mathematics 1
- Electronics 1
- Circuit Theory
- Field Theory
- Computer and Programme Design
- Engineering Mathematics 2
- Electronics 2
- Introduction to Machines and Power Systems
- Instrumentation and Measurement Techniques
- Algorithms and Data Structures
- Digital Logic Design
- Electronics 3

Year 2
- Engineering Maths 3
- Microcontroller and Microprocessor Systems
- Circuits and Signals
- Electromagnetic Theory
- Computer Organisation and Architecture
- Database Systems
- Object Oriented Programming with C++
- Digital Signal Processing
- Engineering Mathematics 4
- Data Communications and Networking

Year 3
- Analog and Digital Communications
- Operating Systems
- Advanced Microprocessors
- Advanced Computer Architecture and Parallel Computing
- Security and Cryptography
- Capstone Project
- Industrial Training

Year 4
- Multimedia Technology and Applications
- Control Theory
- Digital Computer Design
- Project

Electives
- Compiler Construction
- Software Engineering
- Computer Graphics and Virtual Reality
- Digital Image and Video Processing
- Advanced Object-oriented Design with Java
- Distributed Information Systems
- Embedded System Design
- Mobile Application Development
- Parallel Processing and Programming

University Subjects
- TITAS (Local)/Bahasa Melayu Komunikasi 2 (International)
- Workplace Communication
- Pengajian Malaysia 2
- Engineer & Society Law for Engineers
- Hubungan Etika (Local)/Pengajian Malaysia (International)
- Project Management
- Kebangsaan/A/Foreign Language
- Co-Curriculum
- Business & Entrepreneurship in Malaysia
Bachelor of Engineering (Hons.)
(Electronics majoring in Nanotechnology)

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 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 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
- Engineering Mathematics 1
- Electronics 1
- Circuit Theory
- Field Theory
- Computer and Programme Design
- Engineering Mathematics 2
- Electronics 2
- Introduction to Machines and Power Systems
- Instrumentation and Measurement Techniques
- Algorithms and Data Structures
- Digital Logic Design
- Electronics 3

Year 2
- Engineering Mathematics 3
- Microcontroller and Microprocessor Systems
- Circuits and Signals
- Electromagnetic Theory
- Computer Organisation and Architecture
- Microelectronic Circuit Analysis and Design
- Advanced Microprocessors
- Solid State Electronics
- Engineering Mathematics 4
- Control Theory

Year 3
- Analog and Digital Communications
- Optoelectronic Devices
- Semiconductors Devices
- Advanced Fabrication Technology
- Nano-Science
- Capstone Project

Year 4
- Analog and Digital Integrated Circuits
- Diagnostic Technologies
- Project
- N/MEMS
- Data Communications and Computer Networking
- Nanoelectronic Materials and Devices

Electives
- Multimedia Technology and Applications
- Power Electronics

University Subjects
- Bahasa Melayu (Local)/Bahasa Melayu Komunikasi 3 (International)
- Workplace Communications
- Pengajian Malaysia 3
- Engineer & Society Law for Engineers
- Hubungan Dirks (Local)/Pengajian Malaysia (International)
- Project Management
- Bahasa Kebangsaan A/Foreign Language
- Co-Curriculum
- Business & Entrepreneurship in Malaysia

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

(Global. Entrepreneurial. Trendsetter. Engineering)

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

PROGRAMME STRUCTURE FOR FOUNDATION IN ENGINEERING | FET

Trimester 1	Trimester 2

• Communication English
• Algebra
• Mechanics
• Physics Lab 1
• Computer Applications & Programming
• General Chemistry
• Trigonometry & Geometry

Trimester 3

• Essential English
• Electricity & Magnetism
• Physics Lab 2
• Fundamentals of Business Management
• Critical Thinking
• Calculus

• Academic English
• Modern Physics & Thermodynamics
• Introduction to Probability & Statistics

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).

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

(Global. Entrepreneurial. Trendsetter. Engineering)

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.


PROGRAMME STRUCTURE

Year 1

• Computer Organization & Architecture
• Computer Networking
• Microcontroller & Microprocessor Systems
• Circuits & Signals
• Engineering Mathematics I
• Electromagnetics Theory
• Control Theory
• Digital Signal Processing
• Computer Organization & Architecture
• Computer Networking
• Microcontroller & Microprocessor Systems
• Circuits & Signals
• Engineering Mathematics I
• Electromagnetics Theory
• Control Theory
• Digital Signal Processing

Year 2

• Communications Electronics
• Project Management for Engineers
• Antennas & Propagation
• Electro-magnetic Interference
• Design Project
• Multimedia & Communications Networks
• Digital Communications
• Industrial Training
• Project Management for Engineers
• Antennas & Propagation
• Electro-magnetic Interference
• Design Project
• Multimedia & Communications Networks
• Digital Communications
• Industrial Training

Year 3

• Mobile & Satellite Communications
• Digital Signal Processing
• Project
• Mobile & Satellite Communications
• Digital Signal Processing
• Project

Year 4

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

University Subjects and Mata Pelajaran Umum (MPU)

Year 1

• Computer Organization & Architecture
• Computer Networking
• Microcontroller & Microprocessor Systems
• Circuits & Signals
• Engineering Mathematics I
• Electromagnetics Theory
• Control Theory
• Digital Signal Processing

Year 2

• Communications Electronics
• Project Management for Engineers
• Antennas & Propagation
• Electro-magnetic Interference
• Design Project
• Multimedia & Communications Networks
• Digital Communications
• Industrial Training

Year 3

• Mobile & Satellite Communications
• Digital Signal Processing
• Project

Year 4

• Knowledge-based Systems
• Advanced Microprocessors
• Embedded System Design
• Practical FPGA Design & Interfacing
• Optoelectronics & Optical Communications
• Telemedicine Technology
• Java Technology
• Object-Oriented Programming with C++
• Random Processes & Queuing Theory
• Semiconductor Packaging & Test
• Imaging Radar System
• Digital Wireless Communications

Elective Modules (Choose 3 Subjects)

• Telecommunications Network Design
• Mobile Communications Systems
• Digital Signal Processing
• Data Communications & Networking
• Electromagnetics
• Control Theory
• Digital Signal Processing
• Project Management for Engineers
• Antennas & Propagation
• Electro-magnetic Interference
• Design Project
• Multimedia & Communications Networks
• Digital Communications
• Industrial Training

Co-Curriculum

• Workplace Communications
• Law for Engineers
• Engineer and Society
• Business and Entrepreneurship in Malaysia MPU I (FET)
• 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

#### Year 1
- **Core:**
  - Computer and Programme Design
  - Algorithm & Data Structure
  - Circuit Theory
  - Field Theory
  - Engineering Mathematics I
  - Engineering Mathematics II
  - Electromagnetics I
  - Electromagnetics II
  - Digital Logic Design
  - Instrumentation & Measurement Techniques
  - Introduction to Machines & Power Systems

#### Year 2
- **Core:**
  - Computer Organisation & Architecture
  - Microcontroller & Microprocessor Systems
  - Circuits & Signals
  - Engineering Mathematics II
  - Power Technology
  - Electromagnetic Theory
  - Control Theory
  - Engineering Mechanics
  - Analog & Digital Communication

- **Elective:**
  - Multimedia Technology & Applications
  - Project Management for Engineers
  - Design Project
  - Robotics
  - Automation
  - Machine Vision
  - Industrial Training
  - Manufacturing & Operation Management
  - Advanced Robotics Project

#### Year 3
- **Core:**
  - Engineering Mathematics III
  - Introduction to Electrical Power & Machines
  - Fluid Mechanics
  - Manufacturing and Operations Management
  - Applied Thermodynamics
  - Engineering Drawing II
  - Mechanical Design I
  - Mechanics of Materials
  - Control Engineering
  - Microprocessor Systems & Interfacing
  - Fluid Dynamics
  - CAD/CAM
  - Computational Method for Mechanical Engineering
  - Mechanical Design II
  - Heat Transfer
  - Integrated Design Project
  - Industrial Training

- **Elective:**
  - Semiconductor Packaging & Test
  - Energy Technologies
  - Finite Element Method
  - Quality Engineering
  - Tribology
  - Operations Research
  - Computational Fluid Dynamics
  - Robotics and Automation
  - Materials Engineering
  - Ergonomic and Human Factor
  - Heating, Ventilation and Air-Conditioning Systems
  - Internal Combustion Engines
  - Combustion Engines
  - Quality Management

#### Year 4
- **Core:**
  - Engineering Mathematics IV
  - Introduction to Electrical Power & Machines
  - Fluid Mechanics
  - Manufacturing and Operations Management
  - Applied Thermodynamics
  - Engineering Drawing II
  - Mechanical Design I
  - Mechanics of Materials
  - Control Engineering
  - Microprocessor Systems & Interfacing
  - Fluid Dynamics
  - CAD/CAM
  - Computational Method for Mechanical Engineering
  - Mechanical Design II
  - Heat Transfer
  - Integrated Design Project
  - Industrial Training

- **Elective:**
  - Semiconductor Packaging & Test
  - Energy Technologies
  - Finite Element Method
  - Quality Engineering
  - Tribology
  - Operations Research
  - Computational Fluid Dynamics
  - Robotics and Automation
  - Materials Engineering
  - Ergonomic and Human Factor
  - Heating, Ventilation and Air-Conditioning Systems
  - Internal Combustion Engines
  - Combustion Engines
  - Quality Management

### University Subjects and Mata Pelajaran Umum (MPU)

- **Communication Skills/Local/International:**
  - MPU U1: Tamadun Islam & Tamadun Asia (Local)
  - MPU U2: Bahasa Kebangsaan A / Any subjects in U2 (Local)
  - MPU U3: Business and Entrepreneurship in Malaysia

- **Language:**
  - MPU U1: Bahasa Kebangsaan A / Any subjects in U2 (Local)
  - MPU U2: Bahasa Kebangsaan B / Any subjects in U2 (Local)
  - MPU U3: Co-Curriculum

- **Co-Curriculum:**
  - MPU U1: Business and Entrepreneurship in Malaysia
  - MPU U2: Business and Entrepreneurship in Malaysia

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 (AS832)

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

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<th>Trimester 4</th>
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<tbody>
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<td>• Engineering Mathematics 1</td>
<td>• Engineering Mathematics 2</td>
<td>• Analog Electronics 3</td>
<td>• Computer Programming</td>
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<td>• Electric Circuit</td>
<td>• Digital Electronics</td>
<td>• Fluid Theory</td>
<td>• Electrical Measurement and Instrumentation Technique</td>
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<td>• Computer Applications for Engineering</td>
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<td>• U3</td>
<td>• Network Analysis</td>
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<td>• Contemporary Management &amp; Entrepreneurship</td>
<td>• U2</td>
<td>• Industrial Electronics</td>
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Trimester 5

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<td>• Industrial Training</td>
<td>• Analog and Digital Communication System</td>
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<td>• Power Electronics</td>
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<td>• Electrical Machines and Power Systems</td>
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<td>• Project - Part 1</td>
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<td>• Project - Part 2</td>
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<td>• Effective Communication Skills</td>
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<td>• Elective</td>
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<td>• U1</td>
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University Subjects

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

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 grade C in at least four (4) subjects, inclusive of Mathematics and one Science / Engineering subject and a pass in English; OR
- Pass UEC with minimum grade B in at least three (3) subjects inclusive of Mathematics and one Science subject; OR
- Pass Certificate in a related field from a recognised institution.

**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.