



# BACHELOR OF ELECTRICAL AND ELECTRONICS ENGINEERING (HONS)

[R/0713/6/0007] 02/29 [MQA/FA5671]

## DURATION

4 years

## INTAKE

February/April/September

## MEDIUM OF INSTRUCTION

English

## ABOUT THE PROGRAMME

Electrical and Electronics (EE) Engineering is one of the fastest growing branches of engineering that greatly impacts the modern society. It encompasses a whole spectrum of specializations, such as electrical power generation, electronic design, computer modelling, telecommunications, electro-magnetics, information technology and expert systems.

Our programme equips graduates with expertise and skills to perform professional roles in the field of electrical and electronic engineering, and to apply innovative and pioneering approaches to develop new products and technologies, while keeping track of the cutting-edge developments and latest trends in the industry. In view of a massive talent shortage in this field, we are confident that our graduates will be actively sought after by employers.

The E&E programme at Xiamen University Malaysia (XMUM) is mainly supported by the School of Information Science and Technology and the School of Aerospace Engineering of Xiamen University. As one of the oldest engineering schools in China offering a comprehensive range of subjects, the School of Information Science and Technology has cultivated thousands of outstanding graduates who have made great contributions to the development of E&E industry in China and Southeast Asia. It boasts an exemplary national teaching centre for electronic information, and hosts the Ministry of Education's 'Key Laboratory for Underwater Acoustic Communication and Marine Information Engineering'. It has also established extensive ties through academic exchange and cooperation with many world-renowned universities and enterprises. The School of Aerospace Engineering, the first of its kind in China, was set up through a partnership between the Aviation Industry Corporation of China and Xiamen University. With a strong link to the aviation industry, the School ensures that all staff are at the forefront of their own discipline and have an up-to-date appreciation of aerospace technology developments and research directions. For both schools, a significant number of internationally well-known scholars are appointed as adjunct, guest or honorary professors, including members of the Engineering Academies of the US and Canada.

\*All graduates of this programme who apply for registration as graduate engineers will be registered under the electrical engineering discipline with the Board of Engineers Malaysia (BEM)

## PROGRAMME HIGHLIGHTS

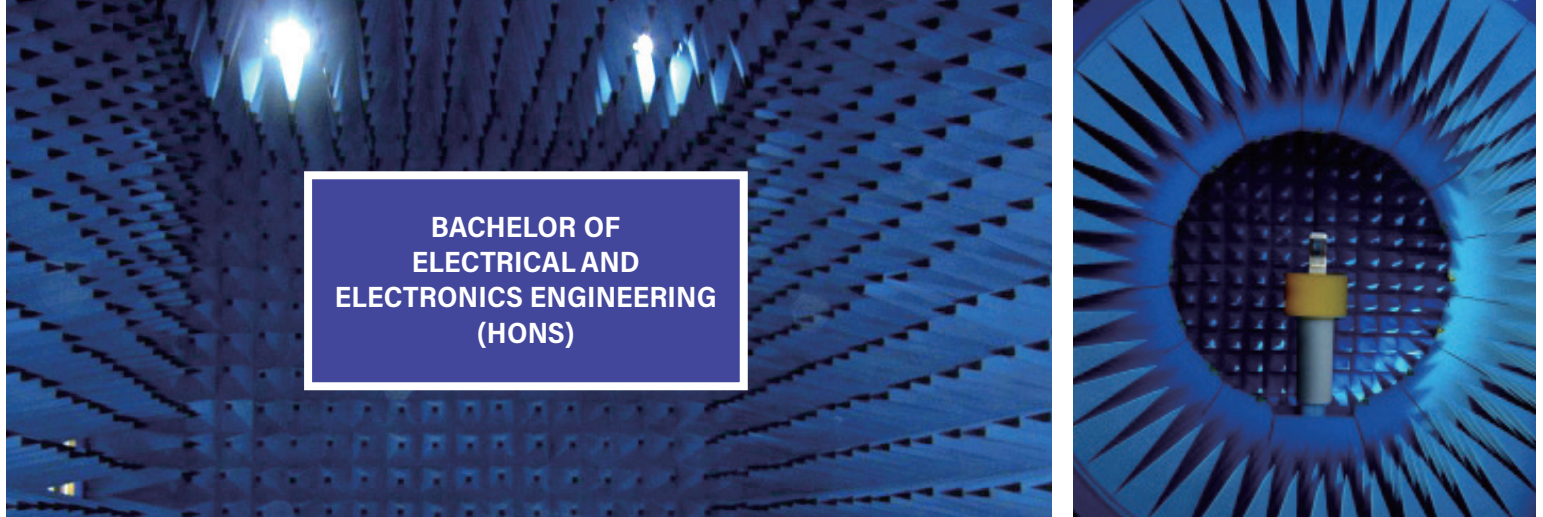
- A programme accredited by the Engineering Accreditation Council (EAC) Malaysia
- A comprehensive curriculum that covers fundamental knowledge along with a wide range of elective courses
- A broad-based education that nurtures interdisciplinary talents capable of meeting new challenges in a changing world through the incorporation of elements of humanities, social sciences, economics, and business management into the curriculum
- An ideal integration of practical training with theoretical learning
- A strong link with industry that ensures up-to-date appreciation of technology developments and research directions

## CAREER OPPORTUNITIES

Our graduates will have the opportunities to work in many industries, including

- Electronics
- IT
- Telecoms
- Manufacturing
- Power
- Automotive systems
- Aerospace technology
- Renewable energy technology, etc.





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### ENTRY REQUIREMENTS

STPM	A pass in STPM with at least a Grade C (GP2.0) in Mathematics AND Physics/Chemistry
A-LEVEL	A pass in A-Level with at least a Grade C in Mathematics AND Physics
UEC	A pass in UEC with at least a Grade B in 5 subjects including Mathematics AND Physics/Chemistry
Foundation/Matriculation (Science/in a relevant field)	A pass in Foundation/Matriculation with at least a CGPA of 2.0 out of 4.0 AND passes in Mathematics AND Physics
Diploma (in a relevant field)	A pass in Diploma with at least a CGPA of 2.5 out of 4.0 AND passes in Mathematics AND Physics

\*For other equivalent qualifications, please consult our programme counsellor.

### MAIN COURSES

#### Year 1

- Engineering Mathematics
- Programming Language C
- Electrical Engineering
- Electronic Engineering
- Engineering Physics
- Circuits and Devices

#### Year 2

- Semiconductor Physics and Device Processes
- Microelectronic Devices and Circuits
- Engineers and Society
- Instrumentation
- Computer Architecture
- Digital Electronics
- Signals and Systems

#### Major Electives

- Data Structures
- Laboratory on Circuit Analysis
- Engineering Graphics
- Circuit Spice Simulation
- Introduction to MATLAB programming

#### Year 3

- Embedded Systems
- Control System
- Electromagnetic Field Theory and Waves
- Electrical Machinery and Drive
- High Voltage Engineering
- Engineering Management
- RF and Microwave Circuits
- Power Electronics
- Statistical and Numerical Techniques
- Capstone Project
- Industrial Training

#### Major Electives

- Programming Practice
- Digital System Design
- Advanced Analogue Circuit Design
- Laboratory on Advanced Circuit Technique
- Digital Signal Processing
- Data Communication Networks
- Laboratory on Microwave Engineering
- Laboratory on Power Engineering

#### Year 4

- Power System Analysis
- Electrical Energy Utilization
- Communication System
- Final Year Project

#### Major Electives

- Optoelectronic Technology
- Antenna and Radio Wave Propagation
- Computer Vision and Robotics
- Renewable Energy
- Integrated Circuit Packaging

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The information in this brochure is correct at the time of publication. Xiamen University Malaysia (XMUM) reserves the right to change the information in line with updates from time to time. Please check the website (www.xmu.edu.my) for latest information.

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