



# BACHELOR OF ENGINEERING (HONOURS) IN COMPUTER ENGINEERING

MQA/PA7028

## PROGRAMME OVERVIEW

The Bachelor of Engineering (Honours) in Computer Engineering offers students the opportunity to prepare for careers in developing new technology people use daily. Computer engineers integrate knowledge from both computer science and electronics engineering, and possess the analytical skills of the computer scientists as well as the design and development skills of the electronics engineers. Key aspects of computer science and electronics engineering form the foundation of computer engineering, which requires an understanding of diverse subject areas such as electrical theory, digital circuits, computer architecture and organisation, engineering mathematics, microprocessor-based systems design, embedded systems, programming techniques, data structures, algorithms, operating systems, software engineering, computer networks and parallel computing.

|                         |                                               |
|-------------------------|-----------------------------------------------|
| <b>LEVEL OF STUDY :</b> | Degree                                        |
| <b>FACULTY :</b>        | Faculty of Computing                          |
| <b>DURATION :</b>       | 4 Years (8 Long Semesters + 1 Short Semester) |
| <b>STUDY MODE :</b>     | Full Time                                     |
| <b>INTAKE :</b>         | January / April / August                      |

## ENTRY REQUIREMENTS

- Pass STPM with at least 2 subjects with minimum CGPA of 2.0; and a credit in Mathematics and Physics at the SPM level; OR
- Pass Unified Examination Certificate (UEC) with at least grade B in 5 subjects including Mathematics, Physics, and 1 Physical Science subject; OR
- Pass GCE A-Level with at least grade C in Mathematics, Physics, and 1 Physical Science subject; OR
- Pass Ministry of Education (MOE) Matriculation in related programme with minimum CGPA of 2.0 and a credit in Mathematics and Physics at the SPM level; OR
- Completed UniMy Foundation Programme or other Higher Education Provider (HEP) foundation programmes recognised by Government of Malaysia with minimum CGPA of 2.0 and a credit in Mathematics at the SPM level; OR
- Pass Diploma in Computer field with minimum CGPA of 2.5; OR
- Pass Diploma in other field with minimum CGPA of 2.5 and a credit in Mathematics at the SPM level; OR
- Pass Australian Year 12 with minimum 55 point average in 6 subjects including Mathematics and Physics; OR
- Pass South Australian Matriculation (SAM) with minimum TER point 55 in 5 subjects including Mathematics and Physics and no subject below 10/20; OR
- Pass Australian Matriculation with minimum TER point 55 including Mathematics and Physics; OR
- Pass Canadian Pre-University (CPU) or Ontario Secondary Diploma (Canadian Grade 12) with a pass in 6 subjects with 55% average including Mathematics and Physics; OR
- Pass International Baccalaureate (IB) Diploma with minimum 24/45 point and credit in Mathematics and Physics; OR
- Other equivalent that is recognised Malaysian Government

## ENGLISH REQUIREMENT

Evidence of proficiency in one of the following English tests.

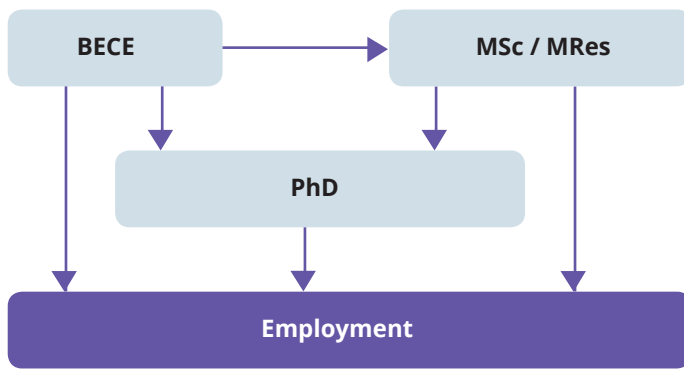
### For Malaysian candidates:

- TOEFL : 550 (paper-based), 213 (computer-based), 79 (internet based)
- IELTS : 5.5
- MUET : Band 3
- UEC English : B4
- O-Level English : Credit
- English 1119 : Credit

### For International candidates:

- Pass TOEFL (within the 2-year validity period) with a minimum score of 550; OR
- Pass IELTS (within the 2-year validity period) with a minimum score of Band 6.

## STUDY / CAREER PATHWAY



## CAREER OPPORTUNITIES

- Computer Engineer
- Computer Architect
- Chip Architect
- Computer Network Engineer
- Networking Engineer
- Network Security Specialist
- Network Solution Architect
- Computer Programmer
- Software Developer
- Software Engineer
- Database Analyst
- Database Developer
- Data Scientist
- Data Visualisation Developer
- Computer Information Research Scientist
- Computer Security Engineer
- Information Security Consultant
- Computer Forensics Investigator / Forensic Analyst
- Systems Analyst / Engineer
- University Academic

## COURSE OUTLINE

### Year 1:

- Hubungan Etnik / Malaysian Studies III
- Discrete Structures
- Engineering Mathematics I
- Programming Techniques
- Electrical Circuits
- Foreign Language
- Engineering Mathematics II
- Data Structures and Algorithms
- Electronic Devices
- Digital Electronics

### Year 2:

- Engineering Mathematics III
- Object-Oriented Programming
- Databases
- Electronic Circuits and Systems
- Signals and Systems
- Co-curriculum
- Linear Algebra
- Multimedia and Human-Computer Interaction
- Electromagnetic Field Theory
- Electronic Instrumentation and Measurements
- Digital Systems

### Year 3:

- Tamadun Islam dan Tamadun Asia (TITAS) / Bahasa Melayu Komunikasi III
- Probability and Statistics
- Software Engineering
- Communication Principles
- Control Systems
- Microprocessors
- Professional Communication
- Basic Power Systems and Electrical Machines
- Digital Signal Processing
- Computer Organization and Architecture
- Data Communication and Networking
- Computer Engineering Capstone Project

### Year 4:

- Computing and Society
- Operating Systems
- VLSI System Design
- Elective #1
- Elective #2
- Final Year Project I
- Cyberpreneurship
- Embedded Processor Systems
- Elective #3
- Free Elective
- Final Year Project II
- Industrial Training

## APPLICATION PROCEDURE

Online application is available at [admission.unimy.edu.my](http://admission.unimy.edu.my)

## FOR ENQUIRIES

T +6 03 8800 5050 F +6 03 8800 5011 E [info@Unimy.edu.my](mailto:info@Unimy.edu.my)

## WEBSITE

[www.Unimy.edu.my](http://www.Unimy.edu.my)

- [www.facebook.com/unimyofficial](https://www.facebook.com/unimyofficial)
- <https://twitter.com/unimyofficial>



## ADDRESS

University Malaysia of Computer Science & Engineering  
Menara Z10, Ground and Mezzanine Floor  
Jalan Alamanda 2, Precinct 1  
62000 Wilayah Persekutuan Putrajaya, Malaysia.

## ACADEMIC PARTNERS



## INDUSTRY PARTNERS

