



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

Razak Faculty of Technology  
and Informatics

# Master of Science (Computer Systems Engineering)

MQA/SWA0444

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## PROGRAMME OVERVIEW

### Master of Science (Computer Systems Engineering)

programme is the integration of systems engineering, software engineering and computer engineering knowledge. This programme will produce graduates who can work in a career related to the field of technology-driven and interdisciplinary or multi-technology in nature. They will be able to design, develop and integrate between software and hardware that includes the embedded system equipped with security and software requirements. Computer Systems Engineering integrates several disciplines and speciality groups into a team effort forming a structured development process that proceeds from concept to production to operation.

## CAREER OPPORTUNITIES

- IoT Engineer
- Systems Analysts
- Systems Integrator
- Software Engineer
- Solutions Architect
- Systems Managers
- Systems Consultants
- System Support Engineer
- Computer Systems Engineer



COURSEWORK (45 CR)



Intake: February and September



Package 1: Weekdays Class

1.5 years (3 semesters) - 4 years (8 semesters)

Package 2: Weekend Class

2 years (4 semesters) - 4 years (8 semesters)

## ENTRY REQUIREMENT

A Bachelor's Degree in Computer Science, or Software Engineering, or Information Technology, or Engineering, or Math, or Science with good honours from Universiti Teknologi Malaysia or any other institution of higher learning recognised by the Senate; OR

A qualification equivalent to a Bachelor's Degree as per above area and experience in the relevant field recognised by the Senate.

### Additional requirement for International Applicant

An English Certificate of IELTS with the minimum band of 6.0 OR TOEFL with the minimum score of 550

## CORE COURSES

- Systems Engineering
- System Design for Security
- System Testing and Evaluation
- System Processors and Peripherals
- Embedded System Analysis and Design
- System Architecture, Behaviours and Optimization
- Research Methodology
- 1 University General Courses

## ELECTIVE COURSES

- System Algorithms
- Trusted Computing
- Machine Learning System
- Software Quality Assurance
- Advanced Software Testing
- Wireless Communication and Networking
- Mobile Computing Systems Programming
- Software Configuration and Management
- Advanced Software Process Improvement

## MASTER PROJECT

- Master Project 1
- Master Project 2



*"Extend my knowledge .."*

“This programme covers the requirement for the development of the internet of things (IoT) system. It also prepares us towards delivering final year IoT-based projects that have both research and entrepreneurial values. By engaging in this program, I extend my knowledge of both the hardware and the software functions from my baccalaureate in computer science to embedded system engineering.”

### **SAMANEH AMIRISOORI**

Senior Application Developer  
CIBC Canada



*"highlights the latest emerging technology.."*

“I enrolled in the programme because I want to learn more about the current technology in IT. The programme not only offers a diverse range of subjects but it also highlights the latest emerging technology. To those considering doing this programme, I would say go for it as it is a worthwhile degree. The knowledge you will obtain will be beneficial in your future career.”

### **DEEPA A/P RAJADRAN**

Assistant Information Technology Officer  
University Malaya Medical Centre