



# BACHELOR OF ENGINEERING IN SOFTWARE ENGINEERING (HONOURS)

[R/0612/6/0009]11/27[MQA/FA5712]

## DURATION

4 years

## INTAKE

February/ April/ September

## MEDIUM OF INSTRUCTION

English

## ABOUT THE PROGRAMME

The software engineering programme at Xiamen University (XMU), which was introduced in 2002, is supported by the Software School, one of the 35 national exemplary software engineering schools approved by China's Ministry of Education. The school has established joint research and development collaborations with a number of overseas IT enterprises including MICROSOFT, IBM, BEA, ORACLE, SYBASE, SUN and DELL.

We have achieved great success in cultivating talents with practical abilities and an international outlook in the field of software engineering since the inception of the programme. We were approved as the "Innovative Area of Talent Training Mode" and "Excellent Engineer Training Programme" by China's Ministry of Education. Moreover, the course "software engineering" has been rated as a top-quality course by XMU, Fujian Province and Ministry of Education respectively.

Our programme at Xiamen University Malaysia is geared at producing graduates who are able to strike a balance between theories and practical implementation in software engineering, applying their knowledge and skills to design, develop, maintain, and manage computer and mobile application systems in the context of a real-world engineering environment. In summary, students in this program are prepared to adeptly utilise current technology through a wide array of application tools and proficiently master diverse programming languages.

**Note:** The degree is not among the fields of engineering in the register of the Board of Engineers Malaysia.

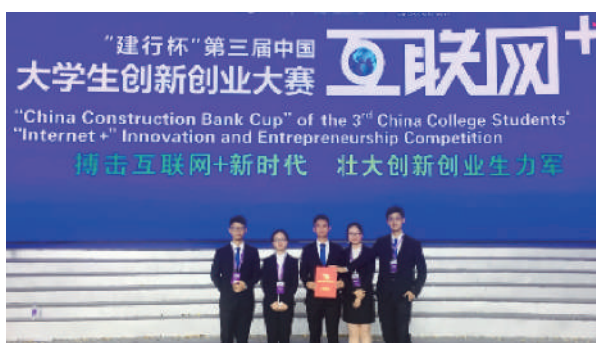


## PROGRAMME HIGHLIGHTS

- A comprehensive curriculum aimed at nurturing graduates' core technical abilities while allowing them to focus on specialised aspects of software engineering.
- Focusing on cultivating interdisciplinary software engineering talents with diverse skills, capable of addressing evolving challenges in today's dynamic world.
- Utilising a problem-centered learning method that integrates practical projects and hands-on training into the learning experience.
- Providing students with the opportunity to acquire valuable industry insights and practical experience through partnerships with global IT corporations.

## CAREER OPPORTUNITIES

- Analyst programmer
- Application analyst
- Database administrator
- IT consultant
- Mobile application developer
- Programmer
- Requirements engineer
- Software design engineer
- Software project manager
- Software quality engineer
- Software architect
- Software auditor
- Software developer
- Software engineer
- Software tester
- Systems analyst
- Techno entrepreneur
- Web developer





Computer Vision and Face Recognition Workshop – collaboration with Robomy Sdn. Bhd.



Final Year Project Presentation by SWE Student

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### ENTRY REQUIREMENTS *\*For other equivalent qualifications, please consult our programme counsellor*

STPM (Science Stream)	A pass in STPM with at least a Grade C (GP2.0) in Mathematics AND 1 Science/ICT subject
STPM (Non Science Stream)	A pass in STPM with at least a Grade C (GP2.0) in any 2 subjects AND a credit in Additional Mathematics in SPM or its equivalent
A-LEVEL	A pass in A-Level with at least a Grade D in any 2 subjects
UEC	A pass in UEC with at least a Grade B in 5 subjects
Foundation/Matriculation	A pass in Foundation / Matriculation with at least a CGPA of 2.0 out of 4.0
Diploma	A pass in Diploma in Computing fields (Computer Science/Software Engineering/Information Technology/Information System/Data Science) with at least a CGPA of 2.5* out of 4.0 OR A pass in any Diploma Science and Technology or the equivalent with at least a CGPA of 2.75** out of 4.0
AND	(i) Additional Mathematics*** —a credit in SPM or the equivalent; <b>OR</b> (ii) Mathematics and any 1 Science/Technology/Engineering subject —a credit in SPM or the equivalent AND pass a Mathematics placement test organised by XMUM before joining the programme

**NOTES:** \* Candidates with a CGPA of less than 2.5 but more than 2.0 may be accepted subject to a stringent internal evaluation process.  
 \*\* Candidates with a CGPA of less than 2.75 but more than 2.5 may be accepted subject to a stringent internal evaluation process.  
 \*\*\* The requirement for the Additional Mathematics at SPM level can be exempted if the Foundation/Matriculation or its equivalent offers a Mathematics course that is of a similar or higher level compared to the Additional Mathematics at SPM level.

### MAIN COURSES

#### Year 1

- Discrete Mathematics B
- Computer Fundamentals
- C and C++ Programming
- Principles of Information Systems
- Data Structure
- Introduction of Software Engineering
- Computer Architecture
- Fundamentals of Network Technology

#### Year 2

- Operating Systems
- Database
- Principles of Artificial Intelligence
- Software Requirement Engineering
- Algorithm Analysis and Design
- Object Oriented Modeling
- Software Quality Engineering

#### Major Elective (Choose 2)

- Human Computer Interaction
- Computer Graphics
- Programming Elective II (1)

#### Year 3

- Software Verification and Validation
- Software Project Management
- Fundamentals of Academic Research
- Software Architecture and Design Patterns
- Information Security

#### Major Elective (Choose 3)

- Embedded System
- Digital Media Technology
- Advanced Software Engineering
- Game Design and Development

#### Major Elective (Choose 3)

- Introduction of Cloud Computing
- Programming Elective II (2): .NET
- Mobile Application System Design
- Distributed Systems

#### Year 4

- Software Engineering Academic Project
- Industrial Training

#### Major Elective (Choose 4)

- Programming Elective II (3)
- Data Mining
- Technology and Application of Internet of Things
- Big Data Analytics
- Virtual Reality Technology and Application

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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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