BE A FUTURE INNOVATOR

BSc Computing Science

KPT/JPS (N/481/6/0833) (PA14530) 06/26
In the current era of digital revolution, computer scientists and software engineers can be found at the forefront, driving latest developments in a broad range of fields such as artificial intelligence, cybersecurity, bioinformatics, healthcare, and data informatics.

Our BSc Computing Science degree focuses on software development and algorithms, with the aim of constructing robust and usable systems for industry and commerce. As well as looking at cutting edge tools and techniques, it’s designed to help you build the next generation of software tools that other system constructors will use. The course aims to give a well-integrated balance of theoretical underpinnings and practical experience, strongly informed by the research expertise of our academic staff.

The programme consists of core computer science, information technology and mathematics units in Year 1 and 2. Students in Year 3 will take highly specialised units including three elective units and will also be conducting a year-long individual final-year dissertation project. Students will also undertake an industrial training programme between Year 2 and 3.

You can take advantage of our international campuses by taking part in an Inter-Campus Transfer. This gives you the opportunity currently to study Computing Science at our Edinburgh campus for a semester or a year.

In accordance with our normal practice our professionally orientated programmes are designed to meet the educational requirements for membership of relevant professional institutions. In addition to recognition within Malaysia, we seek accreditation by the relevant UK or international professional bodies in accordance with their standard procedures.

We are also currently in the process of obtaining accreditation from BCS, The Chartered Institute of IT, UK.

**ENTRY REQUIREMENTS**

- Heriot-Watt University Malaysia Foundation in Science & Foundation in Business: BBCC – including B in Mathematics
- A-Level/STPM: BBB including B in Mathematics
- UEC: 12 points or less including A in Mathematics (5 subjects not less than B grade)
- CPU: 80% including B in Mathematics
- WACE/SACE: ATAR 80 including B in Mathematics
- SMA 3 (Indonesia): 8.0 in Mathematics
- IB Diploma: 26 points with minimum 5 HL in Mathematics
- Diploma with high level of attainment in computing and/or IT and/or mathematics recognised by the Malaysian Government, acceptable to the University.
- Any other relevant qualification with high level of attainment in computing and/or IT and/or mathematics recognised by the Malaysian Government, acceptable to the University.

**English language requirements**

- If English is not your first language, then evidence of proficiency equivalent to IELTS 6.0 is required.
- If you do not have IELTS 6.0, we offer a Pre-Sessional English Programme (PSEP) prior to commencing your studies.

**SCHOLARSHIP**

100% and 50% scholarships are available under our Data Futures scholarship for September 2021 intake. For more information, speak to our Education Consultants or visit: www.hw.edu.my
Employment prospects are good, with excellent financial rewards and career pathway. Our students will be well-equipped for a broad range of technical jobs from software developers and system analysts to machine learning/AI engineers. Our graduates will also be prepared for more general careers like project management, IT consultancy, teaching or research.

Semester 1
- Software Development A
- Software Development B
- Mathematics for Computer Science
- Intro to Interaction Design

Semester 2
- Introduction to Computer Systems
- Software Design
- Data Structures and Algorithms
- Database Management Systems

Semester 1
- Software Engineering
- Data Communications & Networking
- Foundations 1
- Programming Languages

Semester 2
- Professional Development
- Operating Systems & Concurrency
- Foundations 2
- Hardware-Software Interface

Semester 3
- Industrial Training (Summer internship)

Semester 1
- Research Methods & Requirements Engineering
- Computer Network Security
- Option 1*

Semester 2
- Design & Implementation
- Project Testing & Presentation
- Artificial Intelligence and Agents
- Option 2*
- Option 3*

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Semester 3
- Industrial Training (Summer internship)

Options:
- Language Processors
- Distributed & Parallel Technologies
- Big Data Management (also on the DS degree)
- Data Mining and Machine Learning
- Biologically Inspired Computing
- 3D Graphics and Animation
- Intelligent Robotics
- Statistical Modelling & Analytics
- Applied Text Analytics
- Data Visualisation Analytics
- Computer Games Programming

Notes on programme:
- Industrial Training is the compulsory internship during the summer break between Years 2 and 3.
- Software Engineering and Professional Development are group project courses (linked over the whole year).
- Research Methods & Requirements Engineering, Design & Implementation and Project Testing & Presentation are courses corresponding to one individual whole year project.
- Students can select Year 3 Options from the given list of courses, subject to availability of subject on offer.

CAREER OPPORTUNITIES

The present global demand for computing skills presents numerous career opportunities in software and technology sectors, and also supports many other industries such as financial services, telecommunications, retail and manufacturing. Employment prospects are good, with excellent financial rewards and career pathway. Our students will be well-equipped for a broad range of technical jobs from software developers and system analysts to machine learning/AI engineers. Our graduates will also be prepared for more general careers like project management, IT consultancy, teaching or research.
Open for consultation:
Monday to Friday (9am - 5pm)
Extended counselling on selected weekends: Saturday and Sunday (10am to 4pm)
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