Bachelor of Science (Honours) Intelligent Robotics

(N/523/6/0318) 01/26 (MQA/PSA14238)

The Bachelor of Science (Honours) Intelligent Robotics is a 3-year programme that strikes on exquisite balance between the fundamentals of engineering and hands-on, practical skills. This unique multi-disciplinary program combines electronics, robotics, artificial intelligence, automation, and computer programming. It adopts a modern learning approach with early exposure to real world applications. Graduates will be agile knowledge workers in the IR4.0 age and beyond, highly sought after by the industry.

55%

SYSTEM

Career Prospects: Robotics System Designer/Programmers, AI and Machine Learning Developer, Embedded System Designer, Control and Automation Specialist, Field Application Technologist, Printed Circuit Board (PCB) Designer, Production and Planning Engineer, Industry 4.0 Technologist

Programme Structure

| Year 1 | Year 2 | Year 3 |
|---|--|--|
| CORE | | |
| Engineering calculus Computer and programming Micro-controllers & micro-processors Electrical circuits Basic electronics Differential equations Digital design Linear algebra and numerical methods Rapid modelling Analog electronics | Linear systems & signals Electromagnetics with applications Electrical machines and power systems Robotics - Machine design and mechanisms Introduction to artificial intelligence Actuators and sensors Electronics instrumentation Robotics - Modelling and control Feedback control Advanced programming Internship | Mobile robots and drones Machine learning concepts and technologies Project I Project II Machine vision & image processing |
| ELECTIVES | | |
| | Hardware Track | Software Track |
| Elective 1 Elective 2 Elective 3 Elective 4 Elective 5 | IOT systems & applications Electronic prototyping and PCB layout Making embedded systems Industrial automation and digital control Signal and power integrity | Cybersecurity Software engineering fundamentals Introduction to data science Neural networks and deep learning Robot programming |
| UNIVERSITY SUBJECTS AND MATA PELAJARAN UMUM (MPU) | | |
| MPU-U1: TITAS (local)/Bahasa Melayu komunikasi 2 (international) Workplace communications MPU-U1 Hubungan etnik (local)/ Pengajian Malaysia 3 (international) | • MPU-U4 Co-curriculum | MPU-U2 Bahasa kebangsaan A /Foreign language* / Entrepreneurship in cross border e-commerce/ Business and entrepreneurship in Malaysia |

 MPU-U3 Introduction to multicultural studies in Malaysia/ Introduction to Malaysian economy/ Islamic institutions in Malaysia/ Introduction to multicultural studies in Malaysia/ Stress and well-being among Malaysians

* Malaysians who have fulfilled the Bahasa Malaysia requirement (either having passed Bahasa Malaysia with a credit at SPM level; or having passed the MPU3213 Bahasa Kebangsaan A) shall be required to take a 3CH MPU U2 subject. Student who opt to take a foreign language course within the MPU U2 category must ensure that he/she does not have formal education in the chosen foreign language.

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

Entry Requirements

- Pass Foundation / Matriculation studies in related field from a recognised institution; OR
- Pass STPM or its equivalent with a minimum Grade C (GP 2.00) in any 3 subjects inclusive of Mathematics and Physics; OR
- Pass A-Level with a minimum of Grade D in any 3 subjects inclusive of Mathematics and Physics; OR
- Pass UEC with a minimum of Grade B in at least five (5) subjects inclusive of Mathematics and Physics; OR
- Recognised Diploma in the related field with a minimum CGPA of 2.50 or its equivalent; * OR
- *Candidates with CGPA below 2.50 but above 2.0 may be admitted subject to a rigorous internal assessment process
- Pass DKM /DLKM/DVM with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 MUST have at least two (2) years of work experience in the related field; AND
- A minimum score of 5.0 for IELTS or its equivalent (for international students only).

Note: DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.

FEE

Local: RM60,000 International: RM75,000