

PROGRAMME NAME : BACHELOR OF SCIENCE (HONS) INTELLIGENT ROBOTICS
 APPLICABLE INTAKE : OCTOBER 2024

COURSE TYPE	YEAR 1						YEAR 2						YEAR 3					
	Course Code & Name	CH	Course Code & Name	CH	Course Code & Name	CH	Course Code & Name	CH	Course Code & Name	CH	Course Code & Name	CH	Course Code & Name	CH	Course Code & Name	CH	Course Code & Name	CH
	TRIMESTER OCTOBER/NOVEMBER		TRIMESTER MARCH/APRIL		TRIMESTER JULY/AUGUST		TRIMESTER OCTOBER/NOVEMBER		TRIMESTER MARCH/APRIL		TRIMESTER JULY/AUGUST		TRIMESTER OCTOBER/NOVEMBER		TRIMESTER MARCH/APRIL		TRIMESTER JULY/AUGUST	
CORE	ARM6113 Technical calculus	3	ARL6113 Electrical circuits	3	ARA6113 Introduction to artificial intelligence Pre-Req: ARC6113	3	ARL6143 Linear systems & signals Pre-Req: ARL6113	3	ARR6133 Actuators and sensors	3	ARC6144 Machine vision & image processing	4	ARR6153 Mobile robots and drones Pre-Req: ARC6123, ARR6123	3	ARP6110 Project II Pre-Req: 60 CH****	5		
	ARC6113 Computer and programming	3	ARE6113 Basic electronics	3	ARE6133 Analog electronics	3	ARL6134 Electromagnetics with applications	4	ARE6143 Electronics instrumentation	3			ARP6110 Project I Pre-Req: 60 CH****	5	ARR6163 Robot programming Pre-Req: ARC6113	3		
	ARC6123 Micro-controllers & micro-processors	3	ARM6123 Differential equations Pre-Req: ARM6113	3			ARR6123 Robotics – Machine design and mechanisms	3	ARR6143 Robotics – Modelling and control	3			ARC6184 Making embedded systems Pre-Req: ARC6123	4				
	MMD6123 Digital Fabrication and Prototyping	3	ARE6123 Digital design	3			ARM6133 Linear algebra and numerical methods	3	ARL6153 Feedback control	3								
							ARA6123 Machine learning concepts and technologies Pre-Req: ARC6113	3	ARC6133 Advanced programming	3								
									ARL6123 Electrical machines and power systems	3								
ELECTIVE/ *FREE ELECTIVE													Electives #	3	Electives #	3		
													Electives #	3				
INDUSTRIAL TRAINING																	ART6116 Industrial training Pre-Req: 60 CH	6
MPU**	MPU-U1: LMPU3182 (local) and LMPU3142 (international)	2			LMPU3312 Integrity and Leadership	2					MPU-U1: LMPU3192 (local and international)	2			MPU-U2	2		
															MPU-U4	2		
UNIVERSITY COURE	LSSW6112 Sustainable Society	2	Character Building	2														
			LDCW6123 Fundamentals of Digital Competence for Programmers	3														
TOTAL CH		16		17		8		16		18		6		18		15		6

Notes:

***Free Electives :** The code for free elective courses in MMU starts with the alphabet 'F'. Free elective courses maybe within the students' general area of study or totally outside of students' area of study depending on the specific programme's requirement but the credits from these courses contribute to the total graduating credit.

Example : Free Elective Requirement for Bachelor of Multimedia (Hons) Interface Design

2 Free Elective courses or a total of 5 Credit Hours (CH) which can be taken in any of the following combinations:

1. All 2 courses totalling 5 credit hours taken from elective courses offered by FCM (3 CH + 2 CH); or

2. A combination of courses offered by FCM and other faculties. If the total credit hours of the elective courses are 6 CH, there is an additional charge for the extra 1 CH that exceed the required total credit hours in your programme structure.

****Mata Pelajaran Umum (MPU) Courses for Bachelor's Degree Level (Effective Oct 2022 Trimester)**

Mata Pelajaran Umum (MPU) are compulsory courses to be taken by Diploma and Bachelor's degree level students of private education institutions in Malaysia. Students must pass the courses before being awarded the enrolled degree. This is as mandated by Section 43 of the Private Higher Education Act 1996.

MPU Category	Local Students	International Students	Credit Hours
U1	LMPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues)	LMPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues)	2
	LMPU3182 Penghayatan Etika dan Peradaban (Appreciation of Ethics and Civilizations)	LMPU3142 Bahasa Melayu Komunikasi 2	2
U2/U3	<p><u>Students without credit in BM at SPM Level</u></p> <p>i. LMPU3212 Bahasa Kebangsaan A. If the student has taken this course before, he/she must take any other courses in the U2 or U3 category**</p> <p>ii. LMPU3312 Integrity and Leadership</p> <p><u>Students who obtained credit in BM at SPM Level</u></p> <p>i. LMPU3312 Integrity and Leadership</p> <p>ii. Any other courses in the U2 or U3 category***</p>	<p>i. Integrity and Leadership</p> <p>ii. Any other courses in the U2 or U3 category***</p>	2 + 2
U4	MPU34XX - choose one from the list offered		2
	Total Credit Hours		10

*** Should the student choose to take foreign language, he/she must choose one which he/she has no formal education in.

**** Part1 - 60 credit hours (excluding Arts and Humanities subjects),

**** Part2 - ARP6114 (Part 1)

	Hardware Track	Software Track
Elective 1	ARC6173 IOT systems & applications Pre-Req: ARC6123	ARC6153 Cybersecurity
Elective 2	ARE6153 Electronic prototyping and PCB layout	ARC6163 Software engineering fundamentals
Elective 3	ARC6184 Making embedded systems Pre-Req: ERC1136	ARA6144 Data science fundamentals
Elective 4	ARL6163 Industrial automation and digital control Pre-Req: ARC6123, ARL6153	ARA6133 Neural networks and deep learning Pre-Req: ARA6123
Elective 5	ARL6173 Signal and power integrity Pre-Req: ARL6134	ARR6163 Robot programming Pre-Req: ARC6113