

Bachelor of Engineering (Honours) (Robotics and Mechatronics)

BH-ERM

Semester 2 | 2022

Recommended Sequence

Units are listed on your Course Planner in a recommended sequence. However, this can be amended depending on unit availability, unit progression, timetabling and the semester in which you commenced your course.

Year One

Semester 1 Aug 2022		
Unit Code	Unit Name	Pre-requisites
ENG10003	Mechanics of Structures	Nil
ENG10004	Digital and Data Systems	Nil
PHY10004	Electronics and Electromagnetism	Nil
MTH10013	Linear Algebra and Applications	Nil
Semester 2 Feb/Mar 2023		
MTH10012	Calculus and Applications	Nil
ENG10001	Engineering, Design and Innovation	Nil
ENG10002	Engineering Materials	Nil
PHY10001	Energy and Motion	Nil
MPU3193	Philosophy and Current Issues <i>(Malaysian and International Students)</i>	Nil
Winter Term July 2023		
MPU3212	Bahasa Kebangsaan A (Malaysian students who do not have SPM Bahasa Melayu credit)	Nil

Year Two

Semester 3 Aug/Sept 2023		
Unit Code	Unit Name	Pre-requisites
MEE20004	Structural Mechanics	ENG10003
MEE20006	Machine Dynamics 1	MTH10013 & PHY10001
EEE20001	Digital Electronics Design	Nil
SWE20004	Technical Software Development	ENG10004/COS10001/COS10009
MPU3183	Penghayatan Etika dan Peradaban <i>(Malaysian Students Only)</i>	Nil
MPU3143	Malay Language Communication 2 <i>(International Students Only)</i>	Nil
Semester 4 Feb/Mar 2024		
MTH20014	Mathematics 3B	MTH10012 & MTH10013
EEE20006	Circuits and Electronics 1	PHY10004 & MTH10013
MEE20002@	Computer Aided Engineering Mechanical	ENG10001
EEE20003@	Embedded Microcontrollers	EEE20001 & SWE20004/COS10009

Year Three

Semester 5 Aug/Sept 2024		
Unit Code	Unit Name	Pre-requisites
RME20001	Electrical Actuators and Sensors	PHY10004
EEE30004@	Digital Signal Processing	MTH20014 & EEE20002/EEE20006
MME30001@	Engineering Management 1	100 credit points
COS10011&	Creating Web Applications	COS10009/SWE20004
EAT20008	Professional Experience in Engineering#	Introductory Seminar
Semester 6 Feb/Mar 2025		
MEE30003@	Machine Design	MEE20004
RME30002@	Control and Automation	MTH20014 & PHY10004/EEE20006
RME40003@	Robot System Design	250 credit points
MEE40003@	Machine Dynamics 2	MEE20006

Year Four

Semester 7 Aug/Sept 2025		
Unit Code	Unit Name	Pre-requisites
ENG40001@	Final Year Research Project 1	287.5 credit points
RME30003@	Robotic Control	RME30002
RME40002@	Mechatronics Systems Design	EEE20003
MME40001	Engineering Management 2	100 credit points
Semester 8 Feb/Mar 2026		
ENG40002@	Final Year Research Project 2	ENG40001
EEE40002	Integrated Circuit Design	ENG20009
COS40007	Artificial Intelligence for Engineering	100CPs & COS10009
MEE20008	Vibration, Data Analysis & Data Decomposition	MTH10012 & MTH10013

Notes

EAT20008 Professional Experience in Engineering is compulsory for all engineering students and must be taken before the last semester of study as part of EAC's requirement. Introductory Seminar will be conducted in week 4 of normal semester.

@ Honours merit units

Any students who wish to change their elective units must obtain approval from the Head of Department.

How to use your Course Planner

Refer to the below table to help explain what units are required each semester throughout your course. The units in your planner are colour coded to assist you with mapping out your studies.

Course Information

To qualify for the award of this course, students must complete 33 units (400 credit points) comprising of:

12 Core Units
150 credit points

A set of compulsory units you **MUST** complete as part of your Course.

16 Robotics and Mechatronics Major Units
200 credit points

A set of compulsory units you **MUST** complete as part of your Course.

4 Elective Units
50 credit points

A combination of elective units, or a Minor.

1 Industry Placement Unit
0 credit point

A compulsory, not-for-credit unit

General Studies / Mata Pelajaran Umum
0 credit points

Compulsory units to complete as a pre-requisite to graduate (see statement below)
Advisable to enrol in Year One
Email tu@swinburne.edu.my for queries

All commencing students of Master, Degree, Diploma and Foundation courses will be automatically registered for the Academic Integrity Training Module in the first semester (Note: Students articulating from Foundation Studies are expected to undertake this unit as a refresher). There are 4 topics in this online module that are recommended for completion during Week 1-4 of your commencing study period. At the end of this module, students are required to complete a quiz comprised of 10 questions and achieve a score of at least 90%.

Ministry of Education requires that all NEW Cohorts pursuing Degree course (International and Malaysian) students must take the MPU units as a prerequisite for the award of their degree.

- Malaysian students: Must take and pass the units as a prerequisite for the award of their degree
- International students: Must attempt all coursework and final exam as a prerequisite for the award of their degree