COURSE PLANNER

Bachelor of Engineering (Honours) (Robotics and Mechatronics)
BH-ERM

Intake: Feb/Mar 2023

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	Feb/Mar 2023		
Unit Code	Unit Name	Pre-requisites
COS10009	Introduction to Programming	Nil
PHY10001	Energy and Motion	Nil
ENG10001	Humanitarian Engineering Design Project	Nil
MTH10012	Calculus and Applications	Nil
MPU3193	Philosophy and Current Issues *(Malaysian and International Students)*	Nil

Winter Term	June 2023		
MPU3212	Bahasa Kebangsaan A *(Malaysian students who do not have SPM Bahasa Melayu credit)*	Nil

Semester 2	Aug/Sept 2023		
COS10025	Technology in an indigenous Context Project	Nil
ENG10002	Engineering Materials	Nil
ENG10003	Engineering Mechanics	Nil
MTH10013	Linear Algebra and Applications	Nil
MPU3183	Penghayatan Etika dan Peradaban *(Malaysian Students Only)*	Nil
MPU3143	Malay Language Communication 2 *(International Students Only)*	Nil

Year Two

Semester 3	Feb/Mar 2024		
Unit Code	Unit Name	Pre-requisites
MEE20004	Structural Mechanics	ENG10003
EEE20006@	Circuits and Electronics 1	MTH10013 & PHY10004/COS10025
MEE20007@	Design and Product Visualisation Project	ENG10001
ENG20009	Engineering Technology Inquiry Project	Nil

Semester 4	Aug/Sept 2024		
COS20007	Object Oriented Programming	COS10009/SWE20004
MEE20006	Engineering Dynamics	MTH10013 & MTH10012 & PHY10001
MTH20017	Mathematical Methods and Statistics for Engineering	MTH10012 & MTH10013
ENG20010	Engineering Technology Design Project	Nil

Year Three

Semester 5	Feb/Mar 2025		
Unit Code	Unit Name	Pre-requisites
RME30002@	Control and Automation	PHY10004/EEE20006 & MTH20014/MTH20017
TNE20003	Internet and Cybersecurity for Engineering Applications	Nil
MEE30005@	Machine Design Project	MEE20004
ENG30002@	Engineering Technology Sustainability Project	Nil
EAT20008	Professional Experience in Engineering#	Introductory Seminar

Semester 6	Aug/Sept 2025		
RME30003@	Robotic Control	RME30002
RME40002@	Mechatronics Systems Design	EEE20003/ENG20010
ENG40011@	Engineering Technology Innovation Project	Nil
COS30019&	Introduction to Artificial Intelligence	COS20007 / COS30008

Year Four

Semester 7	Feb/Mar 2026		
Unit Code	Unit Name	Pre-requisites
ENG40007@	Engineering Technology Project A	250 CPs
RME40003@	Robot Systems Design	250 CPs
COS40007&	Artificial Intelligence for Engineering	100CPs & COS10009
COS20019&	Cloud Computing Architecture	50CPs

Semester 8	Aug/Sept 2026		
ENG40008@	Engineering Technology Project B	ENG40007
EEE40017@	Machine Vision	EEE20006 & MTH20014/MTH20010/MTH20017
TNE30024	Deploying Secure Engineering Applications Online	TNE20003
COS10022&	Introduction to Data Science	Nil

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

& Recommended Elective units [Industry 4.0]. Please approach your Discipline Leader if you wish to take other elective units.

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:

10 Core Units
125 credit points
A set of compulsory units you MUST complete as part of your Course.

18 Robotics and Mechatronics Major Units
225 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 ltu@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 program (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

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Unit Code	Unit Name	Pre-requisites	Offered in
COS10022	Data Science Principle	Nil	Semester 1 and 2
COS20083	Advanced Data Analytics	COS10009 & COS10022	Semester 1
COS40007	Artificial Intelligence for Engineering	100CPs & COS10009	Semester 1
COS20019	Cloud Computing Architecture	50CPs	Semester 1
COS30019	Introduction to Artificial Intelligence	COS20007 / COS30008	Semester 1 and 2
COS30018	Intelligent Systems	COS20007 / SWE20004	Semester 1
COS30017	Software Development for Mobile Devices	COS20007	Semester 2
COS10026	Computing Technology Inquiry Project	Nil	Semester 1 and 2
SWE30011	IoT Programming	COS20007 & COS10026/COS10011/COS10005	Semester 1
MEE40003	Machine Dynamics	MEE20006	Semester 1