

# Bachelor of Engineering (Honors) (Software)

Semester 1 | 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.

## 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.

## Year One

Semester 1		
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		
MTH10012	Calculus and Applications	Nil
ENG10001	Engineering, Design and Innovation	Nil
SWE20004	Technical Software Development	ENG10004
COS10011	Creating Web Application	Co-requisite: SWE20004

## Course Information

This course has 24 units (300 credit points) consisting of

**12 Core Units**  
150 credit points

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

**16 Software 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

## Year Two

Semester 1		
Unit Code	Unit Name	Pre-requisites
SWE20001	Managing Software Projects	SWE20004
COS20001	User Centred Design	Nil
EEE20001	Digital Electronics Design	Nil
MTH20010	Mathematics 3A	MTH10012 & MTH10013
Semester 2		
ENG10002	Engineering Materials	Nil
PHY10001	Energy and Motion	Nil
MME30001	Engineering Management 1	100 credit points
COS20007	Object-oriented Programming	SWE20004

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%.

## Year Three

Semester 1		
Unit Code	Unit Name	Pre-requisites
EEE20003	Embedded Microcontrollers	EEE20001 & SWE20004
COS20015	Fundamentals of Data Management	SWE20004
EEE40002	Integrated Circuit Design	EEE20001
Elective 1		
Semester 2		
COS30008	Data Structures and Patterns	COS20007
SWE30009	Software Testing and Reliability	COS20007
COS40003	Concurrent Programming	COS20007
Elective 2		

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

## Year Four

Semester 1		
Unit Code	Unit Name	Pre-requisites
ENG40001	Final Year Research Project 1	287.5 credit points
SWE30003	Software Architectures and Design	COS20007 & 150 CP
SWE30004	Software Deployment and Evolution	SWE20001
EEE40014	Hardware-Software Codesign	EEE40002
Semester 2		
ENG40002	Final Year Research Project 2	ENG40001
EEE40013	Computer Architecture	EEE20003 & EEE40002
Elective 3		
Elective 4		

Recommended Elective Units			
Unit Code	Unit Name	Pre-requisites	Offered in
COS30043	Interface Design and Development	COS10011 & COS20007	Semester 1 only
COS10004	Computer Systems	Nil	Semester 2 only
COS20030	Malware Analysis	TNE10006	Semester 2 only
COS20019	Cloud Computing Architecture	COS10011 & TNE10006	Semester 1 only
COS30019	Introduction to Artificial Intelligence	COS20007	Semester 1 & 2
Minor   Big Data Analytics			
COS10022	Introduction to Data Science	NIL	Semester 1 & 2
COS10082	Applied Analytics in Business	NIL	Semester 2 only
COS20083	Advanced Data Analytics	COS10022 & COS20007	Semester 1 only
COS20028	Big Data Architecture and Application	COS10022 & COS20007	Semester 2 only

## Notes

- Enrolment in any of the elective unit is subject to:
  - No timetable clash between selected elective units and core / major units
  - Seat availability in the selected electives