

COURSE PLANNER

Bachelor of Engineering (Honours) (Software) BH-ESE1

Intake: Jan 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

| Summer Jan 2023 | | |
|----------------------------|---|----------------|
| Unit Code | Unit Name | Pre-requisites |
| MTH10013 | Linear Algebra and Applications | Nil |
| PHY10001 | Energy and Motion | Nil |
| Semester 1 Feb/Mar 2023 | | |
| Unit Code | Unit Name | Pre-requisites |
| COS10009 | Introduction to Programming | Nil |
| ENG10001 | Humanitarian Engineering Design Project | Nil |
| MTH10012 | Calculus and Applications | Nil |
| MPU3193 | Philosophy and Current Issues <i>(Malaysian and International Students)</i> | Nil |
| Winter Term June 2023 | | |
| MPU3212 | Bahasa Kebangsaan A <i>(Malaysian students who do not have SPM Bahasa Melayu credit)</i> | Nil |
| Semester 2 Aug/Sept 2023 | | |
| COS10025 | Technology in an indigenous Context Project | Nil |
| ENG10002 | Engineering Materials | Nil |
| ENG10003 | Engineering Mechanics | Nil |
| MPU3183 | Penghayatan Etika dan Peradaban <i>(Malaysian Students Only)</i> | Nil |
| MPU3143 | Malay Language Communication 2 <i>(International Students Only)</i> | Nil |

Year Two

| Semester 3 Feb/Mar 2024 | | |
|----------------------------|---|---------------------|
| Unit Code | Unit Name | Pre-requisites |
| MTH20017 | Mathematical Methods and Statistics for Engineering | MTH10012 & MTH10013 |
| COS20007 | Object Oriented Programming | COS10009/SWE20004 |
| TNE20003 | Internet and Cybersecurity for Engineering Applications | Nil |
| ENG20009 | Engineering Technology Inquiry Project | Nil |
| Semester 4 Aug/Sept 2024 | | |
| COS30019 | Introduction to Artificial Intelligence* | COS20007 |
| SWE30009 | Software Testing and Reliability* | COS20007 |
| COS30017 | Software Development for Mobile Devices* | COS20007 |
| ENG20010 | Engineering Technology Design Project | Nil |

Year Three

| Semester 5 Feb/Mar 2025 | | |
|----------------------------|--|----------------------|
| Unit Code | Unit Name | Pre-requisites |
| COS30043 | Interface Design and Development* | COS20007 & ENG20009 |
| COS20019 | Cloud Computing Architecture | COS20007 |
| SWE30003 | Software Architecture and Design* | COS20007 |
| ENG30002 | Engineering Technology Sustainability Project* | Nil |
| EAT20008 | Professional Experience in Engineering# | Introductory Seminar |
| Semester 6 Aug/Sept 2025 | | |
| COS30008 | Data Structures and Patterns* | COS20007 |
| COS40003 | Concurrent Programming* | COS20007 |
| ENG40011 | Engineering Technology Innovation Project* | Nil |
| | Elective unit | |

Year Four

| Semester 7 Feb/Mar 2026 | | |
|----------------------------|--|------------------|
| Unit Code | Unit Name | Pre-requisites |
| ENG40005 | Final Year Capstone Project 1 * | 287.5 CPs |
| SWE30004 | Software Deployment and Evolution* | 50 credit points |
| COS40007 | Artificial Intelligence for Engineering | COS10009 & 100CP |
| | Elective unit | |
| Semester 8 Aug/Sept 2026 | | |
| ENG40006 | Final Year Capstone Project 2 * | ENG40005 |
| TNE30024 | Deploying Secure Engineering Applications Online | TNE20003 |
| | Elective unit | |
| | Elective unit | |

| Recommended Elective Units | | | |
|----------------------------|--------------------------------|---------------------|--------------------|
| Unit Code | Unit Name | Pre-requisites | Offered in |
| COS10022 | Introduction to Data Science | NIL | Feb/Mar & Aug/Sept |
| COS20015 | Fundamental of Data Management | COS10009 | Feb/Mar only |
| COS30020 | Advanced Web Development | COS10009 & COS10026 | Aug/Sept only |
| COS20030 | Malware Analysis | TNE10006 | Aug/Sept only |
| COS30082 | Applied Machine Learning | COS30018 / COS30019 | Aug/Sept only |
| COS10004 | Computer Systems | Co-req: COS10008 | Feb/Mar & Aug/Sept |

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 Software 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 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

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.
- * Honours merit units