COURSE PLANNER

Bachelor of Engineering (Honours) (Electrical and Electronic) / Bachelor of Computer Science

BB-EEECS1

Intake: Feb/Mar 2025

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 2025		
Unit Code	Unit Name	Pre-requisites
ENG10001	Humanitarian Engineering Design Project	Nil
COS10009	Introduction to Programming	Nil
MTH10012	Calculus and Applications	Nil
PHY10001	Energy and Motion	Nil
MPU3273	Integrity and Anti-Corruption *(Malaysian and International Students)*	Nil
Winter Term | June 2025		
MPU3212	Bahasa Kebangsaan A *(Malaysian students who do not have SPM Bahasa Melayu credit)*	Nil
Semester 2 | Aug/Sep 2025		
COS10025	Technology in an Indigenous Context Project	Nil
MTH10013	Linear Algebra and Applications	Nil
ENG10002	Engineering Materials	Nil
ENG10003	Engineering Mechanics	Nil
MPU3193	Philosophy and Current Issues *(Malaysian and International Students)*	Nil

Year Two

Semester 3 | Feb/Mar 2026		
Unit Code	Unit Name	Pre-requisites
TNE10006	Networks and Switching	Nil
ENG20009	Engineering Technology Inquiry Project	Nil
EEE20006	Circuits & Electronics 1	MTH10013 & COS10025
TNE20003	Internet and Cybersecurity for Engineering Applications	COS10009
MPU3183	Penghayatan Etika dan Peradaban *(Malaysian Students Only)*	Nil
MPU3143	Malay Language Communication 2 *(International Students Only)*	Nil
Semester 4 | Aug/Sep 2026		
ENG20010	Engineering Technology Design Project	Nil
EEE20005	Electrical Machines@	MTH10012 & EEE20006
TNE30024	Deploying Secure Engineering Applications Online	TNE20003
MTH20017	Mathematical Methods and Statistics for Engineering	MTH10012 & MTH10013

Year Three

Semester 5 | Feb/Mar 2027		
Unit Code	Unit Name	Pre-requisites
COS20007	Object Oriented Programming	COS10009/SWE20004
ENG30002	Engineering Technology Sustainability Project@	Nil
EEE30002	Electrical Power Systems@	EEE20005
RME30002	Control and Automation@	EEE20006 & MTH10012
EAT20008	Professional Experience in Engineering#	Introductory Seminar
Semester 6 | Aug/Sep 2027		
ENG40011	Engineering Technology Innovation Project@	Nil
EEE40005	Power Electronics@	EEE20005
EEE40007	Power System Operation and Control@	EEE30002
EEE20013	Power Protection@	EEE20006

Year Four

Semester 7 | Feb/Mar 2028		
Unit Code	Unit Name	Pre-requisites
EEE40015	Renewable Energy (Elective 1)	EEE30002
PHY40001	Electromagnetic Waves	MTH20017
EEE30006	Hydrogen and Energy Storage@	EEE30002 & EEE20013/EEE20004
	Computer Science Major Unit	
Semester 8 | Aug/Sep 2028		
COS10004	Computer Systems	COS10009
COS10026	Web Technology Project	Nil
EEE40016	Design of Smart Power Grids@	200 CPs
	Computer Science Major Unit	

Year Five

Semester 7 | Feb/Mar 2029		
Unit Code	Unit Name	Pre-requisites
EAT40005	Engineering Technology Project A (ENG/CS)@	250 CPs
	Computer Science Major Unit	
	Computer Science Major Unit	
	Computer Science Major Unit	
Semester 8 | Aug/Sep 2029		
EAT40006	Engineering Technology Project B (ENG/CS)@	EAT40005
	Computer Science Major Unit	
	Computer Science Major Unit	
	Computer Science Major Unit	

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

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:

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

17 Electrical and Electronic Major Units
212.5 credit points
A set of compulsory units you MUST complete as part of your Course.

8 Computer Science Major Units + 1 Prescribed Elective
112.5 credit points
A combination of elective units

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 programs 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 take and pass the units as a prerequisite for the award of their degree

Bachelor of Computer Science Major units

Artificial Intelligence Major

Unit Code	Unit Name	Pre-requisites	
COS20019	Cloud Computing Architecture	50 CPs	Semester 1 only
COS20031	Database Design Project	COS10009/COS10005/COS10026	Semester 1 & 2
COS30018	Intelligent Systems	COS20007/SWE20004	Semester 1 only
COS30019	Introduction to Artificial Intelligence	COS20007/COS30008	Semester 1 & 2
COS30049	Computing Technology Innovation Project	COS10009/COS10005/COS10026	Semester 1 & 2
COS30082	Applied Machine Learning	COS30018/COS30019	Semester 2 only
COS40007	Artificial Intelligence for Engineering	100CPs & COS10009	Semester 1 only
SWE30003	Software Architectures and Design	COS20007 & 150 CPs	Semester 1 only

Cybersecurity Major

Unit Code	Unit Name	Pre-requisites	
COS20019	Cloud Computing Architecture	50 CPs	Semester 1 only
COS20030	Malware Analysis	TNE10005/TNE10006	Semester 2 only
COS20031	Database Design Project	COS10009/COS10005/COS10026	Semester 1 & 2
COS30015	IT Security	COS10009/SWE20004 & COS10011/COS10026 & TNE10005/TNE10006	Semester 2 only
COS30049	Computing Technology Innovation Project	COS10009/COS10005/COS10026	Semester 1 & 2
SWE30003	Software Architectures and Design	COS20007 & 150 CPs	Semester 1 only
TNE20002	Network Routing Principles	TNE10006	Semester 1 only
TNE30009	Network Security and Resilience	TNE10006/COS20012	Semester 2 only

Data Science Major

Unit Code	Unit Name	Pre-requisites	
COS10022	Data Science Principles	Nil	Semester 1 & 2
COS20019	Cloud Computing Architecture	50 CPs	Semester 1 only
COS20028	Big Data Architecture and Application	COS10022 & COS20007	Semester 2 only
COS20031	Database Design Project	COS10009/COS10005/COS10026	Semester 1 & 2
COS30045	Data Visualisation	COS10009	Semester 2 only
COS30049	Computing Technology Innovation Project	COS10009/COS10005/COS10026	Semester 1 & 2
SWE30003	Software Architecture and Design	COS20007 & 150 CPs	Semester 1 only
SWE40006	Software Deployment and Evolution	SWE20001/INF30029/SWE30010/SWE30003/COS20031/ICT20025/ENG20010	Semester 2 only

Internet of Things Major

Unit Code	Unit Name	Pre-requisites	
COS20019	Cloud Computing Architecture	50 CPs	Semester 1 only
COS20031	Database Design Project	COS10009/COS10005/COS10026	Semester 1 & 2
COS30017	Software Development for Mobile Devices	COS20007	Semester 2 only
COS30020	Advanced Web Development	COS10009 & COS10026/COS10011	Semester 2 only
COS30049	Computing Technology Innovation Project	COS10009/COS10005/COS10026	Semester 1 & 2
SWE30003	Software Architecture and Design	COS20007 & 150 CPs	Semester 1 only
SWE30011	IoT Programming	COS20007 & COS10011/COS10026	Semester 1 only
TNE10005	Network Administration	Nil	Semester 1 only

Software Development Major

Unit Code	Unit Name	Pre-requisites	Offered in
COS20019	Cloud Computing Architecture	50 CPs	Semester 1 only
COS20031	Database Design Project	COS10009/COS10005/COS10026	Semester 1 & 2
COS30008	Data Structures and Patterns	COS20007	Semester 2 only
COS30043	Interface Design and Development	COS10011/COS10026/ENG20009 & COS20007	Semester 1 only
COS30049	Computing Technology Innovation Project	COS10009/COS10005/COS10026	Semester 1 & 2
COS40003	Concurrent Programming	COS30008/COS20007/SWE20004	Semester 2 only
SWE30003	Software Architecture and Design	COS20007 & 150 CPs	Semester 1 only
SWE30009	Software Testing and Reliability	COS20007/SWE20004	Semester 2 only