

# COURSE PLANNER

## Bachelor of Engineering (Honours) (Civil)

BH-ECV

Semester 1 | 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
ENG10001	Humanitarian Engineering Design Project	Nil
COS10009	Introduction to Programming	Nil
MTH10012	Calculus and Applications	Nil
PHY10001	Energy and Motion	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		
ENG10002	Engineering Materials	Nil
ENG10003	Engineering Mechanics	Nil
MTH10013	Linear Algebra and Applications	Nil
COS10025	Technology in an Indigenous Context Project	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
CVE20001	Topographical Engineering	MTH10012
CVE20015	Digital Engineering Project	Concurrent CVE10002, ENG10003
MEE20004	Structural Mechanics	ENG10003
MTH20010	Statistics and Computation for Engineering	MTH10012 & MTH10013
Semester 4   Aug/Sept 2024		
MEE20003	Fluid Mechanics 1	MTH10012 & MTH10013
CVE20003	Design of Concrete Structures	MEE20004
CVE20005	Road Engineering	CVE20001
MME30002 <sup>†</sup>	Engineering Management Project	100 CPS

### Year Three

Semester 5   Feb/Mar 2025		
Unit Code	Unit Name	Pre-requisites
CVE20004	Geomechanics	ENG10003
CVE30001 <sup>†</sup>	Urban Water Resources	MEE20003
CVE30002 <sup>†</sup>	Design of Steel Structures	MEE20004
CVE30003 <sup>†</sup>	Transport Engineering	CVE20005
EAT20008 <sup>#</sup>	Professional Experience in Engineering	Introductory Seminar
Winter Term   June 2025		
CSM80051 <sup>**</sup>	Building Information Modelling for Construction Management (Elective 1)	250 CPS
Semester 6   Aug/Sept 2025		
CVE30005 <sup>†</sup>	Cost Engineering Project	175 CPS
CVE40001 <sup>†*</sup>	Geotechnical Engineering	CVE20004
CVE40010 <sup>†*</sup>	Water Engineering Design Project	CVE30001
CVE40011 <sup>†</sup>	Engineering Data Analytics and Applications	CVE20015 OR CVE20002

### Year Four

Semester 7   Feb/Mar 2026		
Unit Code	Unit Name	Pre-requisites
ENG40005 <sup>†*</sup>	Final Year Capstone Project 1	287.5 CPS
CVE40002 <sup>†*</sup>	Structural Design of Low Rise Buildings	CVE20003 & CVE30002
Elective code <sup>**</sup>	Approved Elective 2	Unit dependent
Elective code <sup>**</sup>	Approved Elective 3	Unit dependent
Semester 8   Aug/Sept 2026		
ENG40006 <sup>†*</sup>	Final Year Capstone Project 2	ENG40005 or ENG40001
CVE40006 <sup>†*</sup>	Infrastructure Design Project	CVE20003 & CVE30002
Elective code <sup>**</sup>	Approved Elective 4	Unit dependent

#### Notes

- <sup>#</sup> 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. The introductory Seminar will be conducted in week 4 of the normal semester.
- <sup>\*</sup> 6 Outcome units – completion demonstrates the attainment of course learning outcomes
- <sup>†</sup> 12 Honours merit units – the results are used in the honours merit calculation
- <sup>\*\*</sup> 4 Elective units (including IR 4.0 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

Each unit is equivalent to 12.5 credit points.

To qualify for the award of this course, students must complete 32 units (400 credit points), EAT20008 and the General Studies/Mata Pelajaran Umum, comprising of:

#### 10 Core Units 125 credit points

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

#### 18 Civil Major Units 225 credit points

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

#### 4 Recommended Elective Units 50 credit points

A combination of elective units<sup>\*\*</sup>, including Fourth Industrial Revolution (IR 4.0) units.

#### 1 Industry Placement Unit 0 credit point

EAT20008<sup>#</sup> is a COMPULSORY, non-credit unit.

#### General Studies/Mata Pelajaran Umum 0 credit points

<sup>\*</sup> Compulsory units to complete as a pre-requisite to graduate (see statement below)

<sup>\*</sup> Advisable to enrol in Year One

<sup>\*</sup> Email [tu@swinburne.edu.my](mailto: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 take and pass the units as a prerequisite for the award of their degree

## Elective Options for Engineering Programs in 2023 (Sem 1)

<b>Program</b>	<b>Unit Code and Unit Title</b>	<b>Prerequisites</b>	<b>Semester Offered</b>
<p><b>Bachelor of Engineering (Honours) (Civil)</b></p> <p><i>*Students in this program need to complete four (4) electives, comprising of</i></p> <ul style="list-style-type: none"> <li>• a MINIMUM OF TWO from the Civil Specialist and IR4.0 Units or the Master of Construction Management lists, and</li> <li>• a MAXIMUM OF TWO from other programs.</li> </ul> <p><i>*For more information on these units, please search for their respective unit codes on the university website.</i></p>	<b>CIVIL SPECIALIST ELECTIVES and IR4.0 UNITS#</b>		
	CVE80019 Structural Dynamics & Earthquake Engineering	ENG10003 and CVE20003	Semester 1
	*SWE20004 Technical Software Development	ENG10004	Semester 1
	*CSM80015 BIM and Digital Twin for Sustainable Building and Infrastructure	250 CPS	Semester 1
	CVE20008 Wastewater Engineering	CVE30001 or 250 CPS	Semester 2
	*COS10022 Introduction to Data Science	Nil	Semester 2
	*CSM80012 Documentation and Information Management with BIM	250 CPS	Semester 2
	<b>MASTER OF CONSTRUCTION MANAGEMENT</b>		
	CSM80003 Construction Law and Contract Management	250 CPS	Semester 1
	CSM80006 Engineering Project Management	250 CPS	Semester 1
	CSM80016 Estimating and Project Costing	250 CPS	Semester 2
	MME80001 Resource Planning and Management	250 CPS	Semester 2
	<b>OTHER ENGINEERING PROGRAMS</b>		
	MEE20001 Thermodynamics	PHY10001	Semester 1
	EEE80015 Renewable Energy	200 CPS	Semester 1
	MEE20005 Materials and Manufacturing 1	ENG10002	Semester 2
	MEE20006 Machine Dynamics 1	MTH10012, MTH10013 & PHY10001	Semester 2
	MEE30004 Solid Mechanics	MEE20004	Semester 2
	MEE40004 Fluid Mechanics 2	MEE20003	Semester 2
	<b>NON-ENGINEERING PROGRAMS</b>		
	<i>*These are only recommended non-engineering electives.</i>		
	<i>*Students are free to choose from others which are offered by the non-engineering programs.</i>		
	INB20012 Asia Pacific Business Perspectives	50 CPS	Winter Term
PEH20005 Communicable Disease Control	Nil	Winter Term	
DDD10001 Twentieth Century Design	Nil	Semesters 1 and 2	
MKT10009 Marketing and the Consumer Experience	Nil	Semesters 1 and 2	
FIN10002 Financial Statistics	Nil	Semesters 1 and 2	
<b>Bachelor of Engineering (Honours) (Civil) / Bachelor of Business [Double Degree]</b>	No elective unit		

- It is each student's own responsibility to check the offering of the units with the various Program Co-ordinators/Discipline Leader each semester, if in doubt.
- Failure to comply with any instruction above may result in time-table clashes and/or delay in completing the Degree in 4 years under normal circumstances.
- Student **MUST NOT** complete their Degree in less than 4 years, in fulfilment with the requirement from the Board of Engineers Malaysia (BEM).