

# COURSE PLANNER

## Bachelor of Engineering (Honours) (Electrical and Electronic)

BH-EEE

Intake: Aug/Sept 2024

### 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   Aug/Sept 2024   |   |                |
|------------------------------|---|----------------|
| 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<br><i>(Malaysian and International Students)</i>              | Nil            |
| Semester 2   Feb/Mar 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<br><i>(Malaysian and International Students)</i>              | Nil            |
| Winter Term   June/July 2025 |   |                |
| MPU3212                      | Bahasa Kebangsaan A<br><i>(Malaysian students who do not have SPM Bahasa Melayu credit)</i> | Nil            |

### Year Two

| Semester 3   Aug/Sept 2025 |  |                     |
|----------------------------|--|---------------------|
| Unit Code                  | Unit Name  | Pre-requisites      |
| ENG20010                   | Engineering Technology Design Project                                  | Nil                 |
| MTH20017                   | Mathematical Methods and Statistics for Engineering                    | MTH10012 & MTH10013 |
| Elective 1                 | Elective 1   |                     |
| Elective 2                 | Elective 2   |                     |
| MPU3183                    | Penghayatan Etika dan Peradaban<br><i>(Malaysian Students Only)</i>    | Nil                 |
| MPU3143                    | Malay Language Communication 2<br><i>(International Students Only)</i> | Nil                 |
| Semester 4   Feb/Mar 2026  |  |                     |
| ENG20009                   | Engineering Technology Inquiry Project                                 | Nil                 |
| EEE20006                   | Circuits & Electronics 1   | MTH10013 & COS10025 |
| TNE20003                   | Internet and Cybersecurity for Engineering Applications                | Nil                 |
| COS40007                   | Artificial Intelligence for Engineering                                | 100 CPs & COS10009  |

### Year Three

| Semester 5   Aug/Sept 2026 |  |                                       |
|----------------------------|--|---------------------------------------|
| Unit Code                  | Unit Name  | Pre-requisites                        |
| ENG40011                   | Engineering Technology Innovation Project <sup>@</sup>     | Nil                                   |
| EEE20005                   | Electrical Machines  | MTH10012 & EEE20006                   |
| EEE20013                   | Power Protection <sup>@</sup>                              | EEE20006                              |
| EEE40016                   | Design of Smart Power Grids <sup>@</sup>                   | 200 CPs                               |
| EAT20008                   | Professional Experience in Engineering <sup>#</sup>        | Introductory Seminar                  |
| Semester 6   Feb/Mar 2027  |  |                                       |
| ENG30002                   | Engineering Technology Sustainability Project <sup>@</sup> | Nil                                   |
| EEE30002                   | Electrical Power Systems <sup>@</sup>                      | EEE20005                              |
| RME30002                   | Control and Automation <sup>@</sup>                        | PHY10004/EEE20006 & MTH20014/MTH20017 |
| Elective 3                 | Elective 3   |                                       |

### Year Four

| Semester 7   Aug/Sept 2027 |  |                              |
|----------------------------|--|------------------------------|
| Unit Code                  | Unit Name  | Pre-requisites               |
| ENG40007                   | Engineering Technology Project A <sup>@</sup>    | 250 CPs                      |
| EEE40005                   | Power Electronics <sup>@</sup>                   | EEE20005                     |
| EEE40007                   | Power System Operation and Control <sup>@</sup>  | EEE30002                     |
| TNE30024                   | Deploying Secure Engineering Applications Online | TNE20003                     |
| Semester 8   Feb/Mar 2028  |  |                              |
| ENG40008                   | Engineering Technology Project B <sup>@</sup>    | ENG40007                     |
| EEE40015                   | Renewable Energy <sup>@</sup>                    | EEE30002                     |
| EEE30006                   | Hydrogen and Energy Storage <sup>@</sup>         | EEE30002 & EEE20013/EEE20004 |
| PHY40001 <sup>^</sup>      | Electromagnetic Waves                            | MTH20017                     |

### 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

^ You must take this unit to fulfill EAC's requirements

### 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 Electrical and Electronic 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

#### 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](mailto: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 take and pass the units as a prerequisite for the award of their degree

**Note: Semester 1 refers to Feb/Mar semester; Semester 2 refers to Aug/Sep semester**

**List of Recommended Electives for BH-EEE**

| <b>Unit Code</b> | <b>Unit Name</b>            | <b>Pre-requisites</b> | <b>Offered in</b> |
|------------------|-----------------------------|-----------------------|-------------------|
| TNE10006         | Networks and Switching      | Nil                   | Semester 1 & 2    |
| COS10022         | Data Science Principles     | Nil                   | Semester 1 & 2    |
| TNE10005         | Network Administration      | Nil                   | Semester 1 only   |
| COS10005         | Web Development             | Nil                   | Semester 2 only   |
| RME40003         | Robot Systems Design        | 250 CPs               | Semester 1 only   |
| COS20007         | Object Oriented Programming | COS10009/SWE20004     | Semester 1 & 2    |
| EEE40017         | Machine Vision              | EEE20006 & MTH20017   | Semester 2 only   |
| EEE40002         | Integrated Circuit Design   | EEE20001 or ENG20009  | Semester 1 only   |
| RME30003         | Robotic Control             | RME30002              | Semester 2 only   |