

Bachelor of Engineering (Honours) (Robotics and Mechatronics)

BH-ERM

Semester 2 | 2026

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 2026 |                                                                                             |                |
|----------------------------|---------------------------------------------------------------------------------------------|----------------|
| Unit Code                  | Unit Name                                                                                   | Pre-requisites |
| COS10009                   | Introduction to Programming                                                                 | Nil            |
| PHY10001                   | Energy and Motion                                                                           | Nil            |
| ENG10001                   | Humanitarian Engineering Design Project                                                     | Nil            |
| MTH10012                   | Calculus and Applications                                                                   | Nil            |
| MPU3312                    | Academic Integrity and Professional Conduct                                                 | Nil            |
| Summer Term   Jan/Feb 2027 |                                                                                             |                |
| MPU3212                    | Bahasa Kebangsaan A<br><i>(Malaysian students who do not have SPM Bahasa Melayu credit)</i> | Nil            |
| Semester 2   Feb/Mar 2027  |                                                                                             |                |
| ENG10006                   | Engineering Technology with Indigenous Context                                              | Nil            |
| ENG10002                   | Engineering Materials                                                                       | Nil            |
| ENG10003                   | Engineering Mechanics                                                                       | Nil            |
| MTH10013                   | Linear Algebra and Applications                                                             | Nil            |
| MPU3172                    | Aspirasi Negara Bangsa – BM<br><i>(Malaysian Students Only)</i>                             | Nil            |
| MPU3142                    | Malay Language Communication 2<br><i>(International Students Only)</i>                      | Nil            |

Year Two

| Semester 3   Aug/Sept 2027 |                                                                                      |                                |
|----------------------------|--------------------------------------------------------------------------------------|--------------------------------|
| Unit Code                  | Unit Name                                                                            | Pre-requisites                 |
| EEE20006 <sup>®</sup>      | Circuits and Electronics 1                                                           | MTH10013 & ENG10006/COS10025   |
| MEE20006                   | Engineering Dynamics                                                                 | MTH10013 & MTH10012 & PHY10001 |
| MTH20017                   | Mathematical Methods and Statistics for Engineering                                  | MTH10012 & MTH10013            |
| ENG20009                   | Engineering Technology Inquiry Project                                               | Nil                            |
| MPU3222                    | Career Development                                                                   | Nil                            |
| Semester 4   Feb/Mar 2028  |                                                                                      |                                |
| MEE20004                   | Structural Mechanics                                                                 | ENG10003                       |
| COS20007 <sup>®</sup>      | Object Oriented Programming                                                          | COS10009/SWE20004              |
| MEE20007 <sup>®</sup>      | Design and Product Visualisation Project                                             | ENG10001                       |
| ENG20010                   | Engineering Technology Design Project                                                | Nil                            |
| MPU3112                    | Kursus Integriti dan Antirasuah (KIAR) – BM<br><i>(Malaysian Students Only)</i>      | Nil                            |
| MPU3112                    | Kursus Integriti dan Antirasuah (KIAR) – ENG<br><i>(International Students Only)</i> | Nil                            |

Year Three

| Semester 5   Aug/Sept 2028 |                                                                      |                                       |
|----------------------------|----------------------------------------------------------------------|---------------------------------------|
| Unit Code                  | Unit Name                                                            | Pre-requisites                        |
| EEE40017 <sup>®</sup>      | Machine Vision                                                       | EEE20006 & MTH20014/MTH20010/MTH20017 |
| ENG30002 <sup>®</sup>      | Engineering Technology Sustainability Project                        | Nil                                   |
| MEE20005                   | Materials Processing and Machining                                   | ENG10002                              |
| EEE20005                   | Electrical Machine                                                   | MTH10012 & EEE20006/ENG10006          |
| MPU3122                    | Falsafah dan Cabaran Semasa - BM<br><i>(Malaysian Students Only)</i> | Nil                                   |
| MPU3152                    | Citra Malaysia<br><i>(International Students Only)</i>               | Nil                                   |
| EAT20008                   | Professional Experience in Engineering <sup>#</sup>                  | Introductory Seminar                  |
| Semester 6   Feb/Mar 2029  |                                                                      |                                       |
| RME30002 <sup>®</sup>      | Control and Automation                                               | EEE20002/EEE20006 & MTH10012          |
| TNE20003                   | Internet and Cybersecurity for Engineering Applications              | COS10009                              |
| MEE30005                   | Machine Design Project                                               | MEE20004                              |
| ENG40011 <sup>®</sup>      | Engineering Technology Innovation Project                            | Nil                                   |
| MPU3412                    | Service Learning                                                     | Nil                                   |

Year Four

| Semester 7   Aug/Sept 2029 |                                                  |                              |
|----------------------------|--------------------------------------------------|------------------------------|
| Unit Code                  | Unit Name                                        | Pre-requisites               |
| ENG40007 <sup>®</sup>      | Engineering Technology Project A                 | 250 CPs                      |
| RME30003 <sup>®</sup>      | Robotic Control                                  | RME30002                     |
| RME40002 <sup>®</sup>      | Mechatronics Systems Design                      | EEE20003/ENG20009            |
| TNE30024                   | Deploying Secure Engineering Applications Online | TNE20003                     |
| Semester 8   Feb/Mar 2030  |                                                  |                              |
| ENG40008 <sup>®</sup>      | Engineering Technology Project B                 | ENG40007                     |
| RME40003 <sup>®</sup>      | Robot Systems Design                             | 250 CPs                      |
| EEE40002                   | Integrated Circuit Design                        | ENG20009                     |
| MEE30007                   | Vibration, Data Analysis & Data Decomposition    | MTH10012 & MTH10013 & 150CPs |

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

Any students who wish to change their elective units must obtain approval from the Head of Department.

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.

17 Robotics and Mechatronics Major Units  
212.5 credit points

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

5 Elective Units  
62.5 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 [mpu@swinburne.edu.my](mailto:mpu@swinburne.edu.my) for queries

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