

**Engineering Re-enrolment Guide 2022**  
**Re-enrolment period: 11 October – 26 November 2021**  
**Re-enrolment WES**

**Feb 2020 Intake**

**Reminder: You are required to re-enrol for both Semester 1 (Feb-June) and Semester 2 (July-Nov) 2022.**

The normal units for each of the branches of the engineering are as follows:

**Chemical Engineering**

**1) Semester 1 2022 units**

CHE3161	Chemistry and chemical thermodynamics
CHE3165	Separation processes
CHE3167	Transport phenomena & numerical methods
CHE3163	Sustainable processing I*

\* You may choose TRC3500 Sensors and artificial perception (prerequisite: completed ECE2131 and ECE2071 in 2020) as Elective units instead.

**2) Semester 2 2022 units**

**Option 1**

CHE3164	Reaction engineering
CHE3166	Process design
ENG4701	Final year project A

\***Biotechnology or Nanotechnology**, select one unit:

CHE3171	Bioprocess technology or CHE4171 Biochemistry for engineers (if CHE3171 was completed in 2020)
CHE3172	Nanotechnology and materials I or CHE4172 Nanotechnology materials II (if CHE3172 was completed in 2020)

**Civil Engineering**

**1) Semester 1 2022 units**

CIV3248	Groundwater and environmental geomechanics
CIV3285	Engineering hydrology
CIV3294	Structural design

**Select 1 elective**

CIV4234	Advanced structural analysis
CIV4284	Traffic systems

## Civil Engineering (continue)

### 2) Semester 2 2022 units

CIV3221	Building structures and technology
CIV3247	Geomechanics II
CIV3283	Road engineering

### Select 1 elective

CIV4268	Water resource management
CIV4283	Transport planning

## Electrical and Computer Systems Engineering

### 1) Semester 1 2022 units

ECE3073	Computer systems
ECE3161	Analogue electronics
ECE3141	Information and networks

### Plus select one of the following electives \*

ECE4076	Computer vision
ECE4179	Neural networks and deep learning
TRC3500	Sensors and artificial perception

### 2) Semester 2 2022 units

ECE4132	Control system design
ECE4191	Engineering integrated design

### Plus select two of the following electives

ECE4808	Organic electronics and devices
ECE4809	Solid state lighting
ECE4122	Advanced electromagnetics
ECE4810	Internet of Things: Communication, Data and Security
ECE4078	Intelligent robotics
ECE4053	Electrical energy – generation and supply <i>Note: # Compulsory elective for students on Malaysia campus in order to cover compulsory broad engineering areas prescribed by Engineering Accreditation Council (EAC) of Malaysia</i>

## Mechanical Engineering

### 1) Semester 1 2022 units

MEC3451	Fluid mechanics II
MEC3455	Solid mechanics
MEC3456	Engineering computation analysis

#### Select 1 elective below

MEC3800	Introduction to Reliability Engineering
MEC3448	Engineering Technologies
MEC4801	Non-destructive testing and inspection

### 2) Semester 2 2022 units

MEC3416	Machine Design
MEC3453	Dynamics II
MEC3457	Systems and control

#### Select 1 elective below

MEC3458	Experimental Project
MEC3459	Materials Selection for Engineering Design*
MEC3828	Biomedical engineering and healthcare system

\* must pick, if you plan to register as a Mechanical Engineer with the Board of Engineers Malaysia (BEM) in the future and if not attempted in Level 2

## Robotics and Mechatronics Engineering (Artificial Intelligence Stream)

### 1) Semester 1 2022 units

ECE3161	Analogue electronics
TRC3200	Dynamical systems
TRC3500	Sensors and artificial perception
ECE4179	Neural networks and deep learning

#### You can choose from the following electives (if you still have empty slots)\*

ECE3051	Electrical energy systems**
ECE3141	Information and Network
ECE3073	Computer Systems

\* please check with the school before the start of semester for any update to offerings of electives

\*\* compulsory units to be taken before graduation for accreditation in Malaysia

### 2) Semester 2 2022 units

TRC3600	Modelling and control
ECE4078	Intelligent robotics
TRC4802	Thermo-fluids & Power Systems**

\*\* compulsory units to be taken before graduation for accreditation in Malaysia

#### You can choose from the following electives (if you still have empty slots)\*

MEC4426	Computer-aided design
MEC3416	Engineering Design 2
ECE4808	Organic Electronics and Micro Devices

\* please check with the school before the start of semester for any update to offerings of electives

## Robotics and Mechatronics Engineering (Automation Stream)

### 3) Semester 1 2022 units

ECE3161	Analogue electronics
TRC3200	Dynamical systems
TRC3500	Sensors and artificial perception
ECE3051	Electrical energy systems**

\*\* compulsory units to be taken before graduation for accreditation in Malaysia

### You can choose from the following electives (if you still have empty slots)\*

ECE4179	Neural networks and deep learning
ECE3141	Information and Network
ECE3073	Computer Systems

\* please check with the school before the start of semester for any update to offerings of electives

### 4) Semester 2 2022 units

TRC3600	Modelling and control
TRC3000	Automation Project
TRC4802	Thermo-fluids & Power Systems

### You can choose from the following electives (if you still have empty slots)\*

ECE4078	Intelligent robotics
MEC4426	Computer-aided design
MEC3416	Engineering Design 2
ECE4808	Organic Electronics and Micro Devices

\* please check with the school before the start of semester for any update to offerings of electives

## Software Engineering

### 1) Semester 1 2022 units (For students not intending to take IBL)

FIT3171	Databases*
FIT3077	Software engineering: Architecture and design
FIT3159	Computer architecture
FIT3170	Software engineering practice**

### 2) Semester 1 2022 units (For students planning for IBL)

FIT3171	Databases*
FIT3077	Software engineering: Architecture and design
FIT3159	Computer architecture
	Any SE Technical Elective (Level 3 or above)

## Software Engineering (continue)

### 3) Semester 2 2022 units (For students not intending to take IBL)

#### Core units

FIT2100	Operating systems
FIT3170	Software engineering practice

#### Select 2 out of 3 electives

FIT3080	Artificial Intelligence
FIT3175	Usability
FIT3143	Parallel computing

\* Students can choose to do FIT3171 in Semester 1 or Semester 2 2022.

\*\* Students who intend to go for IBL can move FIT3170 to their fourth year of study, and replace FIT3170 with any SE Technical Elective at Level 3 or 4. Students who intend to go for IBL will express their interest in Y3S1 (Feb 2022). IBL interview will be conducted tentatively in April 2022. **Upon successful placement, you will enroll into FIT4042 in Semester 2 2022.**

#### # Important for all engineering students

Please take note that besides the academic requirements, all students must also satisfy both the **Industrial Training** (12 weeks) and **the General Studies** requirements before the engineering degree can be awarded.

Students completing 3<sup>rd</sup> year (6 semesters of study) and having a minimum of 120 credits will be eligible for industrial training. Students are to submit their industrial training report within 4 weeks of completion of their industrial training.

#### General Studies

- General Studies consist of units which every student enrolled in a public or private higher education institutions (PHEIs) are required to undertake **effective October 2013 intake onwards.**
- All Malaysian and international students are compelled to enroll, undertake, attend and pass these units as a pre-requisite to the award of a certificate, diploma or degree.
- For further info, please email: [mum.generalstudies@monash.edu](mailto:mum.generalstudies@monash.edu).