

Robotics and Mechatronics Engineering Re-enrolment Guide 2027

(Prepared by Course Director, Associate Professor Dr Alpha &
Course Director, Common Engineering, Dr Khong Wei Leong - Version 1.9.2026)

- Students are required to [re-enrol for both Semester 1 and Semester 2](#) via [WES](#) (except for final semester students)
- All students MUST complete the [Malaysia General Studies](#) and [Industrial Training](#) before course completion
- Official Faculty of Engineering Course Maps, Elective and Minor website [link](#) (follow your commencing year intake)
- If you encounter issues with enrolment, please submit [SORS enrolment form](#)

Intake: Commencing July and Oct 2026

Units to be enrolled for Second Semester of Year 1 - Semester 1 2027

Semester 1 2027 units

Students who have completed ENG1090 combination in previous semester:

ENG1012	Engineering for People and Planet
ENG1014	Engineering Numerical Analysis
ENG1005	Engineering Mathematics
Choose ONE technical elective from below:	
- PHS1002 Physics for engineering - CHM1051 Chemistry 1 advanced (recommended for Chemical Engineering) - MEC2811 Manufacturing Processes - ENG1813 Next-Gen uncrewed vehicle - FIT1045 Introduction to programming - CHE2167 Process material selection - CHE2871 Biochemistry for engineers - BIO1011 Blueprints for life (Compulsory elective for Biomedical Engineering)	
Software Engineering students are recommended to complete FIT1045 as a breadth study unit.	

Students who have completed ENG1005 in previous semester:

ENG1012	Engineering for People and Planet
ENG1014	Engineering Numerical Analysis
Choose TWO technical electives from below:	
- PHS1002 Physics for engineering - CHM1051 Chemistry 1 advanced (recommended for Chemical Engineering) - MEC2811 Manufacturing Processes - ENG1813 Next-Gen uncrewed vehicle - FIT1045 Introduction to programming - CHE2167 Process material selection - CHE2871 Biochemistry for engineers - BIO1011 Blueprints for life (Compulsory elective for Biomedical Engineering)	
Software Engineering students are recommended to complete FIT1045 as a breadth study unit.	

Units to be enrolled for First Semester of Year 2 in Semester 2 2027

Semester 2 2027 units

Robotics and Mechatronics Engineering

ENG2005	Advanced engineering mathematics
MMA2004	Dynamics 1
ECE2072	Digital systems
<i>One (1) Level 1, 2 or 3 elective, engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		Free Elective	AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
BTW1042	Business law	✓					
ECW1102	Introduction to macroeconomics	✓					
ECE2191	Probability and AI for engineers		✓				
TRC2001	Introduction to systems engineering		✓		✓		
MEC3821*	Introduction to electric vehicle technology			✓			
MEC3800	Introduction to reliability engineering				✓		✓

* If you are graduating in Malaysia, you must complete (ECE3051 or MEC3821 or TRC4902).

*IMPORTANT NOTE - End of Semester 1 2027

- Kindly ensure that your specialisation ('Area of Study') in WES is the **same as** your offer letter and international student pass.
- When the Semester 1 2027 exam results are released, kindly check that you have met the *prerequisites* of these Year 2 units. If you do not meet the pre / co-requisites, then the unit enrolled will become **INVALID**.
- Students who could **NOT PASS ALL CORE Year 1 UNITS**, MUST seek enrolment advice from the Course Director, Common Engineering (Dr Khong Wei Leong, khong.weileong@monash.edu)

Intake: Commencing February 2026

Robotics and Mechatronics Engineering

Semester 1 2027 units

MMA2001	Design 1
ECE2131	Electrical circuits
ECE2071	Systems programming
<i>One (1) Level 1, 2 or 3 elective, engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		Free Elective	AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
BTW1042	Business law	✓					
ECW1102	Introduction to macroeconomics	✓					
MEC2811	Manufacturing processes				✓		
ECE3051*	Electrical energy systems			✓			
MEC3822	Artificial intelligence in manufacturing		✓		✓		

Semester 2 2027 units

ENG2005	Advanced engineering mathematics
MMA2004	Dynamics 1
ECE2072	Digital systems
<i>One (1) Level 1, 2 or 3 elective, engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		Free Elective	AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
BTW1042	Business law	✓					
ECW1102	Introduction to macroeconomics	✓					
ECE2191	Probability and AI for engineers		✓				
TRC2001	Introduction to systems engineering		✓		✓		
MEC3821*	Introduction to electric vehicle technology			✓			
MEC3800	Introduction to reliability engineering				✓		✓

* If you are graduating in Malaysia, you must complete (ECE3051 or MEC3821 or TRC4902).

Intake: Commencing July and Oct 2025

Robotics and Mechatronics Engineering

Semester 1 2027 units

MMA2001	Design 1
ECE2131	Electrical circuits
ECE2071	Systems programming
<i>One (1) Level 3 or 4 engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		Free Elective	AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
BTW1042	Business law	✓					
ECW1102	Introduction to macroeconomics	✓					
MEC2811	Manufacturing processes				✓		
ECE3051*	Electrical energy systems			✓			
MEC3822	Artificial intelligence in manufacturing		✓		✓		

Semester 2 2027 units

MMA2005	Feedback control systems
ECE3192	Fundamentals of deep learning (<i>replaces ECE4179</i>)
MMA2003	Thermo-fluids and power systems
<i>One (1) Level 3 or 4 engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
MEC3821*	Introduction to electric vehicle technology		✓			
MEC3800	Introduction to reliability engineering			✓		✓
TRC4902*	Mechatronics and manufacturing			✓	✓	✓
ECE4078	Intelligent robotics	✓	✓			
ECE4808	Microsystems and semiconductor fabrication					✓

* If you are graduating in Malaysia, you must complete (ECE3051 or MEC3821 or TRC4902).

Intake: Commencing February 2025

Robotics and Mechatronics Engineering

Semester 1 2027 units

ECE3073	Computer systems
TRC3200	Dynamical systems
TRC3500	Sensors and artificial perception
<i>One (1) Level 3 or 4 engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
ECE3051*	Electrical energy systems		✓			
MEC3822	Artificial intelligence in manufacturing	✓		✓		
MEC4801	Non-destructive testing and inspection			✓		✓
CIV4100	Autonomous vehicle systems	✓	✓			
ECE4063	Integrated circuit design					✓
TRC4200	Engineering cyber-physical systems				✓	

Semester 2 2027 units

MMA2005	Feedback control systems
ECE3192	Fundamentals of deep learning (<i>replaces ECE4179</i>)
MMA2003	Thermofluids & power systems
<i>One (1) Level 3 or 4 engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
MEC3821*	Introduction to electric vehicle technology		✓			
MEC3800	Introduction to reliability engineering			✓		✓
TRC4902*	Mechatronics and manufacturing			✓	✓	✓
ECE4078	Intelligent robotics	✓	✓			
ECE4808	Microsystems and semiconductor fabrication					✓
ECE4810	Internet of Things: Communication, data and security	✓		✓	✓	

* If you are graduating in Malaysia, you must complete (ECE3051 or MEC3821 or TRC4902).

Semester Summer Semester A - SSA-02

Students who have completed 120 credit points in their engineering studies and have not yet enrolled in ENG0002 are required to enrol in ENG0002 Industrial Training for the SSA-02 semester.

Intake: Commencing July and Oct 2024

Robotics and Mechatronics Engineering

Semester 1 2027 units

ECE3073	Computer systems
TRC3200	Dynamical systems
TRC3500	Sensors and artificial perception
<i>One (1) Level 3 or 4 engineering technical elective or an engineering minor</i>	

List of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
ECE3051*	Electrical energy systems		✓			
MEC3822	Artificial intelligence in manufacturing	✓		✓		
MEC4801	Non-destructive testing and inspection			✓		✓
CIV4100	Autonomous vehicle systems	✓	✓			
ECE4063	Integrated circuit design					✓
TRC4200	Engineering cyber-physical systems				✓	

Semester 2 2027 units

ENG4701	Final year project A
TRC4407	Automation Design Project
<i>Two (2) Level 3, 4 or 5 Robotics and Mechatronics Engineering technical elective</i>	

List of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
MEC3821*	Introduction to electric vehicle technology		✓			
MEC3800	Introduction to reliability engineering			✓		✓
TRC4902*	Mechatronics and manufacturing			✓	✓	✓
ECE4810	Internet of Things: Communication, data and security	✓		✓	✓	
ECE4078	Intelligent robotics	✓	✓			
ECE4808	Microsystems and semiconductor fabrication					✓
MMA2003*	Thermofluids & power systems					

*** If you are graduating in Malaysia, you must complete [(ECE3051 or MEC3821 or MEC3416) and TRC4802].**

Semester Summer Semester A- SSA-02

Students who have completed 120 credit points in their engineering studies and have not yet enrolled in ENG0002 are required to enrol in ENG0002 Industrial Training for the SSA-02 semester.

Intake: Commencing February 2024

Robotics and Mechatronics Engineering

Semester 1 2027 units

ENG4701	Final year project A
TRC4800	Robotics
ECE4076	Computer vision
ENG4801	Professional Practice (Curriculum embedded)

If there is still an empty slot, list of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
ECE3051*	Electrical energy systems		✓			
MEC3822	Artificial intelligence in manufacturing	✓		✓		
MEC4801	Non-destructive testing and inspection			✓		✓
CIV4100	Autonomous vehicle systems	✓	✓			
ECE4831	Microsystem packaging, assembly and testing					✓
TRC4200	Engineering cyber-physical systems				✓	

Semester 2 2027 units

ENG4702	Final year project B
TRC4407	Automation design project
<i>Two (2) Level 3, 4 or 5 Robotics and Mechatronics Engineering technical elective</i>	

List of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
MEC3821*	Introduction to electric vehicle technology		✓			
MEC3800	Introduction to reliability engineering			✓		✓
TRC4902*	Mechatronics and manufacturing			✓	✓	✓
ECE4810	Internet of Things: Communication, data and security	✓		✓	✓	
ECE4078	Intelligent robotics	✓	✓			
ECE4808	Microsystems and semiconductor fabrication					✓
ECE4809	Solid state lighting				✓	
MMA2003*	Thermofluids & power systems					

*** If you are graduating in Malaysia, you must complete [(ECE3051 or MEC3821 or MEC3416) and TRC4802].**

Semester Summer Semester A - SSA-02

Students who have completed 120 credit points in their engineering studies and have not yet enrolled in ENG0002 are required to enrol in ENG0002 Industrial Training for the SSA-02 semester.

Intake: Commencing July and Oct 2023

Robotics and Mechatronics Engineering

Semester 1 2027 units

ENG4702	Final year project B
TRC4800	Robotics
ECE4076	Computer vision
ENG4801	Professional Practice (Curriculum embedded)

If there is still an empty slot, list of possible Elective to choose from:

Unit Name		AI in Eng.	Electric vehicle	Intel. Mfg	IoT	Semicon
ECE3051*	Electrical energy systems		✓			
MEC3822	Artificial intelligence in manufacturing	✓		✓		
MEC4801	Non-destructive testing and inspection			✓		✓
CIV4100	Autonomous vehicle systems	✓	✓			
ECE4063	Integrated circuit design					✓
TRC4200	Engineering cyber-physical systems				✓	

*** If you are graduating in Malaysia, you must complete [(ECE3051 or MEC3821 or MEC3416) and TRC4802].**