MONASH University

Course progression map for 2023 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 14 July 2023

E3001 Bachelor of Engineering (Honours)

Common First Year

You do not have VCE Units 3 & 4 Specialist Maths >30 study score and VCE Units 3 & 4 Physics >25 study score: You must enrol in Foundation mathematics (ENG1090) and Foundation physics (PHS1001)

1	Sem 1 Feb	ENG1012 Engineering design	ENG1013 Engineering smart systems	PHS1001 Foundation physics * *Corequisite: ENG1090 **	ENG1090 Foundation mathematics
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	First Year engineering technical elective+

You do not have VCE Units 3 & 4 Specialist Maths >30 study score: You must enrol in Foundation mathematics (ENG1090)

1	Sem 1 Feb	ENG1012 Engineering design	ENG1013 Engineering smart systems	ENG1090 Foundation mathematics *	First Year engineering technical elective+ *Or swap semester with the Elective unit*
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	Elective

You do not have VCE Units 3 & 4 Physics >25 study score: You must enrol in Foundation physics (PHS1001)

1	Sem 1 Feb	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1013 Engineering smart systems	PHS1001 Foundation physics * *Required: ENG1090 **	First Year engineering technical elective+ *Or swap semester with the Elective unit*
	Sem 2 July	ENG1011 Engineering methods	ENG1012 Engineering design	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	Elective

You have completed VCE Units 3 & 4 Physics >25 study score and VCE Units 3 and 4 Specialist Maths >30 study score: No foundation units are required

Year	Period	Units			
1	Sem 1 Feb	ENG1013 Engineering smart systems	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	First Year engineering technical elective+ *Or swap semester with an Elective unit*
	Sem 2 July	ENG1012 Engineering design	ENG1011 Engineering methods	Elective	Elective

NOTE:

- ***STUDYING IN MALAYSIA:*** *If you are studying in the Malaysia campus, please consult your campus website for the Common First Year map.*
- * Foundation units: You enrol in the foundation units ENG1090 and/or PHS1001 if you have not completed the Australian VCE (Units 3 & 4) or equivalent Specialist mathematics and/or Physics with the required study score.
- **+ Biomedical engineering:** If you are Clayton-based and planning to specialise in Biomedical engineering, you must take BMS1021 as a First Year elective in Semester 1.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

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Course progression map for 2023 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 12 December 2023

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E3001 Bachelor of Engineering (Honours)

Specialisation – Aerospace engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	MEC2402 Design methods	MEC2403 Mechanics of materials	ENG2005 Advanced engineering mathematics	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	MAE2402 Thermodynamics and gas dynamics	MAE2404 Aerodynamics 1	MAE2505 Aerospace dynamics	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	MAE3401 Aerodynamics 2	MAE3404 Flight vehicle dynamics	MEC3456 Engineering computational analysis	Engineering minor or level 3 or 4 aerospace engineering technical elective	
	Sem 2 July	MAE3405 Aerospace propulsion	MAE3408 Aerospace control	MAE3411 Aerospace structural mechanics	Engineering minor or level 3 or 4 aerospace engineering technical elective	
4	Sem 1 Feb	ENG4701 Final year project A	MAE4416 Orbital mechanics and spaceflight dynamics	MEC4404 Professional practice	Engineering minor or level 3, 4 or 5 aerospace engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	MAE4426 Finite element analysis and composite structures	MAE4410 Flight vehicle design	Engineering minor or level 3, 4 or 5 aerospace engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage.
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg MAE2505) that is also a core in your specialisation or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the aerospace engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- If you completed a First Year engineering elective which happens to be a core unit in your specialisation, you must replace the core with a unit at the same level or higher from your specialisation technical electives list.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- You are required to complete 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information, refer to the CPD webpage.
- For enrolment advice, please refer to the Course Advisers webpage.

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Course progression map for 2023 commencing students

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E3001 Bachelor of Engineering (Honours)

Specialisation – Biomedical engineering – *Biomedical devices stream*

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**			BMS1021 Cells, tissues and organisms	
	Sem 2 July				Elective	
2	Sem 1 Feb	ENG2005 Advanced engineering mathematics	ECE2071 Computer organisation and programming	PHY2011 Neuroscience of communication, sensory and control systems	MCB2011 Molecular biology and the cell	
	Sem 2 July	ECE2111 Signals and systems	CHE2161 Mechanics of fluids	PHY2042 Human physiology: Cardiovascular, respiratory and renal systems	MCB2022 The dynamic cell	
3	Sem 1 Feb	ECE2131 Electrical circuits	MEC3601 Mechanics for biomedical engineering	MTE3204 Biomaterials 1	DEV2011 Early human development from cells to tissues	
	Sem 2 July	ECE4179 Neural networks and deep learning	ECE4087 Medical technology innovation	MEC3602 Biomedical microsystems	DEV2022 Human anatomy and development: Tissues and body systems	
4	Sem 1 Feb	ENG4701 Final year project A	MEC4601 Implantable devices	TRC3500 Sensors and artificial perception	ENG3111 Sensory and cognitive neuroscience Replace with PHY3111 in 2024	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	ENG4105 Biomedical engineering integrated design	MEC4404 Professional practice or ECE4099 Professional practice	ECE4081 Medical instrumentation	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year that is also a core in your specialisation or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the electrical and computer systems engineering or materials engineering or mechanical engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- Care should be taken to ensure units are maintained in sequence.
- Engineering minors are not available within the Biomedical engineering specialisation.
- You are required to complete 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information, refer to the CPD webpage.
- For enrolment advice, please refer to the Course Advisers webpage.

MONASH University

Course progression map for 2023 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 18 December 2023

E3001 Bachelor of Engineering (Honours) — Specialisation – Chemical engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	ENG2005 Advanced engineering mathematics	CHM1011 Chemistry 1 **or** CHM1051 Chemistry 1 advanced	CHE2164 Thermodynamics 1	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	CHE2162 Materials and energy balances	CHE2161 Mechanics of fluids	CHE2163 Heat and mass transfer	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	CHE3161 Chemistry and chemical thermodynamics	CHE3165 Separation processes	CHE3167 Transport phenomena and numerical methods	Engineering minor or level 3 or 4 chemical engineering technical elective	
	Sem 2 July	CHE3162 Process control	CHE3164 Reaction engineering	CHE3166 Process design	Engineering minor or level 3 or 4 chemical engineering technical elective	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	ENG4701 Final year project A	CHE4162 Particle technology	CHE4161 Engineer in society	Engineering minor or level 3, 4 or 5 chemical engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	CHE4170 Design project (12 points)		Engineering minor or level 3, 4 or 5 chemical engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg CHM1011 or CHM1051) that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the chemical engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- CHE4164 and CHE4165 are integrated industrial project units that are for select students only. The units are undertaken in place of the final year project units ENG4701 and ENG4702. Depending on placement location, you may have to overload a semester or extend an additional semester in order to complete your course.
- CHE4170 - You should not overload in the semester when undertaking this unit.
- **Industry 4.0:** You are encouraged to select ECE2071, ECE2131 and TRC3500 if you are seeking to broaden your skills needed for the jobs of the future.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate. For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

MONASH University

Course progression map for 2023 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 18 December 2023

E3001 Bachelor of Engineering (Honours) — Specialisation – Civil engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	CIV2206 Structural mechanics	CIV2282 Transport and traffic engineering	CIV2263 Water systems	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	ENG2005 Advanced engineering mathematics	CIV2242 Geomechanics 1	CIV2235 Structural materials	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	CIV4286 Project management for civil engineers	CIV3294 Structural design	CIV3285 Engineering hydrology	Engineering minor or level 3 or 4 civil engineering technical elective	
	Sem 2 July	CIV3283 Road engineering	CIV3221 Building structures and technology	CIV3247 Geomechanics 2	Engineering minor or level 3 or 4 civil engineering technical elective	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	ENG4701 Final year project A	CIV4249 Foundation engineering	CIV4280 Bridge design and assessment	Engineering minor or level 3, 4 or 5 civil engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	CIV4212 Civil and environmental engineering practice	CIV4288 Water treatment	Engineering minor or level 3, 4 or 5 civil engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the civil engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- **Studying civil engineering specialisation in Malaysia:** You must complete ENG1021 to meet Engineering Accreditation Council Malaysia (EAC) requirement for accreditation.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate. For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

MONASH University

Course progression map for 2023 commencing students

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E3001 Bachelor of Engineering (Honours)

Specialisation – Electrical and computer systems engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	ECE2071 Computer organisation and programming	ECE2131 Electrical circuits	ENG2005 Advanced engineering mathematics	Level 1, 2 or 3 elective or engineering technical elective.	
	Sem 2 July	ECE2072 Digital systems	ECE2111 Signals and systems	ECE2191 Probability models in engineering	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	ECE3073 Computer systems	ECE3141 Information and networks	ECE3161 Analogue electronics	Engineering minor or level 3 or 4 ECSE technical elective	
	Sem 2 July	ECE4132 Control system design	ECE3121 Engineering electromagnetics **Clayton students**: Replace ECE3121 with ECE3122 in 2024	Level 4 or 5 ECE-coded core elective*	Engineering minor or level 3 or 4 ECSE technical elective	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	ENG4701 Final year project A	ECE3051 Electrical energy systems	Level 4 or 5 ECE-coded core elective	Engineering minor or level 3, 4 or 5 ECSE technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	ECE4191 Engineering integrated design	ECE4099 Professional practice	Engineering minor or level 3, 4 or 5 ECSE technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg ECE2072) that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the electrical and computer systems engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- **Studying ECSE specialisation in Malaysia:** You must complete ECE4053 to meet Engineering Accreditation Council Malaysia (EAC) requirement for accreditation.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate.
- For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

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E3001 Bachelor of Engineering (Honours)

Specialisation – Environmental engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	ENE2021 Energy and the environment	CHE2164 Thermodynamics 1	CIV2263 Water systems	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	CHE2162 Material and energy balances	ENG2005 Advanced engineering mathematics	ENE2503 Material properties and recycling	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	CIV3248 Groundwater and environmental geomechanics	CIV3285 Engineering hydrology	BTX3100 Sustainability regulation for business	Engineering minor or level 3 or 4 environmental engineering technical elective	
	Sem 2 July	ENE3606 The air environment	ENE3032 Fate and transport of contaminants	ENE3031 Building sustainability	Engineering minor or level 3 or 4 environmental engineering technical elective	
4	Sem 1 Feb	ENG4701 Final year project A	CIV4286 Project management for civil engineers	ENE4042 Environment impact and risk assessment	Engineering minor or level 3 or 4 environmental engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	CIV4212 Civil and environmental engineering practice	ENE4041 Soil remediation and solid waste management	Engineering minor or level 3 or 4 environmental engineering technical elective	

NOTE:

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- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the environmental engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- You are required to complete 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information, refer to the CPD webpage.
- For enrolment advice, please refer to the Course Advisers webpage.

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E3001 Bachelor of Engineering (Honours)

Specialisation – Materials engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	MTE2101 Atomic-scale structure of materials	MTE2102 Phase equilibria and phase transformations	MTE2103 Mechanical properties of materials	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	MTE2202 Functional materials 1	MTE2201 Polymers	ENG2005 Advanced engineering mathematics	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	MTE3103 Materials life cycle	MTE3102 Plasticity of metals and alloys	MTE3101 Materials in a complex world 1: People, projects and data	Engineering minor or level 3 or 4 materials engineering technical elective	
	Sem 2 July	MTE3202 Functional materials 2	MTE3203 Introduction to ceramics: Properties, processing and applications	MTE3201 Materials in a complex world 2: Characterisation, identification and selection	Engineering minor or level 3 or 4 materials engineering technical elective	
4	Sem 1 Feb	ENG4701 Final year project A	MTE4102 Advanced materials processing and manufacturing	MTE4101 Integrated design project	Engineering minor or level 3, 4 or 5 materials engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	Level 4 or 5 MTE-coded materials engineering core elective	MTE4201 Materials in a complex world 3: Impact in society	Engineering minor or level 3, 4 or 5 materials engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the materials engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- You are required to complete 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information, refer to the CPD webpage.
- For enrolment advice, please refer to the Course Advisers webpage.

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Course progression map for 2023 commencing students

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E3001 Bachelor of Engineering (Honours) — Specialisation – Mechanical engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	MEC2403 Mechanics of materials	MEC2401 Dynamics 1	MEC2402 Design methods	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	ENG2005 Advanced engineering mathematics	MEC2404 Mechanics of fluids	MEC2405 Thermodynamics	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	MEC3455 Solid mechanics	MEC3451 Fluid mechanics 2	MEC3456 Engineering computational analysis	Engineering minor or level 3 or 4 mechanical engineering technical elective	
	Sem 2 July	MEC3453 Dynamics 2	MEC3416 Machine design	MEC3457 Systems and control	Engineering minor or level 3 or 4 mechanical engineering technical elective	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	ENG4701 Final year project A	MEC4404 Professional practice	MEC4408 Thermodynamics and heat transfer	Engineering minor or level 3, 4 or 5 mechanical engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	MEC4407 Design project	MEC4426 Computer-aided design	Engineering minor or level 3, 4 or 5 mechanical engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg MEC2404) that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the mechanical engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- **Studying mechanical engineering specialisation in Malaysia:** You must complete MEC3459 to meet the Board of Engineers Malaysia (BEM) requirement for accreditation.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate.
- For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

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Course progression map for 2023 commencing students

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E3001 Bachelor of Engineering (Honours) — Specialisation – Robotics and mechatronics engineering – *Artificial intelligence stream*

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	ECE2131 Electrical circuits	MEC2402 Design methods	ECE2071 Computer organisation and programming	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	ENG2005 Advanced engineering mathematics	TRC2201 Mechanics	ECE2072 Digital systems	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	ECE3161 Analogue electronics	TRC3200 Dynamical systems	TRC3500 Sensors and artificial perception	Engineering minor or level 3 or 4 robotics and mechatronics engineering technical elective	
	Sem 2 July	TRC3600 Modelling and control	ECE4078 Intelligent robotics	ECE4179 Neural networks and deep learning	Engineering minor or level 3 or 4 robotics and mechatronics engineering technical elective	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	ENG4701 Final year project A	TRC4800 Robotics	ECE4076 Computer vision	Engineering minor or level 3, 4 or 5 robotics and mechatronics engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	TRC4002 Professional practice	ECE4191 Engineering integrated design	Engineering minor or level 3, 4 or 5 robotics and mechatronics engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg ECE2072) that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the robotics and mechatronics engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- **Studying robotics and mechatronics engineering specialisation in Malaysia:** You must complete [(ECE3051 or MEC3416) and TRC4802] to meet Engineering Accreditation Council Malaysia (EAC) requirement for accreditation.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate.
- For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

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Course progression map for 2023 commencing students

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E3001 Bachelor of Engineering (Honours)

Specialisation – Robotics and mechatronics engineering – *Automation stream*

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	ECE2131 Electrical circuits	MEC2402 Design methods	ECE2071 Computer organisation and programming	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	ENG2005 Advanced engineering mathematics	TRC2201 Mechanics	ECE2072 Digital systems	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	ECE3161 Analogue electronics	TRC3200 Dynamical systems	TRC3500 Sensors and artificial perception	Engineering minor or level 3 or 4 robotics and mechatronics engineering technical elective	
	Sem 2 July	TRC3600 Modelling and control	TRC4902 Mechatronics and manufacturing	TRC4802 Thermo-fluids and power systems	Engineering minor or level 3 or 4 robotics and mechatronics engineering technical elective	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	ENG4701 Final year project A	TRC4800 Robotics	TRC4200 Engineering cyber-physical systems	Engineering minor or level 3, 4 or 5 robotics and mechatronics engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July	ENG4702 Final year project B	TRC4002 Professional practice	TRC4407 Automation design project	Engineering minor or level 3, 4 or 5 robotics and mechatronics engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg ECE2072) that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the robotics and mechatronics engineering technical electives list or from one of the engineering minors. The replacement unit must be at the same level as the core unit or higher.
- **Studying robotics and mechatronics engineering specialisation in Malaysia:** You must complete [(ECE3051 or MEC3416) and TRC4802] to meet Engineering Accreditation Council Malaysia (EAC) requirement for accreditation.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate.
- For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

MONASH University

Course progression map for 2023 commencing students – March intake

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 14 November 2022

E3001 Bachelor of Engineering (Honours) — Specialisation – Software engineering

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	FIT2085 Introduction to computer science for engineers	MAT1830 Discrete mathematics for computer science	FIT2099 Object-oriented design and implementation	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	FIT2101 Software engineering process and management	FIT2004 Algorithms and data structures	FIT2107 Software quality and testing	Level 1, 2 or 3 elective or engineering technical elective	
3	Sem 1 Feb	FIT3159 Computer architecture	FIT3077 Software engineering: Architecture and design	FIT3170 Software engineering practice (12 points)	Level 3 or 4 software engineering technical elective	
	Sem 2 July	FIT2100 Operating systems	FIT3171 Databases		Level 3 or 4 software engineering technical elective	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	FIT4002 Software engineering industry experience studio project (12 points)	FIT4701 Final year project A	FIT4165 Computer networks	Level 3, 4 or 5 software engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July		FIT4702 Final year project B	Level 4 or 5 software engineering core elective	Level 3, 4 or 5 software engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg MAT1830 or FIT2085) that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the software engineering technical electives list. The replacement unit must be at the same level as the core unit or higher.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- Engineering minors are not available within the Software engineering specialisation.
- Enrolled in the Industry Based Learning placement program – You will have a different progression map, with your placement in Semester 2 of third year. You will need to overload in one semester or complete a summer semester unit.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate. For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.

MONASH University

Course progression map for 2023 commencing students – March intake

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It should be used in conjunction with the requirements of the course as specified in the Handbook. The map is subject to updates. Update version: 14 November 2022

E3001 Bachelor of Engineering (Honours)

Specialisation – Software engineering – *Industry-based Learning*

Year	Period	Units				
1	Sem 1 Feb	**Common First Year**				
	Sem 2 July					
2	Sem 1 Feb	FIT2085 Introduction to computer science for engineers	MAT1830 Discrete mathematics for computer science	FIT2099 Object-oriented design and implementation	Level 1, 2 or 3 elective or engineering technical elective	
	Sem 2 July	FIT2101 Software engineering process and management	FIT2004 Algorithms and data structures	FIT2107 Software quality and testing	FIT2100 Operating systems	
3	Sem 1 Feb	FIT3159 Computer architecture	FIT3077 Software engineering: Architecture and design	FIT3171 Databases	Level 3 or 4 software engineering technical elective	Level 1, 2 or 3 elective or engineering technical elective
	Sem 2 July	FIT4042 Industry based learning (18 points)			*See footnote	**Malaysia students enrol in** ENG0002 Industrial training (0 credit points)
4	Sem 1 Feb	FIT3170 Software engineering practice (12 points)	FIT4701 Final year project A	FIT4165 Computer networks	Level 3 or 4 software engineering technical elective	**Clayton students enrol in** ENG0001 Continuous Professional Development (0 credit points)
	Sem 2 July		FIT4702 Final year project B	Level 3 or 4 software engineering technical elective	Level 3, 4 or 5 software engineering technical elective	

NOTE:

- MINORS AND TECHNICAL ELECTIVES LIST is located on the Faculty's current student course information webpage
- Each unit requires 12 hours of work per week. A full-time study week totals 48 hours. If you are unable to commit 48 hours of study due to external commitments, please speak with a course advisor about options to study less units per semester or take some units in the summer semester.
- If you have completed a unit in First Year (eg MAT1830 or FIT2085) that is also a core in your specialisation, or if you have completed a unit that is a prohibition to a core unit in your specialisation, you must replace the core with another unit chosen from the software engineering technical electives list. The replacement unit must be at the same level as the core unit or higher.
- The placement of units may be rearranged to support sequencing for double degree courses but care should be taken to ensure sequenced units are maintained in sequence.
- Engineering minors are not available within the Software engineering specialisation.
- * Depending on placement location when you undertake FIT4042, you will have to either overload a semester, undertake a summer unit or extend an additional semester in order to complete your course.
- You are required to complete the Continuous Professional Development (if studying in Australia) or Industrial training (if studying in Malaysia) in order to graduate.
- For enrolment advice, please speak with a course adviser in your specialisation. Refer to the Course Advisers webpage if you are in Clayton.