

Course progression map for 2019 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)

Common first year

If no foundation units are required:

Year	Sem	Units			
1	1	ENG1001 Engineering design: lighter, faster, stronger	ENG1005 Engineering mathematics	ENG1060 Computing for engineers	Elective unit
	2	ENG1002 Engineering design: cleaner, safer, smarter	ENG1003 Engineering mobile apps	First Year engineering elective unit	Elective unit

If you need to enrol in foundation physics and maths:

1	1	ENG1002 Engineering design: cleaner, safer, smarter	ENG1003 Engineering mobile apps	PHS1001 Foundation physics	ENG1090 Foundation mathematics
	2	ENG1001 Engineering design: lighter, faster, stronger	ENG1005 Engineering mathematics	ENG1060 Computing for engineers	First Year engineering elective unit

If you need to enrol in foundation maths:

1	1	ENG1002 Engineering design: cleaner, safer, smarter	ENG1003 Engineering mobile apps	ENG1090 Foundation mathematics	First Year engineering elective unit
	2	ENG1001 Engineering design: lighter, faster, stronger	ENG1005 Engineering mathematics	ENG1060 Computing for engineers	Elective unit

If you need to enrol in foundation physics:

1	1	ENG1002 Engineering design: cleaner, safer, smarter	ENG1003 Engineering mobile apps	PHS1001 Foundation physics	First Year engineering elective unit
	2	ENG1001 Engineering design: lighter, faster, stronger	ENG1005 Engineering mathematics	ENG1060 Computing for engineers	Elective unit

Note:

- You are required to complete at least 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 – Aerospace Engineering

Year	Sem	Units				
1	1	Common first year				
	2					
2	1	MAE2401 Aircraft structures 1 <small>Replace with MEC2403 from 2023</small>	MAE2406 Orbital mechanics and space flight dynamics	ENG2005 Advanced engineering mathematics	Elective or aerospace technical elective at level 2 or 3 (Elective may also be level 1)	
	2	MAE2402 Thermodynamics and heat transfer	MAE2404 Aerodynamics 1	MAE2405 Aircraft performance	Elective or aerospace technical elective at level 2 or 3 (Elective may also be level 1)	
3	1	MAE3401 Aerodynamics 2	MAE3404 Flight vehicle dynamics	MAE3456 Aerospace computational mechanics <small>Replace with MEC3456 from 2023</small>	Engineering minor or aerospace technical elective at level 3 or 4	
	2	MAE3405 Flight vehicle propulsion	MAE3408 Aerospace control	MAE3426 Computer-aided design	Engineering minor or aerospace technical elective at level 3 or 4	
4	1	MEC4401 Final year project <small>Replace with ENG4701 from 2022</small>	MAE4411 Aircraft structures 2 <small>Replace with a level 4 unit from the Aerospace technical elective list from 2022</small>	MAE4404 Aerospace practices <small>Replace with MEC4404 from 2023</small>	Engineering minor or aerospace technical elective at level 3, 4 or 5	ENG0001 Continuous Professional Development (0 credit points)
	2	MEC4402 Final year project – Thesis <small>Replace with ENG4702 from 2022</small>	MAE4408 Damage tolerance and airworthiness <small>Replace with MAE3411 from 2022</small>	MAE4410 Flight vehicle design	Engineering minor or aerospace technical elective at level 3, 4 or 5	

Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- 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 at least 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 – Chemical Engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	ENG2005 Advanced engineering mathematics	CHM1011 Chemistry 1 or CHM1051 Chemistry 1 Advanced (if not already completed at level 1)	CHE2164 Thermodynamics 1	Elective or chemical technical elective at level 2 or 3 (Elective may also be level 1)
	2	CHE2162 Materials and energy balances	CHE2161 Mechanics of fluids	CHE2163 Heat and mass transfer	Elective or chemical technical elective at level 2 or 3 (Elective may also be level 1)
3	1	CHE3161 Chemistry and chemical thermodynamics	CHE3165 Separation processes	CHE3167 Transport phenomena and numerical methods	Engineering minor or chemical technical elective at level 3 or 4
	2	CHE3162 Process control	CHE3164 Reaction engineering	CHE3166 Process design	Engineering minor or chemical technical elective at level 3 or 4
4	1	CHE4164 Integrated industrial project (18 points) For select students taking a period of integrated industrial training in their final year. <small>CHE4164 (18 cp) will be replaced by CHE4164 (6 cp) and CHE4165 (6 cp) from 2022. You must now also complete CHE4161. See footnote.</small>			Engineering minor or chemical technical elective at level 3, 4 or 5
	OR				Malaysia students enrol in ENG0002 Industrial training (0 credit points) Clayton students enrol in ENG0001 Continuous Professional Development (0 credit points)
	1	CHE4180 Chemical engineering project <small>Replace with ENG4701. See footnote</small>	CHE4161 Engineer in society	CHE4162 Particle technology	
	2	ENG4702 Final year project B <small>See footnote</small>	CHE4170 Design project (12 points)		Engineering minor or chemical technical elective at level 3, 4 or 5

Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- From 2021, [ENG4701](#) and [ENG4702](#) will replace the 12 credit point **CHE4180**, therefore extending the final year project over two semesters. Please seek course advice if needed.
- 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 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.
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E3001 Bachelor of Engineering (Honours)

Specialisation – Civil Engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	CIV2206 Structural mechanics	CIV2225 Design of steel and timber structures <small>Replace with CIV2235 from 2021</small>	CIV2263 Water systems	Elective or civil technical elective at level 2 or 3 (Elective may also be level 1)
	2	ENG2005 Advanced engineering mathematics	CIV2242 Geomechanics 1	CIV2282 Transport and traffic engineering <small>Sem 1 offering from 2021</small>	Elective or civil technical elective at level 2 or 3 (Elective may also be level 1)
3	1	CIV3248 Groundwater and environmental geomechanics	CIV3284 Design of concrete and masonry structures <small>Replace with CIV3294 from 2022</small>	CIV3285 Engineering hydrology	Engineering minor or civil technical elective at level 3 or 4
	2	CIV3204 Engineering investigation <small>See footnote</small>	CIV3221 Building structures and technology	CIV3247 Geomechanics 2	Engineering minor or civil technical elective at level 3 or 4
4	1	CIV4210 Project A <small>Replace with ENG4701 from 2022. See footnote.</small>	CIV4286 Project management for civil engineers	CIV4280 Bridge design and assessment	Engineering minor or civil technical elective at level 3 or 4
	2	CIV4287 Road engineering <small>Replace with ENG4702 from 2022. See footnote.</small>	CIV4212 Civil and environmental engineering practice	CIV4288 Water treatment	Engineering minor or civil technical elective at level 3 or 4

Malaysia students enrol in [ENG0002](#) Industrial training (0 credit points)

Clayton students enrol in [ENG0001](#) Continuous Professional Development (0 credit points)

Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- **FROM 2022:** Following a recent advice by Engineers Australia, you must complete 12 CP of a final year project in order to meet professional accreditation requirements. Please seek course advice from the [Student Services](#) at the Faculty of Engineering.
- **CIV4210** – If you are course-completing in 2022/S1, complete CIV4210 (for 6CP FYP) or CIV4211 (if undertaking 12CP FYP). Otherwise, replace CIV4210 with ENG4701 from 2022.
- **CIV3204** – If you have not completed CIV3204 by 2021, replace CIV3204 with CIV3283 Road engineering from 2022.
- **CIV4287** – If you have completed CIV3204 but not CIV4287 by 2021, replace CIV4287 with ENG4702 from 2022. CIV3283 is highly recommended to be taken as a level 3 civil engineering technical elective.
- 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.
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E3001 Bachelor of Engineering (Honours)

Specialisation – Electrical and Computer Systems Engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	ECE2071 Computer organisation and programming	ECE2131 Electrical circuits	ENG2005 Advanced engineering mathematics	Elective or ECSE technical elective at level 2 or 3 (Elective may also be level 1) 1, 2 or 3
	2	ECE2072 Digital systems (if not already completed at level 1)	ECE2111 Signals and systems	ECE2191 Probability models in engineering	Elective or ECSE technical elective at level 2 or 3 (Elective may also be level 1)
3	1	ECE3073 Computer systems	ECE3141 Information and networks	ECE3161 Analogue electronics	Engineering minor or ECSE technical elective at level 3 or 4
	2	ECE3091 Engineering design Replace with ECE4191 from 2022. See footnote	ECE3121 Engineering electromagnetics Clayton students: Replace ECE3121 with ECE3122 in 2024	Level 4 or 5 ECE-coded core elective	Engineering minor or ECSE technical elective at level 3 or 4
4	1	ECE4094 Project A Replace with ENG4701 from 2022	ECE3051 Electrical energy systems	Level 4 or 5 ECE-coded core elective	Engineering minor or ECSE technical elective at level 3, 4 or 5
	2	ECE4095 Project B Replace with ENG4702 from 2022	ECE4132 Control system design	ECE4099 Professional practice	Engineering minor or ECSE technical elective at level 3, 4 or 5

Malaysia students enrol in [ENG0002](#) Industrial training (0 credit points)

Clayton students enrol in [ENG0001](#) Continuous Professional Development (0 credit points)

Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- **ECE3091** – Replace with ECE4191 if you have not completed ECE3091 by 2021. ECE4191 should be undertaken in your final year of study by swapping placement on the course map with ECE4132 or the level 4 ECSE technical elective.
- 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.
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E3001 Bachelor of Engineering (Honours)

Specialisation – Environmental Engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	ENE2021 Energy and the environment	CHE2164 Thermodynamics 1	CIV2263 Water systems	Elective or environmental technical elective at level 2 or 3 (Elective may also be level 1)
	2	CHE2162 Material and energy balances	ENG2005 Advanced engineering mathematics	ENE2503 Material properties and recycling	Elective or environmental technical elective at level 2 or 3 (Elective may also be level 1)
3	1	CIV3248 Groundwater and environmental geomechanics	CIV3285 Engineering hydrology	ENE3031 Building sustainability	Engineering minor or environmental technical elective at level 3 or 4
	2	ENE3606 The air environment	ENE3032 Fate and transport of contaminants	BTX3100 Sustainability regulation for business <small>See footnote</small>	Engineering minor or environmental technical elective at level 3 or 4
4	1	CIV4210 Project A <small>Replace with ENG4701 from 2022. See footnote.</small>	CIV4286 Project management for civil engineers	ENE4042 Environment impact and risk assessment	Engineering minor or environmental technical elective at level 3 or 4
	2	Environmental engineering technical elective at level 4 <small>Replace with ENG4702 from 2022. See footnote.</small>	CIV4212 Civil and environmental engineering practice	ENE4041 Soil remediation and solid waste management	Engineering minor or environmental technical elective at level 3 or 4

Clayton students enrol in [ENG0001](#) Continuous Professional Development (0 credit points)

Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- **FROM 2022:** Following a recent advice by Engineers Australia, you must complete 12 CP of a final year project (FYP) in order to meet professional accreditation requirements. To undertake 12CP FYP units ENG4701 and ENG4702, you must free up 6 credit points by reserving the level 4 technical elective (the 6 CP elective that counts towards the Part C and D of the course requirement) or replacing **BTX3100** (if you haven't already completed this unit by 2021) for FYP. BTX3100 is still highly recommended to be taken but as a level 3 environmental engineering technical elective. Please seek course advice from the [Student Services](#) at the Faculty of Engineering.
- **CIV4210** – If you are course-completing in 2022/S1, complete CIV4210 (if undertaking 6CP FYP only) or CIV4211 (if undertaking 12CP FYP). Otherwise, replace CIV4210 with ENG4701 from 2022.
- 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.
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E3001 Bachelor of Engineering (Honours)

Specialisation – Materials Engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	MTE2544 Functional materials <small>Replace with MTE2202 from 2021 (Semester 2 offering)</small>	MTE2541 Crystal structures, thermodynamics and phase equilibria <small>See footnote 1</small>	MTE2546 Mechanics of materials <small>Replace with MTE2103 from 2021.</small>	Elective or materials technical elective at level 2 or 3 (Elective may also be level 1)
	2	ENG2005 Advanced engineering mathematics	MTE2542 Microstructural development <small>Replace with MTE2102 from 2021 (Semester 1 offering)</small>	MTE2545 Polymers and ceramics 1 <small>See footnote 2</small>	Elective or materials technical elective at level 2 or 3 (Elective may also be level 1)
3	1	MTE3541 Materials durability <small>Replace with MTE3103 from 2022.</small>	MTE3543 Microstructure to applications: The mechanics of materials <small>See footnote 3</small>	MTE3542 Microstructural design in structural materials <small>Replace with MTE3102 from 2022.</small>	Engineering minor or materials technical elective at level 3 or 4
	2	MTE3546 Polymers and ceramics 2 <small>Replace with MTE3203 from 2022. See footnote 2</small>	MTE3545 Functional materials and devices <small>Replace with MTE3202 from 2022.</small>	MTE3547 Materials characterisation and modelling <small>See footnote 1</small>	Engineering minor or materials technical elective at level 3 or 4
4	1	MTE4525 Project 1 <small>Replace with ENG4701 from 2022</small>	MTE4571 Materials engineering design and practice <small>See footnote 3</small>	MTE4572 Polymer and composite processing and engineering <small>See footnote 3</small>	Engineering minor or materials technical elective at level 3, 4 or 5
	2	MTE4526 Project 2 <small>Replace with ENG4702 from 2022</small>	MTE4573 Processing and engineering of metals and ceramics <small>See footnote 3</small>	Level 4 or 5 MTE-coded materials engineering core elective	Engineering minor or materials technical elective at level 3, 4 or 5

Clayton students enrol in [ENG0001](#) Continuous Professional Development (0 credit points)

Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- 1. **MTE2101 and MTE3101 replaces MTE2541 and MTE3547** in combination. If you have completed MTE2541 prior to 2021, you must complete MTE3547 (last offering 2021). Otherwise, complete MTE2101 and MTE3101 as a combination.
- 2. **MTE2201 and MTE3203 replaces MTE2545 and MTE3546** in combination. If you have completed MTE2545 prior to 2021, you must complete MTE3546 (last offering 2021). Otherwise, complete MTE2201 and MTE3203 as a combination.
- 3. You must complete the (**MTE3543+MTE4571+MTE4572+MTE4573**) combination (last offerings 2022). Otherwise, complete (**MTE3201+MTE4101+MTE4102+MTE4201**) combination.
 - 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.
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E3001 Bachelor of Engineering (Honours)

Specialisation – Mechanical Engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	MEC2403 Mechanics of materials	MEC2401 Dynamics 1	MEC2402 Engineering design 1 <small>Unit title change in 2021</small>	Elective or mechanical technical elective at level 2 or 3 (Elective may also be level 1)
	2	ENG2005 Advanced engineering mathematics	MEC2404 Mechanics of fluids	MEC2405 Thermodynamics	Elective or mechanical technical elective at level 2 or 3 (Elective may also be level 1)
3	1	MEC3455 Solid mechanics	MEC3451 Fluid mechanics 2	MEC3456 Engineering computational mechanics	Engineering minor or mechanical technical elective at level 3 or 4
	2	MEC3453 Dynamics 2	MEC3416 Engineering design 2 <small>Unit title change in 2021</small>	MEC3457 Systems and control	Engineering minor or mechanical technical elective at level 3 or 4
4	1	MEC4401 Final year project <small>Replace with ENG4701 from 2022</small>	MEC4404 Professional practice	MEC4408 Thermodynamics and heat transfer	Engineering minor or mechanical technical elective at level 3, 4 or 5
	2	MEC4402 Final year project – Thesis <small>Replace with ENG4702 from 2022</small>	MEC4407 Engineering design 3 <small>Unit title change from 2021</small>	MEC4426 Computer-aided design	Engineering minor or mechanical technical elective at level 3, 4 or 5

Malaysia students enrol in [ENG0002](#) Industrial training (0 credit points)

Clayton students enrol in [ENG0001](#) Continuous Professional Development (0 credit points)

Note:

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- 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 at least 420 hours of Continuous Professional Development (CPD) in order to graduate.
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E3001 Bachelor of Engineering (Honours)

Specialisation – Robotics and Mechatronics Engineering – Artificial intelligence stream

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	ECE2131 Electrical circuits	MEC2402 Engineering design 1 <small>Unit title change in 2021</small>	ECE2071 Computer organisation and programming	Elective or robotics and mechatronics technical elective at level 2 or 3 (Elective may also be level 1)
	2	ENG2005 Advanced engineering mathematics	TRC2201 Mechanics	ECE2072 Digital systems	Elective or robotics and mechatronics technical elective at level 2 or 3 (Elective may also be level 1)
3	1	ECE3161 Analogue electronics	TRC3200 Dynamical systems	TRC3500 Sensors and artificial perception	Engineering minor or robotics and mechatronics technical elective at level 3 or 4
	2	TRC3600 Modelling and control	ECE3091 Engineering design <small>Replace with ECE4191 from 2022. See footnote</small>	ECE4179 Neural networks and deep learning	Engineering minor or robotics and mechatronics technical elective at level 3 or 4
4	1	TRC4000 Robotics and mechatronics final year project 1 <small>Replace with ENG4701 from 2022</small>	TRC4800 Robotics	ECE4076 Computer vision	Engineering minor or robotics and mechatronics technical elective at level 3, 4 or 5
	2	TRC4001 Robotics and mechatronics final year project 2 <small>Replace with ENG4702 from 2022</small>	TRC4002 Professional practice	ECE4078 Intelligent robotics	Engineering minor or robotics and mechatronics technical elective at level 3, 4 or 5

Malaysia students enrol in [ENG0002](#) Industrial training (0 credit points)

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Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- [ECE3091](#) – Replace with [ECE4191](#) if you have not completed [ECE3091](#) by 2021. [ECE4191](#) should be undertaken in your final year of study by swapping placement on the course map with [ECE4078](#).
- 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 either the [Continuous Professional Development](#) (if you studying in Australia) or [Industrial training](#) (if you are 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 – Robotics and Mechatronics Engineering – Automation stream

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	ECE2131 Electrical circuits	MEC2402 Engineering design 1 <small>Unit title change in 2021</small>	ECE2071 Computer organisation and programming	Elective or robotics and mechatronics technical elective at level 2 or 3 (Elective may also be level 1)
	2	ENG2005 Advanced engineering mathematics	TRC2201 Mechanics	ECE2072 Digital systems	Elective or robotics and mechatronics technical elective at level 2 or 3 (Elective may also be level 1)
3	1	ECE3161 Analogue electronics	TRC3200 Dynamical systems	TRC3500 Sensors and artificial perception	Engineering minor or robotics and mechatronics technical elective at level 3 or 4
	2	TRC3600 Modelling and control	TRC3000 Automation project	TRC4802 Thermo-fluids and power systems	Engineering minor or robotics and mechatronics technical elective at level 3 or 4
4	1	TRC4000 Robotics and mechatronics final year project 1 <small>Replace with ENG4701 from 2022</small>	TRC4800 Robotics	TRC4200 Engineering cyber-physical systems	Engineering minor or robotics and mechatronics technical elective at level 3, 4 or 5
	2	TRC4001 Robotics and mechatronics final year project 2 <small>Replace with ENG4702 from 2022</small>	TRC4002 Professional practice	TRC4902 Mechatronics and manufacturing	Engineering minor or robotics and mechatronics technical elective at level 3, 4 or 5

Malaysia students enrol in [ENG0002](#) Industrial training (0 credit points)

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- 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 either the [Continuous Professional Development](#) (if you studying in Australia) or [Industrial training](#) (if you are studying in Malaysia) in order to graduate.
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E3001 Bachelor of Engineering (Honours)

*Specialisation – Mechatronics Engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	ECE2131 Electrical circuits	MEC2402 Engineering design 1 <i>*Unit title change in 2021</i>	ECE2071 Computer organisation and programming	Elective or mechatronics technical elective at level 2 or 3 (Elective may also be level 1)
	2	ENG2005 Advanced engineering mathematics	TRC2201 Mechanics	TRC2001 Intro to systems engineering	Elective or mechatronics technical elective at level 2 or 3 (Elective may also be level 1)
3	1	ECE3161 Analogue electronics	TRC3200 Dynamical systems	TRC3500 Sensors and artificial perception	Engineering minor or mechatronics technical elective at level 3 or 4
	2	TRC4802 Thermo-fluids and power systems	TRC3000 Mechatronics project 2	TRC3600 Modelling and control	Engineering minor or mechatronics technical elective at level 3 or 4
4	1	TRC4000 Mechatronics final year project 1 <i>Replace with ENG4701 from 2022</i>	TRC4800 Robotics	ECE3141 Information and networks	Engineering minor or mechatronics technical elective at level 3, 4 or 5
	2	TRC4001 Mechatronics final year project 2 <i>Replace with ENG4702 from 2022</i>	TRC4902 Mechatronics and manufacturing	TRC4002 Professional practice	Engineering minor or mechatronics technical elective at level 3, 4 or 5

Malaysia students enrol in [ENG0002](#) Industrial training (0 credit points)

Clayton students enrol in [ENG0001](#) Continuous Professional Development (0 credit points)

Note:

* **ROBOTICS AND MECHATRONICS ENGINEERING** will replace the **Mechatronics Engineering specialisation in 2020**.

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E3001 Bachelor of Engineering (Honours)

Specialisation – Resources and mining engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	CIV2206 Structural mechanics	CIV2263 Water systems	EAE2511 Deep earth processes	Elective or Resources and mining technical elective at level 2 or 3 (Elective may also be level 1)
	2	CIV2242 Geomechanics 1	RSE2010 Fixed plant engineering and project management	ENG2005 Advanced engineering mathematics	Elective or Resources and mining technical elective at level 2 or 3 (Elective may also be level 1)
3	1	RSE3020 Resource estimation	RSE3060 Rock breakage	ENE4042 Environmental impact assessment and management systems	Engineering minor or resources and mining technical elective at level 3 or 4
	2	RSE3010 Mine geotechnical engineering	RSE3030 Ventilation for surface and underground spaces	RSE3040 Mining systems	Engineering minor or resources and mining technical elective at level 3 or 4
4	1	CIV4210 Project A Replace with ENG4701 from 2022	RSE4010 Mine planning and scheduling	RSE4120 Instrumentation, automation and asset management	Engineering minor or resources and mining technical elective at level 3 or 4
	2	CIV4211 Project B Replace with ENG4702 from 2022	RSE4020 Mine design and feasibility project	RSE4040 Mineral processing	Engineering minor or resources and mining technical elective at level 3 or 4
					ENG0001 Continuous Professional Development (0 credit points)

Note:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- The Resources and mining engineering specialisation is not offered in a double degree course.
- You are required to complete at least 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](#).

Course progression map for 2019 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 – Resources and renewable energy engineering

Year	Sem	Units				
1	1	Common first year				
	2					
2	1	CIV2206 Structural mechanics	CIV2263 Water systems	EAE2511 Deep earth processes	Elective or Resources technical elective at level 2 or 3 (Elective may also be level 1)	
	2	CIV2242 Geomechanics 1	RSE2010 Fixed plant engineering and project management	ENG2005 Advanced engineering mathematics	Elective or Resources technical elective at level 2 or 3 (Elective may also be level 1)	
3	1	ECE2131 Electrical circuits	RSE3141 Solar energy	ENE4042 Environmental impact assessment and management systems	Engineering minor or resources and renewable energy technical elective at level 3 or 4	
	2	RSE3241 Hydropower	RSE3242 Geothermal energy	RSE3243 Bioenergy	Engineering minor or resources and renewable energy technical elective at level 3 or 4	
4	1	CIV4210 Project A <small>Replace with ENG4701 from 2022</small>	RSE4050 Energy systems and design	ECE3051 Electrical energy systems	Engineering minor or resources and renewable energy technical elective at level 3 or 4	ENG0001 Continuous Professional Development (0 credit points)
	2	CIV4211 Project B <small>Replace with ENG4702 from 2022</small>	ECE4053 Power system analysis	MEC4459 Wind engineering	Engineering minor or resources and renewable energy technical elective at level 3 or 4	

Note:

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- You are required to complete at least 420 hours of Continuous Professional Development (CPD) in order to graduate. For further information, refer to the [CPD webpage](#).
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Course progression map for 2019 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 – Software engineering

Year	Sem	Units			
1	1	Common first year			
	2				
2	1	FIT2085 Introduction to computer science for engineers	MAT1830 Discrete mathematics for computer science	FIT2099 Object-oriented design and implementation	Elective or software engineering technical elective at level 2 or 3 (Elective may also be level 1)
	2	FIT2101 Software engineering process and management	FIT2004 Algorithms and data structures	FIT2107 Software quality and testing	Elective or software engineering technical elective at level 2 or 3 (Elective may also be level 1)
3	1	FIT3159 Computer architecture	FIT3077 Software engineering: Architecture and design	FIT3170 Software engineering practice (12 points)	Software engineering technical elective at level 3 or 4
	2	FIT2100 Operating systems	FIT3171 Databases		Software engineering technical elective at level 3 or 4
4	1	FIT4002 Software engineering industry experience studio project (12 points)	FIT4003 Software engineering research project Replace with FIT4701 from 2023	FIT4165 Computer networks	Software engineering technical elective at level 3, 4 or 5
	2		Replace with FIT4702 from 2023	Level 4 or 5 software engineering core elective	Software engineering technical elective at level 3, 4 or 5

Malaysia students enrol in [ENG0002](#) Industrial training (0 credit points)

Clayton students enrol in [ENG0001](#) Continuous Professional Development (0 credit points)

Notes:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- 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.
- You are required to complete at least 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](#)

Course progression map for 2019 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 – Software Engineering – Industry Based Learning

Year	Sem	Units				
1	1	Common first year				
	2					
2	1	FIT2085 Introduction to computer science for engineers	MAT1830 Discrete mathematics for computer science	FIT2099 Object-oriented design and implementation	Elective or software engineering technical elective	
	2	FIT2101 Software engineering process and management	FIT2004 Algorithms and data structures	FIT2107 Software quality and testing	FIT2100 Operating systems	
3	1	FIT3159 Computer architecture	FIT3077 Software engineering: Architecture and design	FIT3171 Databases	Software engineering technical elective at level 3 or 4	Elective or Software engineering technical elective
	2	FIT4042 Industry based learning (18 points)			*See footnote	Malaysia students enrol in ENG0002 Industrial training (0 credit points)
4	1	FIT3170 Software engineering practice (12 points)	FIT4003 Software engineering research project Replace with FIT4701 from 2023	FIT4165 Computer networks	Software engineering technical elective at level 3, 4 or 5	Clayton students enrol in ENG0001 Continuous Professional Development (0 credit points)
	2		Replace with FIT4702 from 2023	Software engineering technical elective at level 3 or 4	Software engineering technical elective at level 3, 4 or 5	

Notes:

- [MINORS AND ELECTIVES LIST](#) is located on the Faculty's current student course information webpage.
- 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 at least 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](#).