

Course progression map for 2021 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 does not substitute for the list of required units as described in the course 'Requirements' section of the [Handbook](#). Please note that the map is subject to updates. Version update: 26 November 2020

E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

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	ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting
	2	ENG1002 Engineering design: Cleaner, safer, smarter	ENG1003 Engineering mobile apps	Level one engineering elective unit	ECC1000 Principles of microeconomics

Tip: You can swap the semester of your first year engineering elective and your semester 1 commerce unit.

If you need to enrol in foundation physics and maths*:					
1	1	ENG1002 Engineering design: Cleaner, safer, smarter	PHS1001 Foundation physics	ENG1090 Foundation mathematics	ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting
	2	ENG1001 Engineering design: Lighter, faster, stronger	ENG1005 Engineering mathematics	ENG1060 Computing for engineers	ECC1000 Principles of microeconomics

- If you require two foundation units, you will need to take the remaining core unit ENG1003 Engineering mobile apps in semester one of year two as an overload, and increase the total credit points needed for the double by 6 points. You cannot swap the semesters of any of the units.
- If you want to complete Software Engineering, you must complete ENG1003 Engineering mobile apps in Year 1 (Semester 1) and ENG1001 Engineering design: Lighter, faster, stronger in Year 2 (Semester 1) as an overload.

If you need to enrol in foundation maths:					
1	1	ENG1002 Engineering design: Cleaner, safer, smarter	ENG1003 Engineering mobile apps	ENG1090 Foundation mathematics	ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting
	2	ENG1001 Engineering design: Lighter, faster, stronger	ENG1005 Engineering mathematics	ENG1060 Computing for engineers	ECC1000 Principles of microeconomics

Tip: You can swap the semester of ENG1003 and your semester 2 commerce unit if you like.

If you need to enrol in foundation physics:					
1	1	ENG1002 Engineering design: Cleaner, safer, smarter	ENG1003 Engineering mobile apps	PHS1001 Foundation physics	ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting
	2	ENG1001 Engineering design: Lighter, faster, stronger	ENG1005 Engineering mathematics	ENG1060 Computing for engineers	ECC1000 Principles of microeconomics

Tip: You can swap the semester of ENG1003 and your semester 2 commerce unit if you like.

Note:

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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation - Aerospace Engineering

	Bachelor of Aerospace Engineering (Honours)	Bachelor of Commerce			
YEAR 1 Semester 1	Common first year			ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting	
YEAR 1 Semester 2				ECC1000 Principles of microeconomics	
YEAR 2 Semester 1	ENG2005 Advanced engineering mathematics	MAE2412 Aerospace design	ETC1000 Business and economic statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps
YEAR 2 Semester 2	MAE2404 Aerodynamics 1	MAE2402 Thermodynamics and gas dynamics	MKC1200 Principles of marketing	MGC1010 Introduction to management	
YEAR 3 Semester 1	MAE2401 Aerospace structures and materials	MAE3401 Aerodynamics 2	Commerce major	Commerce major	
YEAR 3 Semester 2	MAE2505 Aerospace dynamics	MAE3405 Flight vehicle propulsion <i>Unit title change in 2022</i>	Commerce major	Commerce major	
YEAR 4 Semester 1	MAE3456 Aerospace computational mechanics	MAE3404 Flight vehicle dynamics	Commerce major	Level three commerce major	
YEAR 4 Semester 2	MAE3411 Aerospace structural mechanics	MAE3408 Aerospace control	Level three commerce major	Level three commerce major	
YEAR 5 Semester 1	MEC4401 Final year project	MAE4410 Flight vehicle design	MAE4416 Orbital mechanics and spaceflight dynamics	Level three Capstone Portfolio unit	ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	MEC4402 Final year project - Thesis	MAE4404 Aerospace practices <i>Unit title change in 2023</i>	MAE4426 Finite element analysis and composite materials	Commerce elective	

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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce Specialisation - Chemical Engineering

	Bachelor of Chemical Engineering (Honours)		Bachelor of Commerce		
YEAR 1 Semester 1	Common first year				ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting
YEAR 1 Semester 2					ECC1000 Principles of microeconomics
YEAR 2 Semester 1	ENG2005 Advanced engineering mathematics	CHM1011 Chemistry 1 (if not already completed at level 1) or CHM1051 Chemistry 1 Advanced	ETC1000 Business and economic statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps
YEAR 2 Semester 2	CHE2162 Material and energy balances	CHE2161 Mechanics of fluids	MKC1200 Principles of marketing	MGC1010 Intro to management	
YEAR 3 Semester 1	CHE2164 Thermodynamics 1	CHE3167 Transport phenomena and numerical methods	Commerce major	Commerce major	
YEAR 3 Semester 2	CHE2163 Heat and mass transfer	CHE3162 Process control	Commerce major	Commerce major	
YEAR 4 Semester 1	CHE3161 Chemistry and chemical thermodynamics	CHE3165 Separation processes	Commerce major	Level three commerce major	
YEAR 4 Semester 2	CHE3166 Process design	CHE3164 Reaction engineering	Level three commerce major	Level three commerce major	
YEAR 5 Semester 1	CHE4164 Integrated industrial project (18 points) For selected students taking a period of integrated industrial training in the first semester of their final year. This will replace the three core units below [CHE4181, CHE4182 and CHE4161]			Level three Capstone Portfolio unit	ENG0001 Continuous Professional Development (0 credit points)
OR	CHE4181 Chemical engineering project A	CHE4162 Particle technology	CHE4161 Engineers in society	Level three Capstone Portfolio unit	
YEAR 5 Semester 2	CHE4182 Chemical engineering project B	CHE4170 Design project (12 points)		Commerce elective	

Note:

- If you choose CHE4164 and depending on placement location, you may have to overload a semester or extend an additional semester in order to complete your course requirement.
- You should not overload in the semester of undertaking CHE4170.
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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation - Civil Engineering

	Bachelor of Civil Engineering (Honours)		Bachelor of Commerce		
YEAR 1 Semester 1	Common first year			ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting	
YEAR 1 Semester 2				ECC1000 Principles of microeconomics	
YEAR 2 Semester 1	CIV2282 Transport and traffic engineering	CIV2206 Structural mechanics	ETC1000 Business and economic statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps
YEAR 2 Semester 2	CIV2235 Structural materials	ENG2005 Advanced engineering mathematics	MKC1200 Principles of marketing	MGC1010 Intro to management	
YEAR 3 Semester 1	CIV3294 Structural design	CIV2263 Water systems	Commerce major	Commerce major	
YEAR 3 Semester 2	CIV3204 Engineering investigation	CIV2242 Geomechanics 1	Commerce major	Commerce major	
YEAR 4 Semester 1	CIV3285 Engineering hydrology	CIV3248 Groundwater and environmental geomechanics	Commerce major	Level three commerce major	
YEAR 4 Semester 2	CIV3247 Geomechanics 2	CIV3221 Building structures and technology	Level three commerce major	Level three commerce major	
YEAR 5 Semester 1	CIV4280 Bridge design and assessment	CIV4210 Project A	CIV4286 Project management for civil engineers	Level three Capstone Portfolio unit	ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	CIV4288 Water treatment	CIV4212 Civil engineering practice 4	CIV4287 Road engineering	Commerce elective	

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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation - Electrical and Computer Systems Engineering

	Bachelor of Electrical and Computer Systems Engineering (Honours)		Bachelor of Commerce			
YEAR 1 Semester 1	Common first year			ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting		
YEAR 1 Semester 2				ECC1000 Principles of microeconomics		
YEAR 2 Semester 1	ENG2005 Advanced engineering mathematics	ECE2071 Computer organisation and programming	ETC1000 Business and economic statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps	
YEAR 2 Semester 2	ECE2191 Probability models in engineering	ECE2072 Digital systems	MKC1200 Principles of marketing	MGC1010 Intro to management		
YEAR 3 Semester 1	ECE3073 Computer systems	ECE2131 Electrical circuits	Commerce major	Commerce major		
YEAR 3 Semester 2	ECE2111 Signals and systems	ECE3121 Engineering electromagnetics	Commerce major	Commerce major		
YEAR 4 Semester 1	ECE3161 Analogue electronics	ECE3141 Information and networks	Commerce major	Level three commerce major		
YEAR 4 Semester 2	Level four ECSE technical elective	ECE3091 Engineering design	Level three commerce major	Level three commerce major		
YEAR 5 Semester 1	ECE3051 Electrical energy systems	ECE4094 Project A	Level four ECSE technical elective	Level three Capstone Portfolio unit		ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	ECE4132 Control system design	ECE4095 Project B	ECE4099 Professional practice	Commerce elective		

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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation - Environmental Engineering

	Bachelor of Environmental Engineering (Honours)		Bachelor of Commerce		
YEAR 1 Semester 1	Common first year			ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting	
YEAR 1 Semester 2				ECC1000 Principles of microeconomics	
YEAR 2 Semester 1	BTX3100 Sustainability regulation for business	ENE2021 Energy and the environment	ETC1000 Business and economics statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps
YEAR 2 Semester 2	ENG2005 Advanced engineering mathematics	CHE2162 Material and energy balances	MKC1200 Principles of marketing	MGC1010 Intro to management	
YEAR 3 Semester 1	ENE3031 Building sustainability	CIV2263 Water systems	Commerce major	Commerce major	
YEAR 3 Semester 2	CHE2164 Thermodynamics 1 <small>*Unit offering changed to Sem 1 from 2020</small>	ENE2503 Materials properties and recycling	Commerce major	Commerce major	
YEAR 4 Semester 1	CIV3248 Groundwater and environmental geomechanics	CIV3285 Engineering hydrology	Commerce major	Level three commerce major	
YEAR 4 Semester 2	ENE3606 The air environment	ENE3032 Fate and transport of contaminants	Level three commerce major	Level three commerce major	
YEAR 5 Semester 1	CIV4286 project management for civil engineers	CIV4210 Project A	ENE4042 Environment impact and risk assessment	Level three Capstone Portfolio unit	ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	ENE4041 Soil remediation and solid waste management	Level four environmental engineering technical elective	CIV4212 Civil and environmental engineering practice	Commerce elective	

Note:

- The Sustainable processing stream is not available in a double degree as it requires extra prerequisites in the elective space.
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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation - Materials Engineering

	Bachelor of Materials Engineering (Honours)	Bachelor of Commerce			
YEAR 1 Semester 1	Common first year			ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting	
YEAR 1 Semester 2				ECC1000 Principles of microeconomics	
YEAR 2 Semester 1	MTE2101 Atomic-scale structure of materials	MTE2102 Phase equilibria and phase transformations	ETC1000 Business and economic statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps
YEAR 2 Semester 2	MTE2202 Functional materials 1	ENG2005 Advanced engineering mathematics	MKC1200 Principles of marketing	MGC1010 Intro to management	
YEAR 3 Semester 1	MTE3103 Materials life-cycle	MTE2103 Mechanical properties of materials	Commerce major	Commerce major	
YEAR 3 Semester 2	MTE3202 Functional materials 2	MTE2201 Polymers	Commerce major	Commerce major	
YEAR 4 Semester 1	MTE3101 Materials in a complex world 1: Data and modelling	MTE3102 Structural materials	Commerce major	Level three commerce major	
YEAR 4 Semester 2	MTE3201 Materials in a complex world 2: Characterisation, identification and selection	MTE3203 Ceramics	Level three commerce major	Level three commerce major	
YEAR 5 Semester 1	MTE4101 Materials in a complex world 3: Design, build and create	MTE4525 Project 1	MTE4102 Advanced materials processing and manufacturing	Level three Capstone Portfolio unit	ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	MTE4201 Materials in a complex world 4: Impact in society	MTE4526 Project 2	Level four (or above) materials technical elective	Commerce elective	

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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation - Mechanical Engineering

	Bachelor of Mechanical Engineering (Honours)		Bachelor of Commerce			
YEAR 1 Semester 1	Common first year			ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps	
YEAR 1 Semester 2				ECC1000 Principles of microeconomics		
YEAR 2 Semester 1	MEC2403 Mechanics of materials	MEC2401 Dynamics 1	ETC1000 Business and economic statistics	BTC1110 Commercial law		
YEAR 2 Semester 2	MEC2404 Mechanics of fluids	ENG2005 Advanced engineering mathematics	MKC1200 Principles of marketing	MGC1010 Intro to management		
YEAR 3 Semester 1	MEC2402 Design methods	MEC3456 Engineering computational analysis	Commerce major	Commerce major		
YEAR 3 Semester 2	MEC3457 Systems and control	MEC2405 Thermodynamics	Commerce major	Commerce major		
YEAR 4 Semester 1	MEC3455 Solid mechanics	MEC3451 Fluid mechanics 2	Commerce major	Level three commerce major		
YEAR 4 Semester 2	MEC3453 Dynamics 2	MEC3416 Machine design	Level three commerce major	Level three commerce major		
YEAR 5 Semester 1	MEC4408 Thermodynamics and heat transfer	MEC4404 Professional Practice	MEC4401 Final year project	Level three Capstone Portfolio unit		ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	MEC4426 Computer-aided design	MEC4407 Design project	MEC4402 Final year project – Thesis	Commerce elective		

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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation – Robotics and Mechatronics Engineering

	Bachelor of Robotics and Mechatronics Engineering (Honours)		Bachelor of Commerce		
YEAR 1 Semester 1	Common first year			ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting	
YEAR 1 Semester 2				ECC1000 Principles of microeconomics	
YEAR 2 Semester 1	ECE2071 Computer organisation and programming	ECE2131 Electrical circuits	ETC1000 Business and economic statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1003 Engineering mobile apps
YEAR 2 Semester 2	ENG2005 Advanced engineering mathematics	TRC2201 Mechanics	MKC1200 Principles of marketing	MGC1010 Intro to management	
YEAR 3 Semester 1	TRC3200 Dynamical systems	MEC2402 Design methods	Commerce major	Commerce major	
YEAR 3 Semester 2	Automation stream TRC4802 Thermo-fluids and power systems Artificial intelligence stream ECE4179 Neural networks and deep learning	ECE2072 Digital systems	Commerce major	Commerce major	
YEAR 4 Semester 1	ECE3161 Analogue electronics	TRC3500 Sensors and artificial perception	Commerce major	Level three commerce major	
YEAR 4 Semester 2	TRC3600 Modelling and control	Automation stream TRC3000 Automation project Artificial intelligence stream ECE3091 Engineering design	Level three commerce major	Level three commerce major	

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YEAR 5 Semester 1	TRC4000 Robotics and mechatronics final year project 1	TRC4800 Robotics	Automation stream TRC4200 Engineering cyber-physical systems Artificial intelligence stream ECE4076 Computer vision	Level three Capstone Portfolio unit	ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	TRC4001 Robotics and mechatronics final year project 2	Automation stream TRC4902 Mechatronics and manufacturing Artificial intelligence stream ECE4078 Intelligent robotics	TRC4002 Professional Practice	Commerce elective	

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E3005 Bachelor of Engineering (Honours) and Bachelor of Commerce

Specialisation - Software Engineering

	Bachelor of Software Engineering (Honours)	Bachelor of Commerce			
YEAR 1 Semester 1	Common first year				
YEAR 1 Semester 2					
	ACC1200 Accounting for managers or ACC1100 Introduction to financial accounting				
		ECC1000 Principles of microeconomics			
YEAR 2 Semester 1	MAT1830 Discrete mathematics for computer science	FIT2085 Introduction to computer science	ETC1000 Business and economics statistics	BTC1110 Commercial law	If two foundation units are required then overload is required for ENG1001 Engineering design: Lighter, faster, stronger
YEAR 2 Semester 2	FIT2004 Algorithms and data structures	FIT2101 Software engineering process and management	MKC1200 Principles of Marketing	MGC1010 Introduction to Management	
YEAR 3 Semester 1	FIT3159 Computer architecture	FIT2099 Object oriented design and implementation	Commerce major	Commerce major	
YEAR 3 Semester 2	FIT2107 Software quality and testing	FIT2100 Operating systems	Commerce major	Commerce major	
YEAR 4 Semester 1	FIT3170 Software engineering industry practice (12 points)	FIT3077 Software engineering: architecture and design	Commerce major	Level three commerce major	
YEAR 4 Semester 2		FIT3171 Databases	Level three commerce major	Level three commerce major	
YEAR 5 Semester 1	FIT4002 Software engineering industry experience studio project (12 points)	FIT4165 Computer networks	Level four (or above) software engineering technical elective	Level three Capstone Portfolio unit	ENG0001 Continuous Professional Development (0 credit points)
YEAR 5 Semester 2		FIT4003 Software engineering research project		Commerce elective	

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