

## Course progression map for 2020 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](#). This map is subject to updates. Update version: 11 October 2025

### E3010 Bachelor of Engineering (Honours) and Bachelor of Computer Science

#### Common first year

If no foundation units are required:					
Year	Sem	Units			
1	1	<a href="#">ENG1001</a> Engineering design: lighter, faster, stronger	<a href="#">ENG1005</a> Engineering mathematics	<a href="#">ENG1060</a> Computing for engineers	<a href="#">FIT1045</a> Algorithms and programming fundamentals in Python
	2	<a href="#">ENG1002</a> Engineering design: cleaner, safer, smarter	<a href="#">ENG1003</a> Engineering mobile apps	<a href="#">First Year engineering elective unit</a>	<a href="#">FIT1008</a> Introduction to computer science

Tip: You can swap the semesters of your engineering elective and FIT1045.

If you need to enrol in foundation physics and maths*:					
1	1	<a href="#">ENG1002</a> Engineering design: cleaner, safer, smarter	<a href="#">PHS1001</a> Foundation physics	<a href="#">ENG1090</a> Foundation mathematics	<a href="#">FIT1045</a> Algorithms and programming fundamentals in Python
	2	<a href="#">ENG1003</a> Engineering mobile apps	<a href="#">ENG1005</a> Engineering mathematics	<a href="#">ENG1060</a> Computing for engineers	<a href="#">FIT1008</a> Introduction to computer science

- If you require two foundation units, you will need to take the remaining core unit [ENG1001](#) Engineering design: lighter, faster, stronger 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 [PHS1001](#) Foundation physics in Year 2 (Semester 1) as an overload.

If you need to enrol in foundation maths:					
1	1	<a href="#">ENG1002</a> Engineering design: cleaner, safer, smarter	<a href="#">ENG1003</a> Engineering mobile apps	<a href="#">ENG1090</a> Foundation mathematics	<a href="#">FIT1045</a> Algorithms and programming fundamentals in Python
	2	<a href="#">ENG1001</a> Engineering design: lighter, faster, stronger	<a href="#">ENG1005</a> Engineering mathematics	<a href="#">ENG1060</a> Computing for engineers	<a href="#">FIT1008</a> Introduction to computer science

Tip: You can swap the semesters of [ENG1003](#) and [FIT1008](#).

If you need to enrol in foundation physics:					
1	1	<a href="#">ENG1002</a> Engineering design: cleaner, safer, smarter	<a href="#">ENG1003</a> Engineering mobile apps	<a href="#">PHS1001</a> Foundation physics	<a href="#">FIT1045</a> Algorithms and programming fundamentals in Python
	2	<a href="#">ENG1001</a> Engineering design: lighter, faster, stronger	<a href="#">ENG1005</a> Engineering mathematics	<a href="#">ENG1060</a> Computing for engineers	<a href="#">FIT1008</a> Introduction to computer science

Tip: You can swap the semesters of [ENG1003](#) and [FIT1008](#).

#### 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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### E3010 Bachelor of Engineering (Honours) and Bachelor of Computer Science

#### Specialisation - Electrical and Computer Systems Engineering and Advanced Computer Science

	Bachelor of Electrical and Computer Systems Engineering (Honours)	Bachelor of Computer Science			
YEAR 1 Semester 1	<b>Common first year</b>			<a href="#">FIT1045</a> Algorithms and programming fundamentals in Python	
YEAR 1 Semester 2				<a href="#">FIT1008</a> Introduction to computer science	
YEAR 2 Semester 1	<a href="#">ENG2005</a> Advanced engineering mathematics	<a href="#">ECE2071</a> Computer organisation and programming <small>Unit title change from 2025</small>	<a href="#">FIT1047</a> Introduction to computer systems, networks and security	<a href="#">MAT1830</a> Discrete mathematics for computer science	If two foundation units are required then overload is required for <a href="#">ENG1001</a> Engineering design: lighter, faster, stronger
YEAR 2 Semester 2	<a href="#">ECE2191</a> Probability models in engineering	<a href="#">ECE2072</a> Digital systems	<a href="#">FIT1049</a> IT professional practice	<a href="#">FIT</a> elective	
YEAR 3 Semester 1	<a href="#">ECE3073</a> Computer systems	<a href="#">ECE2131</a> Electrical circuits	<a href="#">FIT2004</a> Algorithms and data structures	<a href="#">FIT2099</a> Object-oriented design and implementation	
YEAR 3 Semester 2	<a href="#">ECE2111</a> Signals and systems	<a href="#">ECE3121</a> Engineering electromagnetics <small>In 2024: Replace with <a href="#">ECE3122</a></small>	<a href="#">FIT2014</a> Theory of computation	<a href="#">FIT2102</a> Programming paradigms	
YEAR 4 Semester 1	<a href="#">ECE3161</a> Analogue electronics <small>Semester 2 offering from 2025</small>	<a href="#">ECE3141</a> Information and networks	<a href="#">FIT3171</a> Databases	Level 3 computer science approved elective	
YEAR 4 Semester 2	<a href="#">ECE4132</a> Control system design	<a href="#">Level 4 or 5 ECE-coded core elective</a>	<a href="#">FIT3155</a> Advanced data structures and algorithms	<a href="#">FIT3143</a> Parallel computing	
YEAR 5 Semester 1	<a href="#">ENG4701</a> Final year project A	<a href="#">ECE3051</a> Electrical energy systems	ECE4099 Professional practice <small>From Sem 2, 2024: Replace with one <a href="#">Professional Practice domain unit</a></small>	<a href="#">FIT3161</a> Computer science project 1	<a href="#">ENG0001</a> Continuous Professional Development (0 credit points)
YEAR 5 Semester 2	<a href="#">ENG4702</a> Final year project B	<a href="#">ECE4191</a> Engineering integrated design	<a href="#">Level 4 or 5 ECE-coded core elective</a>	<a href="#">FIT3162</a> Computer science project 2	

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### E3010 Bachelor of Engineering (Honours) and Bachelor of Computer Science

#### Specialisation - Software Engineering and Advanced Computer Science

	Bachelor of Software Engineering (Honours)	Bachelor of Computer Science			
YEAR 1 Semester 1	<b>Common first year</b>			<a href="#">FIT1045</a> Algorithms and programming fundamentals in Python	
YEAR 1 Semester 2				<a href="#">FIT1008</a> Introduction to computer science	
YEAR 2 Semester 1	<a href="#">MAT1830</a> Discrete mathematics for computer science	<a href="#">Software engineering approved elective</a>	<a href="#">FIT1047</a> Introduction to computer systems, networks and security	FIT elective	If two foundation units are required then overload is required for <a href="#">ENG1001</a> Engineering design: lighter, faster, stronger
YEAR 2 Semester 2	<a href="#">FIT2004</a> Algorithms and data structures	<a href="#">FIT2101</a> Software engineering process and management	<a href="#">FIT1049</a> IT professional practice	FIT elective	
YEAR 3 Semester 1	<a href="#">FIT3159</a> Computer architecture	<a href="#">FIT2099</a> Object oriented design and implementation	Level 2 FIT elective	Any level 3 unit from list B of the advanced computer science specialisation	
YEAR 3 Semester 2	<a href="#">FIT2107</a> Software quality and testing	<a href="#">FIT2100</a> Operating systems	<a href="#">FIT2014</a> Theory of computation	<a href="#">FIT2102</a> Programming paradigms	
YEAR 4 Semester 1	<a href="#">FIT3170</a> Software engineering practice (12 points)	<a href="#">FIT3077</a> Software engineering: architecture and design	Level 3 computer science approved elective	Level 3 computer science approved elective	
YEAR 4 Semester 2		<a href="#">FIT3171</a> Databases	<a href="#">FIT3155</a> Advanced data structures and algorithms	<a href="#">FIT3143</a> Parallel computing	
YEAR 5 Semester 1	<a href="#">FIT4002</a> Software engineering industry experience studio project (12 points)	<a href="#">FIT4003</a> Software engineering research project <small>Replace with <a href="#">FIT4701</a> from 2023</small>	<a href="#">FIT4165</a> Computer networks	<a href="#">FIT3161</a> Computer science project 1	<a href="#">ENG0001</a> Continuous Professional Development (0 credit points)
YEAR 5 Semester 2		<small>Replace with <a href="#">FIT4702</a> from 2023</small>	<a href="#">Level 4 or 5 software engineering core elective</a>	<a href="#">FIT3162</a> Computer science project 2	

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