MONASH University

Course progression map for 2022 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. Update version: 18 December 2023

E3011 Bachelor of Engineering (Honours) and Bachelor of Information Technology

Common first year

If no foundation units are required:

Year	Sem	Units			
1	Sem 1 Feb	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	FIT1047 Introduction to computer systems networks and security
	Sem 2 July	ENG1012 Engineering design	ENG1013 Engineering smart systems	First Year engineering technical elective	FIT1048 Fundamentals of C++ or FIT1045 Algorithms and programming fundamentals in Python or FIT1051 Programming fundamentals in Java
Tip: You can swap the semesters of your engineering elective and FIT1047.					

If you need to enrol in foundation physics and maths*:

1	Sem 1 Feb	ENG1012 Engineering design	PHS1001 Foundation physics * *Corequisite: ENG1090 **	ENG1090 Foundation mathematics *	FIT1047 Introduction to computer systems networks and security
	Sem 2 July	ENG1013 Engineering smart systems	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	FIT1048 Fundamentals of C++ or FIT1045 Algorithms and programming fundamentals in Python or FIT1051 Programming fundamentals in Java
You must complete ENG1013 Engineering smart systems in Year 1 and take ENG1011 Engineering methods in Year 2 (Semester 1) as an overload. This will increase the total credit points needed for the double degree by 6 points You cannot swap the semesters of any of the units.					

If you need to enrol in foundation maths*:

1	Sem 1 Feb	ENG1012 Engineering design	ENG1013 Engineering smart systems	ENG1090 Foundation mathematics *	FIT1047 Introduction to computer systems networks and security
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	FIT1048 Fundamentals of C++ or FIT1045 Algorithms and programming fundamentals in Python or FIT1051 Programming fundamentals in Java

If you need to enrol in foundation physics*:

1	Sem 1 Feb	ENG1012 Engineering design	ENG1013 Engineering smart systems	PHS1001 Foundation physics *	FIT1047 Introduction to computer systems networks and security
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Corequisite: ENG1005*	FIT1048 Fundamentals of C++ or FIT1045 Algorithms and programming fundamentals in Python or FIT1051 Programming fundamentals in Java

NOTE:

- * 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.
- For enrolment advice, please refer to the Course advisers webpage.

Course progression map for 2022 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. Update version: 18 December 2023

E3011 Bachelor of Engineering (Honours) and Bachelor of Information Technology

Engineering specialisation - Electrical and computer systems engineering
IT major – Computer networks and security

	Bachelor of Electrical and Computer Systems Engineering (Honours)		Bachelor of Information Technology		
Year 1 Semester 1 February	Common first year			FIT1047 Introduction to computer systems networks and security	
Year 1 Semester 2 July				FIT1048 Fundamentals of C++ or FIT1045 Algorithms and programming fundamentals in Python or FIT1051 Programming fundamentals in Java	
Year 2 Semester 1 February	ENG2005 Advanced engineering mathematics	ECE2071 Computer organisation and programming	FIT2094 Databases	FIT2093 Introduction to cyber security	If two foundation units are required then overload is required for ENG1011 Engineering methods
Year 2 Semester 2 July	ECE2191 Probability models in engineering	ECE2072 Digital systems	FIT1049 IT professional practice	FIT2100 Operating systems	
Year 3 Semester 1 February	ECE3073 Computer systems	ECE2131 Electrical circuits	FIT elective	FIT2001 Systems development or FIT2099 Object-oriented design and implementation	
Year 3 Semester 2 July	ECE2111 Signals and systems	ECE3121 Engineering electromagnetics Replace with ECE3122 in 2024	FIT2002 IT project management	FIT elective	
Year 4 Semester 1 February	ECE3161 Analogue electronics	ECE3141 Information and networks	FIT3173 Software security	FIT3165 Computer networks	
Year 4 Semester 2 July	ECE4132 Control system design	Level 4 or 5 ECE-coded core elective	FIT3031 Network security	FIT2081 Mobile applications development or FIT3142 Distributed computing or FIT3168 IT forensics	
Year 5 Semester 1 February	ENG4701 Final year project A	ECE3051 Electrical energy systems	Level 4 or 5 ECE-coded core elective	FIT3047 IE Studio project 1	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	ECE4191 Engineering integrated design	ECE4099 Professional practice	FIT3048 IE Studio project 2	

NOTE:

- **ECE2072** - If you have completed the unit as a First Year elective, you must replace the core with another unit from the electrical and computer systems engineering technical electives list or from one of the engineering minors. The replacement unit must be of the same level as the core unit or higher.
- Engineering minors are not available in the Engineering double degree courses.
- 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.

MONASH University

Course progression map for 2022 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. Update version: 18 December 2023

E3011 Bachelor of Engineering (Honours) and Bachelor of Information Technology

Engineering specialisation - Software engineering
IT major – Computer networks and security

	Bachelor of Software Engineering (Honours)		Bachelor of Information Technology		
Year 1 Semester 1 February	Common first year			FIT1047 Introduction to computer systems, networks and security	
Year 1 Semester 2 July				FIT1048 Fundamentals of C++ or FIT1045 Algorithms and programming fundamentals in Python or FIT1051 Programming fundamentals in Java	
Year 2 Semester 1 February	MAT1830 Discrete mathematics for computer science	FIT2085 Introduction to computer science	FIT2094 Databases	FIT2093 Introduction to cyber security	If two foundation units are required then overload is required for ENG1011 Engineering methods
Year 2 Semester 2 July	FIT2004 Algorithms and data structures	FIT2101 Software engineering process and management	FIT1049 IT professional practice	FIT elective	
Year 3 Semester 1 February	FIT3159 Computer architecture	FIT2099 Object oriented design and implementation	FIT elective	FIT2001 Systems development	
Year 3 Semester 2 July	FIT2107 Software quality and testing	FIT2100 Operating systems	FIT2002 IT project management	FIT elective	
Year 4 Semester 1 February	FIT3170 Software engineering practice (12 points)	FIT3077 Software engineering: architecture and design	FIT3173 Software security	FIT2081 Mobile applications development	
Year 4 Semester 2 July		Level 3 or 4 software engineering technical elective	FIT3031 Network security	FIT3142 Distributed computing Replace with FIT3168 from 2023	
Year 5 Semester 1 February	FIT4002 Software engineering industry experience studio project (12 points)	FIT4003 Software engineering research project Replace with FIT4701 from 2023	FIT4165 Computer networks	FIT3047 IE Studio project 1	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July		Replace with FIT4702 from 2023	Level 4 or 5 software engineering core elective	FIT3048 IE Studio project 2	

NOTE:

- Engineering minors are not available in the Engineering double degree courses.
- 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.