MONASH University

Course progression maps for 2027 commencing students

This progression map provides advice on the optimal sequencing of units and guidance on planning unit enrolment for each semester of study in conjunction with the required units outlined in the course 'Requirements' section of the Handbook. Please note that the map may be updated to reflect changes to course requirements. Be sure to review it for the latest information before re-enrolling. *Last updated: 24 September 2026*

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

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)					
Year	**Sem**	**Units**			
1	Sem 1 Feb	ENG1013 Engineering smart systems	PHS1001 Foundation physics * *Recommended: ENG1090 **	ENG1090 Foundation mathematics *	FIT1045 Software development 1: Programming foundations
	Sem 2 July	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Required: ENG1090 **	FIT1047 Computing systems 1: Foundations and operations
If you require two foundation units, you will need to take the remaining core unit ENG1012 Engineering for people and planet in Year 2 (Semester 1) as an overload. This increases the total credit points needed for the double degree by 6 points. You cannot swap the semesters of any of the units.					

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 for people and planet	ENG1011 Engineering methods	ENG1090 Foundation mathematics *	FIT1045 Software development 1: Programming foundations
	Sem 2 July	ENG1013 Engineering smart systems	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Required: ENG1090 **	FIT1047 Computing systems 1: Foundations and operations

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 * *Recommended: ENG1090 **	FIT1045 Software development 1: Programming foundations
	Sem 2 July	ENG1011 Engineering methods	ENG1012 Engineering for people and planet	ENG1014 Engineering numerical analysis *Required: ENG1090 **	FIT1047 Computing systems 1: Foundations and operations

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					
1	Sem 1 Feb	ENG1011 Engineering methods	ENG1005 Engineering mathematics *Required: ENG1090 **	ENG1014 Engineering numerical analysis *Required: ENG1090 **	FIT1045 Software development 1: Programming foundations
	Sem 2 July	ENG1012 Engineering for people and planet	ENG1013 Engineering smart systems	First Year engineering breadth study	FIT1047 Computing systems 1: Foundations and operations

NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- ***Foundation units ENG1090 and PHS1001:** 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.
- 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 refer to the Course advisers webpage.

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

Engineering specialisation - Electrical and computer systems engineering
IT majors*

	Bachelor of Electrical and Computer Systems Engineering (Honours)		Bachelor of Information Technology		
Year 1 Semester 1 February	Common First Year			FIT1045 Software development 1: Programming foundations	
Year 1 Semester 2 July				FIT1047 Computing systems 1: Foundations and operations	
Year 2 Semester 1 February	ECE2071 Systems programming	ECE2131 Electrical circuits	FIT1062 Data management	Major unit 1^ *or* FIT1063 Topics in computing *or* MTH1010# Functions and their applications *or* Elective	If two foundation units are required then overload is required for ENG1012 Engineering for people and planet
Year 2 Semester 2 July	ECE2072 Digital systems	ENG2005 Advanced engineering mathematics	BIT listed major unit 1 or elective	BIT listed major unit 2	
Year 3 Semester 1 February	ECE3051 Electrical energy systems	ECE3073 Computer systems	BIT listed major unit 3	BIT listed major unit 4	
Year 3 Semester 2 July	ECE2111 Signals and systems	ECE2191 Probability and AI for engineers	BIT listed major unit 5	BIT listed major unit 6	
Year 4 Semester 1 February	ECE3141 Information and networks	Core List A elective	BIT listed major unit 7	FIT2119 Computing in practice: Professional practice	
Year 4 Semester 2 July	ECE3121 Engineering electromagnetics	ECE3161 Analogue electronics	BIT listed major unit 8	FIT2130 Computing practice: Project practices and management	
Year 5 Semester 1 February	ENG4701 Final year project A	Complete one Professional Practice domain unit	Core List A or B elective	FIT3222 Computing practice: Project 1	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	ECE4191 Engineering integrated design	ECE3133 Control systems	FIT3223 Computing practice: Project 2	

NOTE:

- It is important that you follow the course map unit sequence, as units are designed to build on prior knowledge. Taking units out of sequence can disrupt your progression and cause delays due to semester offerings and enrolment rules.
- 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.
- **BACHELOR OF INFORMATION TECHNOLOGY**
  - *MAJOR STUDIES: Applied artificial intelligence, Artificial intelligence algorithms and models#, Business AI systems, Computer science#, Cybersecurity, Data science, Games and immersive media, Software development. (Agentic software engineering major is not available in this double-degree course).
  - ^If you completed the introductory unit relevant to your major in Year 2-Semester 1, you will choose an elective in Year 2-Semester 2.
  - #For selected majors, you will need to have a mathematics background equivalent to VCE Mathematics Methods or have completed MTH1010.
  - For enrolment advice, please refer to the Re-enrolment webpage.
- **BACHELOR OF ENGINEERING**
  - ECE2072: If you have completed ECE2072 as a First Year breadth study unit, it will count towards your ECSE engineering study. You must still fulfil the First Year engineering breadth study requirement by completing another breadth study unit.
  - 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.

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

Engineering specialisation – Robotics and mechatronics engineering
IT majors*

	Bachelor of Robotics and Mechatronics Engineering (Honours)		Bachelor of Information Technology		
Year 1 Semester 1 February	Common First Year			FIT1045 Software development 1: Programming foundations	
Year 1 Semester 2 July				FIT1047 Computing systems 1: Foundations and operations	
Year 2 Semester 1 February	ECE2071 Systems programming	ECE2131 Electrical circuits	FIT1062 Data management	Major unit 1^ *or* FIT1063 Topics in computing *or* MTH1010# Functions and their applications *or* Elective	If two foundation units are required then overload is required for ENG1012 Engineering for people and planet
Year 2 Semester 2 July	ENG2005 Advanced engineering mathematics	MMA2004 Dynamics 1	BIT listed major unit 1 or elective	BIT listed major unit 2	
Year 3 Semester 1 February	MMA2001 Design 1	TRC3200 Dynamical systems	BIT listed major unit 3	BIT listed major unit 4	
Year 3 Semester 2 July	ECE2072 Digital systems	MMA2005 Modelling and control	BIT listed major unit 5	BIT listed major unit 6	
Year 4 Semester 1 February	TRC3500 Sensors and artificial perception	ECE3073 Computer systems	BIT listed major unit 7	FIT2119 Computing in practice: Professional practice	
Year 4 Semester 2 July	MMA2003 Thermofluids 1	ECE3192 Fundamentals of deep learning	BIT listed major unit 8	FIT2130 Computing practice: Project practices and management	
Year 5 Semester 1 February	ENG4701 Final year project A	TRC4800 Robotics	ECE4076 Computer vision	FIT3222 Computing practice: Project 1	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July	ENG4702 Final year project B	TRC4407 Automation design project	Complete one Professional Practice domain unit	FIT3223 Computing practice: Project 2	

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- **BACHELOR OF INFORMATION TECHNOLOGY**
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  - ^If you completed the introductory unit relevant to your major in Year 2-Semester 1, you will choose an elective in Year 2-Semester 2.
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E3011 Bachelor of Engineering (Honours) and Bachelor of Information Technology

Engineering specialisation - Software engineering
IT majors*

	Bachelor of Software Engineering (Honours)		Bachelor of Information Technology		
Year 1 Semester 1 February	Common First Year			FIT1045 Software development 1: Programming foundations	
Year 1 Semester 2 July				FIT1047 Computing systems 1: Foundations and operations	
Year 2 Semester 1 February	MAT1830 Discrete mathematics for computer science	FIT2099 Object oriented design and implementation	FIT1062 Data management	Major unit 1^ *or* FIT1063 Topics in computing *or* MTH1010# Functions and their applications *or* Elective	If two foundation units are required then overload is required for ENG1012 Engineering for people and planet
Year 2 Semester 2 July	FIT2115 Data structures and algorithms	FIT2101 Software engineering process and management	BIT listed major unit 1 or elective	BIT listed major unit 2	
Year 3 Semester 1 February	FIT2173 Software security	FIT2094 Databases	BIT listed major unit 3	BIT listed major unit 4	
Year 3 Semester 2 July	FIT2121 System architecture and integration	FIT2100 Operating systems	BIT listed major unit 5	BIT listed major unit 6	
Year 4 Semester 1 February	FIT3197 Software quality and testing	FIT3077 Software engineering: architecture and design	BIT listed major unit 7	FIT2119 Computing in practice: Professional practice	
Year 4 Semester 2 July	FIT3170 Software engineering practice	FIT3184 Cloud computing	BIT listed major unit 8	FIT2130 Computing practice: Project practices and management	
Year 5 Semester 1 February	FIT4002 Software engineering industry experience studio project (12 points)	FIT4701 Final year software engineering project A	FIT4043 Advanced topics in software engineering	FIT3222 Computing practice: Project 1	ENG0001 Continuous Professional Development (0 credit points)
Year 5 Semester 2 July		FIT4702 Final year software engineering project B	Level 4 or 5 software engineering core elective	FIT3223 Computing practice: Project 2	

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