

Course progression map for 2017 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

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 Sem 1	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	FIT1047 Introduction to computer systems, networks and security
YEAR 1 Sem 2	ENG1002 Engineering design: cleaner, safer, smarter or ENG1001	ENG1005 Engineering mathematics or ENG1003	Engineering elective or ENG1060 Computing for engineers (if not taken in Sem 1)	FIT1048 Fundamentals of C++ or FIT1045 Algorithms and programming fundamentals in python or FIT1051 Programming fundamentals in java
YEAR 2 Sem 1	ENG2005 Advanced engineering mathematics	ECE2071 Computer organisation and programming	FIT2094 Databases	FIT2093 Introduction to cyber security
YEAR 2 Sem 2	ECE2191 Probability models in engineering	ECE2072 Digital systems	FIT1049 IT professional practice	FIT2100 Operating systems
YEAR 3 Sem 1	ECE3073 Computer systems	ECE2131 Electrical circuits	FIT elective	FIT2001 Systems development or FIT2099 Object-oriented design and implementation
YEAR 3 Sem 2	ECE2111 Signals and systems	ECE3121 Engineering electromagnetics <small>Replace ECE3121 with ECE3122 in 2024</small>	FIT2002 IT project management	FIT elective
YEAR 4 Sem 1	ECE3161 Analogue electronics	ECE3141 Information and networks	FIT3173 Software security	FIT3165 Computer networks
YEAR 4 Sem 2	Level 4 or 5 ECE-coded core elective	ECE3091 Engineering design <small>Replace with ECE4191 from 2022</small>	FIT3031 Information and network security	FIT2081 Mobile applications development or FIT3142 Distributed computing
YEAR 5 Sem 1	ECE4094 Project A <small>Replace with ENG4701 from 2021/22</small>	ECE3051 Electrical energy systems*	ECE4099 Professional practice	FIT3047 IE Studio Project 1
YEAR 5 Sem 2	ECE4095 Project B <small>Replace with ENG4702 from 2022</small>	Level 4 or 5 ECE-coded core elective	ECE4132 Control system design**	FIT3048 IE Studio Project 2

* This unit replaces ECE4151 Electrical energy systems

** This unit replaces ECE3132 Control systems design.

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.

All Bachelor of Engineering (Honours) students are required to complete [Continuous Professional Development \(CPD\)](#) in order to graduate. For CPD advice, 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 - Software engineering; IT major – Computer Networks and Security

	Bachelor of Software Engineering (Honours)		Bachelor of Information Technology	
YEAR 1 Sem 1	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	FIT1047 Introduction to computer systems, networks and security
YEAR 1 Sem 2	ENG1002 Engineering design: cleaner, safer, smarter or ENG1001	ENG1005 Engineering mathematics or ENG1003	Engineering elective or ENG1060 Computing for engineers (if not taken in Sem 1)	FIT1048 Fundamentals of C++ or FIT1051 Programming fundamentals in java
YEAR 2 Sem 1	MAT1830 Discrete mathematics for computer science	FIT2085 Introduction to computer science	FIT2094 Databases	FIT2093 Introduction to cyber security
YEAR 2 Sem 2	FIT2004 Algorithms and data structures	FIT2101 Software engineering process and management	FIT1049 IT professional practice	FIT elective
YEAR 3 Sem 1	FIT2100 Operating systems	FIT2099 Object oriented design and implementation	FIT elective	FIT2001 Systems development
YEAR 3 Sem 2	FIT2107 Software quality and testing	FIT3159 Computer architecture	FIT2002 IT project management	FIT elective
YEAR 4 Sem 1	FIT3170 Software engineering practice (12 points)	FIT3077 Software engineering: architecture and design	FIT3173 Software security	FIT2081 Mobile applications development
YEAR 4 Sem 2		Level 3 or 4 Software engineering-approved elective	FIT3031 Information and network security	FIT3142 Distributed computing
YEAR 5 Sem 1	FIT4002 Software engineering industry experience studio project (12 points)	FIT4003 Software engineering research project <small>Replace with FIT4701 from 2023</small>	FIT4165 Computer networks	FIT3047 IE Studio Project 1
YEAR 5 Sem 2		<small>Replace with FIT4702 from 2023</small>	Software engineering technical elective at level 4 or 5	FIT3048 IE Studio Project 2

If two foundation units are required then overload is required for PHS1080 Foundation physics
*This unit is replaced by PHS1001 Foundation physics from 2018

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