MONASH University

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

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	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	FIT1045 Algorithms and programming fundamentals in python	
YEAR 1 Semester 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)	FIT1008 Introduction to computer science	
YEAR 2 Semester 1	ENG2005 Advanced engineering mathematics	ECE2071 Computer organisation and programming	FIT1047 Introduction to computer systems, networks and security	MAT1830 Discrete mathematics for computer science	If two foundation units are required then overload is required for PHS1080 Foundation physics **This unit is replaced by PHS1001 Foundation physics from 2018*
YEAR 2 Semester 2	ECE2191 Probability models in engineering	ECE2072 Digital systems	FIT1049 IT professional practice	FIT elective	
YEAR 3 Semester 1	ECE3073 Computer systems	ECE2131 Electrical circuits	FIT2004 Algorithms and data structures	FIT2099 Object-oriented design and implementation	
YEAR 3 Semester 2	ECE2111 Signals and systems	ECE3121 Engineering electromagnetics Replace ECE3121 with ECE3122 in 2024	FIT2014 Theory of computation	FIT2102 Programming paradigms	
YEAR 4 Semester 1	ECE3161 Analogue electronics	ECE3141 Information and networks	FIT3171 Databases	Level 3 computer science approved elective	
YEAR 4 Semester 2	Level 4 or 5 ECE-coded core elective	ECE3091 Engineering design Replace with ECE4191 from 2022. See footnote	FIT3155 Advanced data structures and algorithms	FIT3143 Parallel computing	
YEAR 5 Semester 1	ECE4094 Project A Replace with ENG4701 from 2021/22	ECE3051 Electrical energy systems*	ECE4099 Professional practice	FIT3161 Computer science project 1	
YEAR 5 Semester 2	ECE4095 Project B Replace with ENG4702 from 2022	Level 4 or 5 ECE-coded core elective	ECE4132 Control system design**	FIT3162 Computer science 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

Source: *Monash University 2017 Handbook* –http://www.monash.edu.au/pubs/2017handbooks/maps/map-e3010.pdf
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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	ENG1001 Engineering design: lighter, faster, stronger or ENG1002	ENG1003 Engineering mobile apps or ENG1005	Foundation unit or ENG1060 Computing for engineers	FIT1045 Algorithms and programming fundamentals in python	
YEAR 1 Semester 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)	FIT1008 Introduction to computer science	
YEAR 2 Semester 1	MAT1830 Discrete mathematics for computer science	SE approved elective	FIT1047 Introduction to computer systems, networks and security	FIT elective	If two foundation units are required then overload is required for PHS1080 Foundation physics **This unit is replaced by PHS1001 Foundation physics from 2018*
YEAR 2 Semester 2	FIT2004 Algorithms and data structures	FIT2101 Software engineering process and management	FIT1049 IT professional practice	FIT elective	
YEAR 3 Semester 1	FIT2100 Operating systems	FIT2099 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	FIT2107 Software quality and testing	FIT3159 Computer architecture	FIT2014 Theory of computation	FIT2102 Programming paradigms	
YEAR 4 Semester 1	FIT3170 Software engineering practice (12 points)	FIT3077 Software engineering: architecture and design	Level 3 computer science approved elective	Level 3 computer science approved elective	
YEAR 4 Semester 2		FIT3171 Databases	FIT3155 Advanced data structures and algorithms	FIT3143 Parallel computing	
YEAR 5 Semester 1	FIT4002 Software engineering industry experience studio project (12 points)	FIT4003 Software engineering research project Replace with FIT4701 from 2023	FIT4165 Computer networks	FIT3161 Computer science project 1	
YEAR 5 Semester 2		Replace with FIT4702 from 2023	Software engineering technical elective at level 4 or 5	FIT3162 Computer science project 2	

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