

BACHELOR OF SOFTWARE ENGINEERING (2770) – 2015 (Coursework stream)
Year 1

First Semester	FIT1040 Digital futures: Adventures in programming	Approved Elective Level 1, 2 or 3	MAT1830 Discrete mathematics for computer science	FIT1029 Algorithmic problem solving OR FIT1045 Introduction to algorithms and programming
Second Semester	FIT1004 Data management OR FIT2094 Databases [FIT1045 or FIT1048 or FIT1051]	FIT1010 Introduction to software engineering OR ENG1003 Engineering mobile apps	FIT1031 Computers and networks OR FIT1047 Introduction to computer systems, networks and security	FIT1008 Computer science [FIT1040 & FIT1029]

Year 2

First Semester	FIT2001 Systems development [24pts level 1 FIT]	FIT2024 Software engineering practice OR FIT2099 Object oriented design and implementation [FIT1045 or FIT1048 or FIT1051]	FIT2069 Computer architecture OR FIT3159 Computer architecture [One of FIT1031, FIT1047, FIT1008 or FIT2085]	FIT2004 Algorithms and data structures [FIT1008 & 6 pts approved Maths]
Second Semester	FIT2002 * Project management [36pts of study, including one of (FIT1040, FIT1045, FIT1048, FIT1051, ENG1003) and one of (FIT1049, FIT2003)]	FIT2043 Technical documentation for software engineers [FIT1010] OR Approved Software Engineering elective	FIT2070 Operating systems OR FIT2100 Operating systems [ENG1003 or FIT1047]	MAT2003 * Continuous mathematics for computer science OR MAT1841 Continuous mathematics for computer science

Year 3

First Semester	FIT3042 Systems tools and programming languages OR FIT2102 Programming paradigms [FIT1008]	FIT3077 Software engineering: architecture and design [FIT2001 & (FIT2024 or FIT2004)]	ECE2041 Telecommunications or FIT3141 Data communications and computer networks OR ECE3141 Information and networks OR FIT3165 Computer networks [FIT1047 & FIT1045 or FIT1048 or FIT1051]	FIT2003 IT professional practice OR FIT1049 IT professional practice [12 pts FIT units] OR ENG1061 Engineering profession***
Second Semester	Approved Elective Level 1, 2 or 3	FIT3013 Formal specification for software engineering OR FIT5138 Advanced software engineering [MAT1830 & FIT2004]	FIT3142 Distributed computing [FIT3141 or ECE2041 or ECE3141]	Approved Elective Level 1, 2 or 3

Year 4 (Option 1)

First Semester	FIT4002 Software engineering industry experience studio project (Full year project) [Pre-req: FIT3077 & FIT2002 Co-req: FIT4004] (12 points)	FIT4004 System verification and validation, quality and standards OR FIT5171 System verification and validation, quality and standards [MAT1830 & FIT2004]	Approved Elective Level 3 or 4	Approved Elective Level 3 or 4
Second Semester		Approved Elective Level 3 or 4	Approved Elective Level 3 or 4	Approved Elective Level 3 or 4

Year 4 (Option 2 – HONOURS RESEARCH OPTION) **

First Semester	FIT4002 Software engineering industry experience studio project (Full year project) [Pre-req: FIT3077 & FIT2002 Co-req: FIT4004] (12 points)	FIT4004 System verification and validation, quality and standards OR FIT5171 System verification and validation, quality and standards [MAT1830 & FIT2004]	FIT4005 Research methods	FIT4441 Honours thesis - part 1 (Full year project)
Second Semester		Approved Elective Level 3 or 4	FIT4442/4448 Honours thesis - part 2/final (Full year project)	

Notes on both Coursework Stream and IBL Placement Course maps

This course map shows a recommended progression only. Some units can be taken in semesters other than those indicated below. Students completing units in a different sequence to that indicated below should be aware of unit prerequisites and semesters of offering prior to varying their course progression. Please see a Course Advisor for any queries.

UNITS IN RED ARE REPLACEMENTS FOR CORE UNITS NO LONGER OFFERED. SEE <http://www.monash.edu/it/current-students/course-information/course-maps-and-handbooks> FOR FURTHER TRANSITION INFORMATION.

192 points must be completed to qualify for the degree of Bachelor of Software Engineering, with the following conditions:

- normally 48 points, and a maximum of 60 points, of first year level units will be counted;
- a maximum of 60 points can be completed at second year level
- at least 36 points must be completed at third year level

All units are 6 points unless indicated otherwise.

* Units can be completed in a later semester if students wish to complete a minor sequence with their Approved Electives in first and second year.

** Option 2 is only available to students undertaking the honours version of the degree. Entry to the Honours stream is by application, based upon a weighted average of previous years' results.

*** Students have the option of completing FIT1049 (previously FIT2003) IT professional practice (recommended) OR ENG1061 Engineering profession.

Approved course variations to the BSE course structure:

- Students requiring other mathematics for an Engineering sequence may replace MAT1830/2003/1841 with approval.
- Students intending to complete a minor sequence in Mathematics within the Faculty of Science should substitute another mathematics unit for MAT2003/1841, with approval.

Any other course variations must be approved by the Course Director and will be confirmed in writing.

Students are required to fulfil a 12-week industry placement requirement. Students are advised to complete this requirement during their summer break between year 3 and year 4 of their course. (This is an Engineers Australia (EA) requirement for accreditation of Professional Engineering courses).

	Software and programming
	Systems
	Foundation
	Software Engineering
	Approved electives. Please see http://www.monash.edu/it/current-students/course-information/course-maps-and-handbooks for approved elective lists. A limited number of units not on the approved elective list may be taken with approval.