MONASH University

BACHELOR OF SOFTWARE ENGINEERING (2770) - 2015

Industry Based Learning (IBL) placement

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.

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	**FIT3013** Formal specification for software engineering **OR** **FIT5138** Advanced software engineering [MAT1830 & FIT2004]	**FIT2043** Technical documentation for software engineers [FIT1010]	**FIT2070** Operating systems [FIT1031 & FIT1008] OR **FIT2100** Operating systems [ENG1003 or FIT1047]	**MAT2003** Continuous mathematics for computer science OR **MAT1841** Continuous mathematics for computer science

Year 3

Summer Semester	**FIT2002** Project management [36pts of study, including one of (FIT1040, FIT1045, FIT1048, FIT1051, ENG1003) and one of (FIT1049, FIT2003)]			
First Semester	**FIT3042** Systems tools and programming languages [FIT1008] 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 [24pts level 1 FIT] OR **FIT1049** IT professional practice [12 pts FIT units] OR **ENG1061 *** Engineering profession
Second Semester	**FIT3045** Industry-based learning (18 points)			

Year 4 (Option 1)

First Semester	**FIT4002** Software engineering industry experience studio project (Full year project) [Pre-req: FIT3077 & FIT2002 Co-req: FIT4004]	**FIT4004** System verification and validation, quality and standards OR **FIT5171** System verification and validation, quality and standards [MAT1830 & FIT2004]	**Approved Elective Level 1, 2 or 3**	**Approved Elective Level 1, 2 or 3**
Second Semester	(12 points)	**FIT3142** Distributed computing [FIT3141 or ECE2041]	**Approved Elective Level 3 or 4**	**Approved Elective Level 3 or 4**

Year 4 (Option 2) **

First Semester	**FIT4002** Software engineering industry experience studio project (Full year project) [Pre-req: FIT3077 & FIT2002 Co-req: FIT4004]	**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	(12 points)	**FIT3142** Distributed computing [FIT3141 or ECE2041]	**FIT4442/4448** Honours thesis – part 2/final (Full year project – 18 points total)	

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.

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

** Level 4, 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.

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 or major sequence in Mathematics within the Faculty of Science should substitute another mathematics unit for MAT2003, with approval.

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

Software and programming

Systems

Foundation

Software Engineering

Approved Electives. **Please see http://www.infotech.monash.edu.au/current/course-information/ for approved elective lists. A limited number of units not on the approved elective list may be taken with approval.**