

BACHELOR OF COMPUTER SCIENCE (C2001) - 2020

Advanced Computer Science Specialisation

Year 1 (48 credit points)

First Semester	FIT1045 Algorithms and programming fundamentals in python	FIT1047 Introduction to computer systems, networks and security	MAT1830 Discrete mathematics for computer science	Elective
Second Semester	FIT1008 Introduction to computer science [FIT1045]	FIT1055 IT professional practice and ethics [12 pts FIT study]	MAT1841 Continuous mathematics for computer science	Elective

Year 2 (48 credit points)

First Semester	FIT2004 Algorithms and data structures [FIT1008 & 6 pts L1 Maths]	FIT2099 Object-oriented design and implementation [One of FIT1045, FIT1048, FIT1051, FIT1008]	Elective	Elective
Second Semester	FIT2014 Theory of computation [FIT1045 & MAT1830]	FIT2102 Programming paradigms [FIT1008]	Elective	Elective

Summer Semester

FIT3199 Industry work experience
(0 credit points)

Year 3 (48 credit points)

First Semester	FIT3161 Computer science project 1 [FIT2004]	FIT3171 Databases [One of FIT1045, FIT1048, FIT1051 or ENG1003]	Level 3 Computer Science Approved Elective*	Elective
Second Semester	FIT3162 Computer science project 2 [FIT3161]	FIT3155 Advanced data structures and algorithms [FIT2004]	FIT3143 Parallel computing [FIT2004]	Elective

* Approved Computer Science Electives:

FIT3031 Network security	FIT3152 Data analytics
FIT3077 Software engineering: architecture and design	FIT3159 Computer architecture
FIT3080 Intelligent systems	FIT3165 Computer networks
FIT3081 Image processing	FIT3173 Software security
FIT3088 Computer graphics	FIT3175 Usability
FIT3094 Artificial life, artificial intelligence and virtual environments	FIT3181 Deep learning
FIT3139 Computational modelling and simulation	FIT3182 Big data management and processing
FIT3142 Distributed computing	FIT3183 Malicious AI and dark side security
FIT3146 Maker Lab	MTH3170 Network mathematics

Note that not all units will be taught in every year and some will be offered only in alternate years

Notes

Credit points	Unless specified, all units are worth 6 credit points Bachelor of Computer Science 24 units x 6 credit points = Total of 144 credit points
Year Level Requirements	1) Normally 48 points, and a maximum of 60 points, of first year level units will be counted; 2) At least 36 points must be completed at third year level.
Unit requisites	All pre-requisite and co-requisite requirements must be undertaken in order to be able to enrol into a specific unit
Duration of degree	3 years full-time, 6 years part-time
Time limit	Time limit = 8 years. Students have eight years in which to complete this award from the time they commence first year. Periods of intermission are counted as part of the eight years.
Monash University handbook	Students should follow the course requirements for the year the course was commenced https://handbook.monash.edu/2020/courses/C2001