

Bachelor of Computer Science (C2001) – 2025

Algorithms and software specialisation

Year 1 (48 credit points)

First Semester	FIT1045 Introduction to programming	FIT1047 Introduction to computer systems, networks and security	FIT1058 Foundations of computing Replace with: MAT1830 Discrete mathematics for computer science	Elective
Second Semester	FIT1008 Fundamentals of algorithms Replace with: FIT2115 Data structures and algorithms 1	FIT1049 IT professional practice OR FIT1055 IT professional practices and ethics	Elective	Elective

Year 2 (48 credit points)

First Semester	FIT2004 Algorithms and data structures Replace with: FIT3234 Data structures and algorithms 2	FIT2094 Databases	FIT2099 Object-oriented design and implementation	Elective
Second Semester	FIT2014 Theory of computation	FIT2102 Programming paradigms	FIT2109 Computer science workshop	Elective

Year 3 (48 credit points)

First Semester	FIT3161 * Computer science project 1 Replace with: FIT3230 Computer science in practice: project 1	FIT3155 Advanced data structures and algorithms	Level 3 * Algorithms and software Approved Elective**	Elective
Second Semester	FIT3162 * Computer science project 2 Replace with (from S2 2027): FIT3231 Computer science in practice: project 2	FIT3143 Parallel computing	Elective	Elective

** Approved Algorithms and software Electives (choose 1)

FIT3080 Artificial intelligence	FIT3159 Computer architecture
FIT3139 Computational modelling and simulation	MTH3170 Network mathematics
FIT3146 Maker lab	MTH3175 Network mathematics (Advanced)

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

* Industry Based Learning (IBL)

- Students accepted into the IBL program will replace FIT3161, FIT3162 and the Level 3 Computer Science Approved Elective with FIT3045 Industry based learning (18 points).
- IBL placements will normally be completed in semester 1 of third year for BCS Advanced Computer Science students.
- Students completing an IBL placement must overload in one semester OR complete a summer unit to complete the course in 3 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/browse/By%20Faculty/FacultyofInformationTechnology