

Bachelor of Computer Science (C2001) – 2024

Data science specialisation

Year 1 (48 credit points)

First Semester	FIT1045 Introduction to programming	FIT1047 Introduction to computer systems, networks and security	MAT1830 Discrete mathematics for computer science	Elective
Second Semester	FIT1008 Fundamentals of algorithms [FIT1045]	FIT1043 Introduction to data science	MAT1841 Continuous mathematics for computer science	Elective

Year 2 (48 credit points)

First Semester	FIT2004 Algorithms and data structures [FIT1008 & (MAT1830 or FIT1058)]	FIT2094 Databases FIT1045	Elective	Elective
Second Semester	FIT2014 Theory of computation [FIT1008 & MAT1830]	FIT1049 IT professional practice [12 pts FIT study] OR FIT1055 IT professional practices and ethics	FIT2086 Modelling for data science [FIT1045 & one of MAT1841, MAT2003, MTH1030 or MTH1035]	Elective

Year 3 (48 credit points)

First Semester	FIT3163* Data science project 1 [FIT1043, FIT1049, FIT2004, FIT2094, co-req: FIT2086]	FIT3152 Data analytics [FIT2094 and FIT2086]	Level 3* Data Science Approved Elective**	Elective
Second Semester	FIT3164* Data science project 2 [FIT3163]	FIT3179 Data visualisation [One of FIT1045 or FIT1008 or and 24 pts of level 2/3 FIT study]	Elective	Elective

**Approved Data Science Electives (choose 1)

FIT3003 Business intelligence and data warehousing
 FIT3154 Advanced data analysis
 FIT3181 Deep learning
 FIT3182 Big data management and processing
 FIT3183 Malicious AI and dark side security

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

* Industry Based Learning (IBL)

- Students accepted into the IBL program will replace FIT3163, FIT3164 and the Level 3 Data Science Approved Elective with FIT3045 Industry based learning (18 points).
- IBL placements will normally be completed in semester 1 of third year for BCS Data Science students.
- Students completing an IBL placement must overload in one semester OR complete a summer unit in order to complete the course in 3 years.

Notes

Credit points	Unless specified, all units are worth 6 credit points Bachelor of Computer Science in Data 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