Bachelor of Computer Science (C2001) – 2022
Data 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]	**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 & 6 pts L1 Maths]	**FIT2094** Databases [One of FIT1045, FIT1048 or FIT1051]	**Elective**	**Elective**
Second Semester	**FIT2014** Theory of computation [FIT1045 & MAT1830]	**FIT1049** IT professional practice [12 pts FIT study]	**FIT2086** Modelling for data science [FIT1045 & MAT1830 & 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]	**Level 3*** Data Science Approved Elective	**Elective**	**Elective**
Second Semester	**FIT3164*** Data science project 2 [FIT3163]	**Level 3** Data Science Approved Elective	**FIT3179** Data visualisation [24pts level 1 study]	**Elective**

Approved Data Science Electives:

FIT3003 Business intelligence and data warehousing

FIT3139 Computational modelling and simulation

FIT3152 Data analytics

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 a 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