Bachelor of Computer Science (C2001) - Monash College February 2024 Intake
Advanced computer science specialisation

Monash College

First Trimester	**MCD1470 /MCD4470** Engineering practice **CREDIT:** **FIT1049** IT professional practice	**MCD4700** Introduction to computer systems, networks and security **CREDIT:** **FIT1047** Introduction to computer systems, networks and security	**MCD2130** Functions and their applications **OR MCD4490** Advanced mathematics **CREDIT:** **Level 1 Elective**	**MCD4720** Fundamentals of C++ **CREDIT:** **FIT1048** Fundamentals of C++ **(Elective)**
Second Trimester	**MCD4710** Introduction to algorithms and programming **CREDIT:** **FIT1045** Introduction to programming	**MCD4140** Computing for engineers **OR MCD4730** Foundations of 3D **CREDIT: Level 1 Elective OR FIT1033** Foundations of 3D **(Elective)**	**MCD4500** Engineering mathematics **CREDIT:** **ENG1005** Engineering mathematics **(PRECLUSION: MAT1841** Continuous mathematics for computer science**)**	**MCD4440** Discrete mathematics for computer science **CREDIT:** **MAT1830** Discrete mathematics for computer science

Monash University

Semester 1 2024	**FIT1008** Fundamentals of algorithms [FIT1045]	**FIT2099** Object-oriented design and implementation [FIT1045 or FIT1048]	**FIT2094** Databases [FIT1045]	**Level 1, 2 or 3 Elective**
Semester 2 2024	**FIT2014** Theory of computation [FIT1008 & (MAT1830 or ENG1005)]	**FIT2004** Algorithms and data structures [FIT1008 & 6 pts Level 1 Maths]	**FIT2102** Programming paradigms [FIT1008]	**Level 2 or 3 Elective**
Semester 1 2025	**FIT3161** Computer science project 1 [FIT2004]	**Level 3** Computer science Approved Elective*	**Level 3 Elective**	**Level 2 or 3 Elective**
Semester 2 2025	**FIT3162** Computer science project 2 [FIT3161]	**FIT3155** Advanced data structures and algorithms [FIT2004]	**FIT3143** Parallel computing [FIT2004]	**Level 2 or 3 Elective**

*** Approved Computer Science Electives:**

FIT3080 Intelligent systems
FIT3139 Computational modelling and simulation
FIT3146 Maker lab
FIT3159 Computer architecture
FIT3165 Computer networks
MTH3170 Network mathematics
MTH3175 Network mathematics (Advanced)

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

Bachelor of Computer Science (C2001) - Monash College February 2024 Intake
Data science specialisation

Monash College

First Trimester	**MCD1470 /MCD4470** Engineering practice **CREDIT:** **FIT1049** IT professional practice	**MCD4700** Introduction to computer systems, networks and security **CREDIT:** **FIT1047** Introduction to computer systems, networks and security	**MCD2130** Functions and their applications **OR MCD4490** Advanced mathematics **CREDIT:** **Level 1 Elective**	**MCD4720** Fundamentals of C++ **CREDIT:** **FIT1048** Fundamentals of C++ **(Elective)**
Second Trimester	**MCD4710** Introduction to algorithms and programming **CREDIT:** **FIT1045** Introduction to programming	**MCD4140** Computing for engineers **OR MCD4730** Foundations of 3D **CREDIT: Level 1 Elective OR FIT1033** Foundations of 3D **(Elective)**	**MCD4500** Engineering mathematics **CREDIT:** **ENG1005** Engineering mathematics **(PRECLUSION: MAT1841** Continuous mathematics for computer science**)**	**MCD4440** Discrete mathematics for computer science **CREDIT:** **MAT1830** Discrete mathematics for computer science

Monash University

Semester 1 2024	**FIT1008** Fundamentals of algorithms [FIT1045]	**FIT2094** Databases [FIT1045]	**Level 2 or 3 Elective**	**Level 2 or 3 Elective**
Semester 2 2024	**FIT2004** Algorithms and data structures [FIT1008 & 6 pts Level 1 Maths]	**FIT2014** Theory of computation [FIT1008 & (MAT1830 or ENG1005)]	**FIT1043** Introduction to data science	**FIT2086** Modelling for data analysis [FIT1045 & one of MAT1841 or MTH1030]
Semester 1 2025	**FIT3163** Data science project 1 [Prereq: FIT1043, FIT1049, FIT2004, FIT2094 Coreq: FIT2086]	**FIT3152** Data analytics [FIT2094 and FIT2086]	**Level 3** Data Science Approved Elective*	**Level 2 or 3 Elective**
Semester 2 2025	**FIT3164** Data science project 2 [FIT3163]	**FIT3179** Data visualisation [One of FIT1045 or FIT1008 and 24pts level 2 or 3 FIT study]	**Level 3 Elective**	**Level 2 or 3 Elective**

*** Approved Data Science Electives:**

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

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	Normally 48 points, and a maximum of 60 points, of first year level units will be counted; 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