

BACHELOR OF COMPUTER SCIENCE IN DATA SCIENCE (C2001) – 2025

(Specialisation : Data Science)

Year 1 / Level 1 (48 credit points)

July/Oct 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
February Semester	FIT1008 Fundamentals of algorithms Replace with: FIT2115 Data structures and algorithms 1	FIT1043 Introduction to data science Replace with: FIT2132 Reasoning with data	FIT1055 IT professional practice and ethics [12 pts FIT study]	Elective

Year 2 / Level 2 (48 credit points)

July Semester	FIT2014 Theory of computation [FIT1008 & (FIT1058 or MAT1830)]	FIT2086 Modelling for data analysis [FIT1045 & FIT1058, MAT1841, MAT2003, MTH1030 or MTH1035]	FIT2004 Algorithms and data structures Replace with: FIT3234 Data structures and algorithms 2	Elective
February Semester	FIT2094 Databases [FIT1045 or FIT1051]	FIT2179 Data visualisation [FIT1045 or FIT1008]	Elective	Elective

Year 3 / Level 3 (48 credit points)

July Semester	FIT3163 Data science project 1 [FIT1043, FIT1055, FIT2004, FIT2094, FIT2086 and 72 pts of study inc. 60 pts of FIT/ MAT units]	FIT3152 Data analytics [FIT2094 and FIT2086]	*Level 3 Data Science Approved Elective	Elective
Summer Semester	FIT3164 Data science project 2 [FIT3163]			
February Semester	FIT3045 Industry-based learning (18 points) FIT3045 is equivalent to ONE Level 3 Data Science Approved Electives (6 points)+ TWO Level 3 Electives (12 points)			

List of elective units offered at the School of Information Technology, Monash University Malaysia.

The following electives are offered at both the Australia and Malaysia campuses. If you intend to apply for the [global intercampus program](#), please refer to the [course handbook](#) for electives which are offered specifically at the Australia campus. In addition to the minimum two level 3 data science approved electives, you can utilize the elective slots in the course map to enrol for additional level 3 data science electives.

Apart from the listed electives below, you may opt to enrol for electives offered by other courses at Monash University, provided that you fulfil the unit prerequisites. **Please note that elective unit offerings may vary from year to year.**

Important:

- *Co-requisites and Pre-requisites units are subject to change. Please refer to the relevant **Monash unit handbook** for the most up-to-date information.*
- *Students must also complete all **General Studies** requirements as part of their degree.*

Level 1 Electives

FIT1051 Programming fundamentals in JAVA
FIT1056 Introduction to software engineering

FIT1059 Artificial intelligence for everyone

Level 2 Electives

FIT2081 Mobile application development
FIT2093 Cybersecurity tools and techniques
FIT2099 Object oriented design and implementation
FIT2100 Operating systems

FIT2101 Software engineering process & management
FIT2102 Programming paradigms
FIT2107 Software quality and testing

*Level 3 Data Science Approved Electives

FIT3003 Business intelligence and data warehousing
FIT3181 Deep learning
FIT3154 Advanced data analysis

FIT3182 Big data management and processing
FIT3183 Malicious AI & dark side security

Level 3 Electives

FIT3077 Software engineering: architecture & design
FIT3080 Artificial intelligence
FIT3134 Entrepreneurship

FIT3143 Parallel computing
FIT3159 Computer architecture
FIT3155 Advanced data structures and algorithms

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Additional 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 to be able to enrol into a specific unit.
Duration of degree	3 years full-time
Course duration	You have a maximum of 8 years to complete this course including any periods of intermission and suspension and must be continuously enrolled throughout.
Monash University handbook	Students should follow the course requirements for the year the course was commenced https://www.monash.edu/students/handbooks/faculty-info/undergrad/it

The placement and offering of units may be rearranged or revised based on school resources or faculty planning.

If you opt for the IBL and the semester placement of FIT3045 differs from the above, and/or opt for an overseas exchange program, you may need to either overload a semester, undertake a summer unit or extend an additional semester in order to complete your course. Please consult the course coordinator.