

BACHELOR OF COMPUTER SCIENCE IN DATA SCIENCE (C2001) – 2024

(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	MAT1830 Discrete mathematics for computer science	Elective
February Semester	FIT1008 Fundamentals of algorithms [FIT1045]	FIT1043 Introduction to data science [Completion of Year 12 Maths]	MAT1841 Continuous mathematics for computer science	FIT1055 IT professional practice and ethics [12 pts FIT study]

Year 2 / Level 2 (48 credit points)

July Semester	FIT2014 Theory of computation [FIT1008 & MAT1830]	FIT2086 Modelling for data analysis [FIT1045 & MAT1830 & one of MAT1841, MAT2003, MTH1030 or MTH1035]	FIT2004 Algorithms and data structures [FIT1008 & 6 pts L1 Maths]	Elective
February Semester	FIT3163 Data science project 1 [FIT1043, FIT1055, FIT2004, FIT2094, co-req:FIT2086]	FIT2094 Databases [FIT1045]	Elective	Elective

Year 3 / Level 3 (48 credit points)

July Semester	FIT3164 Data science project 2 [FIT3163]	FIT3179 Data visualization [One of FIT1045 or FIT1008 or 24pts level 2/3 FIT study]	FIT3152 Data analytics [FIT2094 and FIT2086]	Elective
Summer Semester	Elective			
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 one 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.

Level 1 Elective

FIT1051 Programming fundamentals in JAVA
FIT1056 Introduction to software engineering

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

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, 6 years part-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.