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

(Specialisation : Data Science)

Year 1 / Level 1 (48 credit points)

February Semester	**FIT1045** Introduction to programming	**FIT1047** Introduction to computer systems, networks and security	**FIT1058** Foundations of computing	**Elective**
July Semester	**FIT1008** Fundamentals of algorithms [FIT1045]	**FIT1043** Introduction to data science	**FIT1055** IT professional practice and ethics [12 pts FIT study]	**Elective**

Year 2 / Level 2 (48 credit points)

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

Summer Semester	**FIT3199** Industry work experience (0 credit points) [Completed a minimum of 96 credit points including FIT1055]

Year 3 / Level 3 (48 credit points)

February Semester	**FIT3163** Data science project 1 [FIT1043, FIT1055, FIT2004, FIT2094, FIT2086 and 72 pts of study including 60 pts of FIT/ MAT units]	**FIT3152** Data analytics [FIT2094 and FIT2086]	***Level 3** Data Science Approved Elective	**Elective**
July Semester	**FIT3164** Data science project 2 [FIT3163]	**Level 3** Data Science Approved Elective*	**Level 3 Elective**	**Elective**

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.

Level 1 Elective

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
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
FIT3154 Advanced data analysis
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 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.