BACHELOR OF COMPUTER SCIENCE IN DATA SCIENCE (C2001) – 2021

(Specialisation : Data Science)

Year / Level 1 (48 credit points)

July/Oct Semester	**FIT1045** Algorithms and programming fundamentals in python	**FIT1047** Introduction to computer systems, networks and security	**MAT1830** Discrete mathematics for computer science	**Elective**
February Semester	**FIT1008** Introduction to computer science [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 [FIT1045 & MAT1830]	**FIT2086** Modelling for data science [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, FIT2086, FIT2094]	**FIT2094** Databases [One of FIT1045, FIT1048 or FIT1051]	**Elective**	**Elective**

Year 3 / Level 3 (48 credit points)

July Semester	**FIT3164** Data science project 2 [FIT3163]	**Level 3** Data Science Approved Elective*	**FIT3179** Data visualization [24pts level 1 study]	**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. Note that the FIT3081, FIT3134 & FIT3183 units are currently offered at the Malaysia 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

Level 2 Electives

FIT2081 Mobile application development
FIT2093 Introduction to cybersecurity
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
FIT3152 Data analytics
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
FIT3081 Image processing
FIT3134 Entrepreneurship
FIT3143 Parallel computing
FIT3159 Computer architecture
FIT3155 Advanced data structures and algorithms
FIT3175 Usability

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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