Master of Data Science (C6004) – 2024

Industry experience stream

Year 1 (48 credit points)

First semester	**FIT9132** (S1, S2) Introduction to databases	**FIT9136** (S1, S2) Algorithms and programming foundations in python	**FIT9137** (S1, S2) Introduction to computer architecture and networks	**MAT9004** (S1, S2) Mathematical foundations for data science and AI
Second Semester	**FIT5145** (S1, S2) Introduction to data science [FIT9136]	**FIT5125** (S1, S2) IT research methods	**FIT5057** (S1, S2) Project management	**FIT5197** (S1, S2) Statistical data modelling [FIT9136 and MAT9004]

Year 2 (48 credit points)

First Semester	**FIT5147** (S1, S2) Data exploration and visualisation	**FIT5196** (S1, S2) Data wrangling [FIT9136]	**Data Science elective unit***	**Level 5 FIT Elective**
Second Semester	**FIT5120** (S1, S2) Industry experience project (12 points [Completion of 72 points, Co-requisite: FIT5122]		**FIT5122** (S1, S2) IT professional practice [Co-requisite: FIT5120 or FIT5127]	**FIT5202** (S2) Data processing for big data [FIT5145]

Research stream**

Year 1 (48 credit points)

First Semester	**FIT9132** (S1, S2) Introduction to databases	**FIT9136** (S1, S2) Algorithms and programming foundations in python	**FIT9137** (S1, S2) Introduction to computer architecture and networks	**MAT9004** (S1, S2) Mathematical foundations for data science and AI
Second Semester	**FIT5145** (S1, S2) Introduction to data science [FIT9136 and FIT9132]	**FIT5125** (S1, S2) IT research methods	**FIT5057** (S1, S2) Project management	**FIT5197** (S1, S2) Statistical data modelling [FIT9136 and MAT9004]

Year 2 (48 credit points)

First Semester	**FIT5126** (S1, S2) Masters thesis part 1 [FIT5125]	**FIT5147** (S1, S2) Data exploration and visualisation	**FIT5196** (S1, S2) Data wrangling [FIT9136]	**Data Science elective unit***
Second Semester	**FIT5127** (S1, S2) Masters thesis part 2 [FIT5126]	**FIT5128** (S1, S2) Masters thesis final [Co-requisite: FIT5127]	**FIT5122** (S1, S2) IT professional practice [Co-requisite: FIT5120 or FIT5127]	**FIT5202** (S2) Data processing for big data [FIT5145]

FOUNDATION	CORE MASTER'S STUDIES	ADVANCED PRACTICE

*Data Science core units (choose 1):

FIT5149 Applied data analysis [FIT5197]	FIT5230 Malicious AI [FIT9136]
FIT5201 Machine learning [FIT5145 & MAT9004]	BMS5021 Introduction to bioinformatics
FIT5212 Data analysis for semi-structured data [FIT5197]	BMS5022 Advanced bioinformatics [BMS5021]

** Research stream requirements

- To be eligible for the research stream, students must have successfully completed 24 points of level five (non-foundation) FIT units, achieved an overall average of at least 75 per cent across all these units and achieved an overall course average of 65%.
- Applications for the Research stream must be submitted by 31 January (for S1 thesis start) or 30 June (for S2 thesis start). Students will be notified when applications open for each intake.
- Research stream information and application: https://www.monash.edu/it/current-students/enrolment/honours-and-minor-thesis

Industry experience stream – July intake

Year 1 (24 credit points)

Second Semester	FIT9132 (S1, S2) Introduction to databases	FIT9136 (S1, S2) Algorithms and programming foundations in python	FIT9137 (S1, S2) Introduction to computer architecture and networks	MAT9004 (S1, S2) Mathematical foundations for data science and AI

Year 2 (48 credit points)

First Semester	FIT5145 (S1, S2) Introduction to data science [FIT9136]	FIT5125 (S1, S2) IT research methods	FIT5057 (S1, S2) Project management	FIT5197 (S1, S2) Statistical data modelling [FIT9136 and MAT9004]
Second Semester	FIT5147 (S1, S2) Data exploration and visualisation	FIT5196 (S1, S2) Data wrangling [FIT9136]	FIT5202 (S2) Data processing for big data [FIT5145]	Data Science elective unit*

Year 3 (24 credit points)

First Semester	FIT5120 (S1, S2) Industry experience project (12 points [Completion of 72 points, Co-requisite: FIT5122]	FIT5122 (S1, S2) IT professional practice [Co-requisite: FIT5120 or FIT5127]	Level 5 FIT Elective

Research stream** – July intake

Year 1 (24 credit points)

Second Semester	FIT9132 (S1, S2) Introduction to databases	FIT9136 (S1, S2) Algorithms and programming foundations in python	FIT9137 (S1, S2) Introduction to computer architecture and networks	MAT9004 (S1, S2) Mathematical foundations for data science and AI

Year 2 (48 credit points)

First Semester	FIT5145 (S1, S2) Introduction to data science [FIT9136 and FIT9132]	FIT5125 (S1, S2) IT research methods	FIT5057 (S1, S2) Project management	FIT5197 (S1, S2) Statistical data modelling [FIT9136 and MAT9004]
Second Semester	FIT5126 (S1, S2) Masters thesis part 1 [FIT5125]	FIT5147 (S1, S2) Data exploration and visualisation	FIT5196 (S1, S2) Data wrangling [FIT9136]	FIT5202 (S2) Data processing for big data [FIT5145]

Year 3 (24 credit points)

First Semester	FIT5127 (S1, S2) Masters thesis part 2 [FIT5126]	FIT5128 (S1, S2) Masters thesis final [Co-requisite: FIT5127]	FIT5122 (S1, S2) IT professional practice [Co-requisite: FIT5120 or FIT5127]	Data Science elective unit*

Notes

Credit points	Unless specified, all units are worth 6 credit points Master of Data Science 16 units x 6cp = Total of 96 credit points
Year Level Requirements	1) A maximum of 24 points of level 9 (foundation) units will be counted; 2) At least 72 points must be completed at level 5.
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	2 years full-time, 4 years part-time
Time limit	Time limit = 6 years. Students have six years in which to complete this award from the time they commence. Periods of intermission are counted as part of the six 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