1. FOUNDATION UNITS (24 PTS)

Students must complete:

a) four foundation units (24 points):

- FIT9133 Programming foundations in Python (S1, S2)
- MAT9004 Mathematical foundations for data science (S1, S2)
- FIT9132 Introduction to databases (S1, S2)
- FIT9123 Introduction to business information systems (S1, S2)
- FIT9134 Computer architecture and operating systems (S1, S2)

b) one unit (6 points) from the list below:

- FIT9123 Introduction to business information systems (S1, S2)
- FIT9134 Computer architecture and operating systems (S1, S2)

2. CORE UNITS (48 PTS)

Students must complete:

a) three units (18 points) from the list below:

- FIT5145 Introduction to data science (S1, S2)
- FIT5196 Data wrangling (S1, S2)
- FIT5197 Modelling for data analysis (S1, S2)

b) four units (24 points) from either the Advanced Data Analytics Stream or the Data Science Stream:

**ADVANCED DATA ANALYTICS STREAM**

- FIT5147 Data exploration and visualisation (S1)
- FIT5149 Applied data analysis (S2)
- FIT5148 Distributed databases and big data (S1)
- FIT5201 Data analysis algorithms (S1, S2)

**DATA SCIENCE STREAM**

- FIT5097 Business intelligence modelling (S2)
- FIT5147 Data exploration and visualisation (S1)
- FIT5149 Applied data analysis (S2)
- FIT5205 Data in society (S1)
- FIT5148 Distributed databases and big data (S1)
- FIT5202 Data processing for big data (S2)
- FIT5206 Digital continuity (S1)

b) four units (24 points) from either the Advanced Data Analytics Stream or the Data Science Stream:

**ADVANCED DATA ANALYTICS STREAM**

- FIT5147 Data exploration and visualisation (S1)
- FIT5149 Applied data analysis (S2)
- FIT5148 Distributed databases and big data (S1)
- FIT5201 Data analysis algorithms (S1, S2)

**DATA SCIENCE STREAM**

- FIT5097 Business intelligence modelling (S2)
- FIT5147 Data exploration and visualisation (S1)
- FIT5149 Applied data analysis (S2)
- FIT5205 Data in society (S1)
- FIT5148 Distributed databases and big data (S1)
- FIT5202 Data processing for big data (S2)
- FIT5206 Digital continuity (S1)

**DATA SCIENCE ELECTIVES LIST** (note: not all units will be offered every year)

- FIT5046 Mobile and distributed computing systems (S1)
- FIT5057 Project management (S1, S2)
- FIT5097 Business intelligence modelling (S2)
- FIT5107 Managing business records (S2)
- FIT5139 Advanced distributed and parallel systems (S1)
- FIT5166 Information retrieval systems (S2)
- FIT5201 Data analysis algorithms (S1, S2)
- FIT5204 Heritage informatics (W)
- FIT5206 Digital continuity (S1)
- FIT5211 Algorithms and data structures (S1, S2)
- FIT5047 Intelligent systems (S1)
- FIT5088 Information and knowledge management systems (S1)
- FIT5106 Information organisation (S2)
- FIT5108 Reading unit (approval required) (S1, S2)
- FIT5146 Data curation and management (S2)
- FIT5195 Business intelligence and data warehousing (S1)
- FIT5202 Data processing for big data (S2)
- FIT5205 Data in society (S1)
- FIT5207 Data for sustainability (not offered in 2017)
### 3. ADVANCED PRACTICE (24 PTS)

Students must complete 24 points of either research† or industry‡ units, as follows:

<table>
<thead>
<tr>
<th>RESEARCH UNITS†</th>
<th>INDUSTRY UNITS‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIT5125 IT Research methods (S1, S2)</td>
<td>FIT5120 Industry experience studio project (12 points) (S1, S2)</td>
</tr>
<tr>
<td>FIT5126 Masters thesis part 1 (S1, S2)</td>
<td>FIT5122 Professional practice (S1, S2)</td>
</tr>
<tr>
<td>FIT5127 Masters thesis part 2 (S1, S2)</td>
<td>one unit from the approved Data Science elective list above</td>
</tr>
<tr>
<td>FIT5128 Masters thesis final (S1, S2)</td>
<td></td>
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</tbody>
</table>

† Research component to be completed across final two semesters: To enrol in the research units, students must have successfully completed 24 points of level five units and have achieved an overall average of at least 75% across all units.

‡ Industry component to be completed in final semester

### NOTES:

- **Credit Points**: Unless specified, all units are worth 6 credit points. Master of Data Science is a total of 96 credit points
- **Unit Requisites**: All pre-requisite and co-requisite requirements must be undertaken in order to be able to enrol into a specific unit
- **Degree Duration**: 1, 1.5, or 2 years full-time, 2, 3, or 4 years part-time
- **Time Limit**: Time limit = \((\text{Degree Duration} \times 2) + 2\) = 4, 5, or 6 years in which to complete this award from the time they first commence. Periods of intermission are counted toward the time limit.
- **Key**: S1 = Semester 1, S2 = Semester 2, W = Winter
- **Monash University Handbook**: Students should follow course map in conjunction with the course requirements for the year the course was commenced. [http://monash.edu/pubs/2017handbooks/courses/index-byfaculty-it.html](http://monash.edu/pubs/2017handbooks/courses/index-byfaculty-it.html)