MSc in Data Analytics for Government
Programme Structure

Options for Different Lengths of Study

2 years part-time

Students will typically take two compulsory modules and 2 or 3 optional modules in each semester in the first year (for a total of 80 to 100 credits), with the remaining optional modules and a dissertation in the second year (for the remaining 80 to 100 credits). This will be available from 2018-19 onwards.

Alternatively, students could take two compulsory modules and one optional module in each semester in the first year (60 credits), followed by three optional modules in each semester plus the dissertation in the second year (120 credits). This would be available from 2017-18 onwards.

3 years part-time

Students will typically take two compulsory modules plus one optional module in each semester in the first year (60 credits), 3 optional modules in each semester in the second year (60 credits) and the dissertation in the third year (60 credits). This would be available from 2017-18 onwards.

4 years part-time

Students will typically take two compulsory modules in each semester in the first year (40 credits), two optional modules in each semester in the second year (40 credits), two optional modules in each semester in the third year (40 credits), and the dissertation in their fourth year (60 credits).

5 years part-time

Students are advised to take P08801, P08803 and P08811 early in their programme to allow greater flexibility. Students will typically take 3 modules each year for the first 4 years and then complete the dissertation in their final year.

The above options are shown in the following structure diagrams
2 years part-time

Starting in 2017-18 (note that there is no choice in modules for students starting in 2017-18)

Year 1
Semester 1
- P08801 Data Science Foundations
- P08803 Statistical Programming
- P08811 Regression Modelling

Year 1
Semester 2
- P08800 Statistics in Government
- P08802 Survey Fundamentals
- P08814 Advanced Statistical Modelling

Year 2
Semester 1
- P08810 Introduction to Survey Research
- P08820 Introduction to Machine Learning
- P08823 Data Mining
- P08899 Dissertation in Data Analytics

Year 2
Semester 2
- P08812 Survey Data Collection
- P08821 Advanced Machine Learning
- P08824 Applied Data Mining
### 2 years part-time

**Starting in 2018-19 onwards**

#### Year 1

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>P08801 Data Science Foundations</td>
<td>P08803 Statistical Programming</td>
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</tr>
</tbody>
</table>

#### Year 2

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
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<tbody>
<tr>
<td>Option 5</td>
<td>Option 6</td>
</tr>
<tr>
<td>Option 7</td>
<td>Option 8</td>
</tr>
</tbody>
</table>

**Option 1**
- Chosen from semester 1 options

**Option 2**
- Chosen from semester 1 options

**Option 3**
- Chosen from semester 2 options

**Option 4**
- Chosen from semester 2 options

**Option 5**
- Chosen from semester 1 options

**Option 6**
- Chosen from semester 1 options

**Option 7**
- Chosen from semester 2 options

**Option 8**
- Chosen from semester 2 options

**P08899**
- Dissertation in Data Analytics

### Semester 1 options
- P08810 Introduction to Survey Research
- P08811 Regression Modelling
- P08815 Time Series Analysis (2019-20 onwards)
- P08820 Introduction to Machine Learning
- P08823 Data Mining
- P08825 Data Visualisation (2019-20 onwards)

### Semester 2 options
- P08812 Survey Data Collection
- P08813 Further Survey Estimation Methods (2019-20 onwards)
- P08814 Advanced Statistical Modelling
- P08821 Advanced Machine Learning
- P08822 Introduction to Distributed Systems (2019-20 onwards)
- P08824 Applied Data Mining

**Option 3**
- Chosen from semester 2 options

**Option 4**
- Chosen from semester 2 options

**Option 5**
- Chosen from semester 1 options

**Option 6**
- Chosen from semester 1 options

**Option 7**
- Chosen from semester 2 options

**Option 8**
- Chosen from semester 2 options

**P08899**
- Dissertation in Data Analytics

### Semester 1 options
- P08810 Introduction to Survey Research
- P08811 Regression Modelling
- P08815 Time Series Analysis (2019-20 onwards)
- P08820 Introduction to Machine Learning
- P08823 Data Mining
- P08825 Data Visualisation (2019-20 onwards)

### Semester 2 options
- P08812 Survey Data Collection
- P08813 Further Survey Estimation Methods (2019-20 onwards)
- P08814 Advanced Statistical Modelling
- P08821 Advanced Machine Learning
- P08822 Introduction to Distributed Systems (2019-20 onwards)
- P08824 Applied Data Mining
3 years part-time

Starting in 2017-18 (note that there is no choice in modules for students starting in 2017-18)

Year 1
Semester 1

- P08801 Data Science Foundations
- P08803 Statistical Programming
- P08811 Regression Modelling

Semester 2

- P08800 Statistics in Government
- P08802 Survey Fundamentals
- P08814 Advanced Statistical Modelling

Year 2
Semester 1

- P08810 Introduction to Survey Research
- P08820 Introduction to Machine Learning
- P08823 Data Mining

Semester 2

- P08812 Survey Data Collection
- P08821 Advanced Machine Learning
- P08824 Applied Data Mining

Year 3
Semester 1

- P08899 Dissertation in Data Analytics

Semester 2
Starting in 2018-19 onwards

Year 1
Semester 1

- P08801 Data Science Foundations
- P08803 Statistical Programming

- Option 1
  - Chosen from semester 1 options

Year 1
Semester 2

- P08800 Statistics in Government
- P08802 Survey Fundamentals

- Option 2
  - Chosen from semester 2 options

Year 2
Semester 1

- Option 3
  - Chosen from semester 1 options

- Option 4
  - Chosen from semester 1 options

- Option 5
  - Chosen from semester 1 options

Year 2
Semester 2

- Option 6
  - Chosen from semester 2 options

- Option 7
  - Chosen from semester 2 options

- Option 8
  - Chosen from semester 2 options

Year 3
Semester 1

- P08899 Dissertation in Data Analytics

Year 3
Semester 2

Semester 1 options
- P08810 Introduction to Survey Research
- P08811 Regression Modelling
- P08815 Time Series Analysis (2019-20 onwards)
- P08820 Introduction to Machine Learning
- P08823 Data Mining
- P08825 Data Visualisation (2019-20 onwards)

Semester 2 options
- P08812 Survey Data Collection
- P08813 Further Survey Estimation Methods (2019-20 onwards)
- P08814 Advanced Statistical Modelling
- P08821 Advanced Machine Learning
- P08822 Introduction to Distributed Systems (2019-20 onwards)
- P08824 Applied Data Mining

Semester 1 options
- P08810 Intro to Survey Research
- P08811 Regression Modelling
- P08815 Time Series Analysis
- P08820 Intro to Machine Learning
- P08823 Data Mining
- P08825 Data Visualisation

Semester 2 options
- P08812 Survey Data Collection
- P08813 Further Surv Estimation Methods
- P08814 Advanced Statistical Modelling
- P08821 Advanced Machine Learning
- P08822 Intro to Distributed Systems
- P08824 Applied Data Mining
Starting in 2017-18 onwards

Year 1
Semester 1
- P08801 Data Science Foundations
- P08803 Statistical Programming

Year 1
Semester 2
- P08800 Statistics in Government
- P08802 Survey Fundamentals

Year 2
Semester 1
- Option 1: Chosen from semester 1 options
  - P08810 Introduction to Survey Research
  - P08811 Regression Modelling
  - P08815 Time Series Analysis (2019-20 onwards)
  - P08820 Introduction to Machine Learning
  - P08823 Data Mining
  - P08825 Data Visualisation (2019-20 onwards)

Year 2
Semester 2
- Option 2: Chosen from semester 2 options
  - P08812 Survey Data Collection
  - P08813 Further Survey Estimation Methods (2019-20 onwards)
  - P08814 Advanced Statistical Modelling
  - P08821 Advanced Machine Learning
  - P08822 Introduction to Distributed Systems (2019-20 onwards)
  - P08824 Applied Data Mining

Year 3
Semester 1
- Option 3: Chosen from semester 1 options
  - P08810 Introduction to Survey Research
  - P08811 Regression Modelling
  - P08815 Time Series Analysis
  - P08820 Introduction to Machine Learning
  - P08823 Data Mining
  - P08825 Data Visualisation

Year 3
Semester 2
- Option 4: Chosen from semester 2 options
  - P08812 Survey Data Collection
  - P08813 Further Survey Estimation Methods
  - P08814 Advanced Statistical Modelling
  - P08821 Advanced Machine Learning
  - P08822 Introduction to Distributed Systems
  - P08824 Applied Data Mining

Year 4
Semester 1
- Option 5: Chosen from semester 1 options
  - P08811 Regression Modelling
  - P08815 Time Series Analysis
  - P08820 Introduction to Machine Learning
  - P08823 Data Mining
  - P08825 Data Visualisation

Year 4
Semester 2
- Option 6: Chosen from semester 2 options
  - P08812 Survey Data Collection
  - P08813 Further Survey Estimation Methods
  - P08814 Advanced Statistical Modelling
  - P08821 Advanced Machine Learning
  - P08822 Introduction to Distributed Systems
  - P08824 Applied Data Mining

Year 4
Semester 1
- P08899 Dissertation in Data Analytics

Year 4
Semester 2
Pathways

Students who wish to undertake a degree focusing on **statistics, surveys and data handling** should take the following modules:

- P08800 Statistics in Government
- P08801 Data Science Foundations
- P08802 Survey Fundamentals
- P08803 Statistical Programming
- P08810 Introduction to Survey Research
- P08811 Regression Models
- P08812 Survey Data Collection
- P08813 Further Survey Estimation Methods
- P08814 Advanced Statistical Modelling
- P08815 Time Series Analysis
- P08899 Dissertation in Data Analytics

Plus any two from the remaining optional modules

Students who wish to undertake a degree focusing on **computing, machine learning and data mining** should take the following modules:

- P08800 Statistics in Government
- P08801 Data Science Foundations
- P08802 Survey Fundamentals
- P08803 Statistical Programming
- P08820 Introduction to Machine Learning
- P08821 Advanced Machine Learning
- P08822 Introduction to Distributed Systems
- P08823 Data Mining
- P08824 Applied Data Mining
- P08825 Data Visualisation
- P08899 Dissertation in Data Analytics

Plus any two from the remaining optional modules