

## **MSc Data Analytics for Government at University of Southampton**

The MSc Data Analytics for Government (MDataGov) at the University of Southampton provides an opportunity to study a range of topics highly relevant to modern work in government statistics. This course provides an introduction to data analytics alongside statistical topics from Southampton's highly acclaimed MSc in Official Statistics.

### ***Programme structure***

MDataGov at Southampton is tailored to students wishing to study part-time in blocks, with each module taught in a one-week block over four or five days with a mix of lectures, tutorials, exercises, computer workshops and private study time. Modules are examined by either coursework or examination.

MDataGov has four compulsory modules, with the remaining eight modules made up from a range of options. The four core modules are:

- Survey Fundamentals
- Data Science Foundations
- Statistics in Government
- Statistical Programming

and the options in 2017-18 may be chosen from

- Introduction to Survey Research
- Demographic Methods
- Evaluation and Monitoring
- Regression Modelling
- Index Numbers
- Time Series Analysis
- Economics and National Accounts
- Statistical Disclosure Control
- Advanced statistical modelling I: Generalised Linear Models
- Advanced statistical modelling III: Multilevel Modelling

In future years the following additional options will be offered

- Further survey estimation
- Advanced statistical modelling II: analysis Analysis of complex survey data
- Small area estimation
- Survey data collection

and we expect that further data science-related options will also become available as the programme develops.

The taught element of the programme is followed by the opportunity to undertake a period of supervised research for a Master's dissertation in an area related to the programme. The dissertation should be between 15,000-20,000 words in length. The University has a strong team of staff with experience of working in many topics in official statistics, and has an excellent track record of supervising dissertations with many different data sources, approaches and research questions. Data science research related to official statistics will also be an option in this programme.

### ***Entry requirements***

It is normally expected that you will have the equivalent of at least a second-class honours degree, with some exposure to statistical methods (eg in geography, psychology, population sciences, economics/econometrics, statistics, mathematics), and that you will usually be employed in the area of official statistics. In some circumstances, previous relevant professional experience will be taken into consideration.

Students who have a degree with no statistical content will be required to show that they have the necessary background knowledge to the level of the Royal Statistical Society Higher Certificate in Statistics.

In addition, an introductory revision module covering basic mathematics and statistics and an introduction to R is run every September to help students prepare for postgraduate study. Attendance on this module is an entry requirement.

In line with the University's equal opportunities policy, individuals are selected and treated according to their relevant merits and abilities and are given equal opportunities in the Division and University. The aim of the policy is to ensure that no student or prospective student should receive any less favourable treatment on any grounds which are not relevant to academic ability or attainment. Decisions on admission are based solely on the grounds of academic merit.

### ***Costs***

The whole MDataGov programme costs £9,000. Individual modules can be followed as Continuing Professional Development at a cost of £900 per module.

### ***Further information***

Further information on MDataGov will shortly be available from the University of Southampton's website, or you can contact the Programme Coordinator, Paul Smith [p.a.smith@soton.gov.uk](mailto:p.a.smith@soton.gov.uk).

## MDataGov Modules schedule 2017-18

### Semester 1

Module	MDataGov description	Location	Dates 2017/18	Assessment
(no code)	Introduction Module*	Southampton	11 Sep – 15 Sep	
STAT6096	Introduction to Survey Research	Newport	02 Oct – 06 Oct	Exam
STAT6094	Statistical Disclosure Control	Southampton	9 Oct – 13 Oct	Exam
STAT6105	Economics and National Accounts	Newport	16 Oct – 20 Oct	Exam
STAT6089	Evaluation & Monitoring	Southampton	30 Oct – 03 Nov	Coursework
DEMO6020	Demographic Methods	Southampton	13 Nov – 17 Nov	Exam
STAT????a	Data Science Foundations	Southampton	20 Nov – 24 Nov	Coursework
STAT????b	Survey Fundamentals	Southampton	27 Nov – 1 Dec	Exam
STAT6090	Advanced Statistical Modelling I: Generalised linear models	Southampton	11 Dec – 15 Dec	Coursework

## Semester 2

Module	MDataGov description	Location	Dates 2017/18	Assessment
STAT6110	Official Statistics in a European context † (subject to agreement that MDataGov can be included as a basis for EMOS)	Southampton	22 Jan – 26 Jan	Exam
STAT6095	Regression Modelling	Southampton	29 Jan – 02 Feb	Coursework
STAT6102	Advanced Statistical Modelling III: Multilevel Modelling	Southampton	12 Feb – 16 Feb	Coursework
STAT6087	Time Series Analysis	Southampton	26 Feb – 02 Mar	Coursework
STAT6088	Statistics in Government	Southampton	19 Mar – 23 Mar	Exam
STAT6091	Index Numbers	Southampton	09 Apr – 13Apr	Coursework
STAT6103	Statistical Programming	Southampton	June or July tbc	Coursework

**Note:** Those courses marked \* must be taken in year 1 for part-time students.

Those courses marked † are additional courses for those wishing to gain EMOS accreditation. They may be taken as standalone CPD courses. They will only run if there is sufficient demand.