

Statistics (1 Year) [MSc]

Aims of the programme

The MSc programme in Statistics offers students thorough, professional and high quality training in statistics, thus preparing them for work as statisticians in a range of areas including business, industry, education, medicine as well as government and scientific research establishments.

Through the main programme and pathway structure, the emphasis is on providing a good general coverage of the subject together with additional, more specialist instruction in certain areas. The principal strength of the programme is that training is given in the practical side of the subject at the same time as providing a thorough appreciation of the theory underpinning the methodology. The main general aims are to develop each student's understanding of statistical theory and methodology, enable them to solve substantial and realistic statistical problems and to communicate effectively the findings and results.

Intended Learning Outcomes of the programme

On successful completion of the course students will:

- have specialized knowledge and understanding of selected statistical topics at an advanced level which take into account recent advances in the subject;
- use acquired knowledge and skills to enable them to apply and adapt statistical methodology and modelling techniques to real-life problems in both observational and designed studies and communicate the results of them clearly;
- have an appreciation of the general principles of statistical inference and their implications in data analysis;
- have acquired and shown skills in completing an extended individual study of a statistical problem and of presenting the results in a dissertation;
- have developed attitudes and confidence which will allow them to acquire new statistical knowledge and expertise throughout their future careers in statistics.

Structure of the Programme

The MSc programme in Statistics allows students to take either the main programme in Statistics or depending upon their interests and career aspirations, the associated pathway in Financial Statistics. Each one is built around a common core of five modules and then students study an additional set of three specialist modules to make a total of eight in all.

Course descriptions on each course unit includes information on assessment criteria's, lecturer, syllabus, learning outcomes, etc., and they are available from the 'My Course' tab in 'My Manchester' by searching the subject code or you can browse them from the Schools 'Study' website.

Level 6 course units

Description	Semester	Requirement	Credit Rating	Level
MATH68001 - Statistical Inference	1	Mandatory	15	6
MATH68011 - Linear Models with Nonparametric Regression	1	Mandatory	15	6
MATH68061 - Multivariate Statistics	1	Mandatory	15	6
MATH68091 - Statistical Computing	1	Mandatory	15	6
MATH68052 - Generalised Linear Models and Survival Analysis	2	Mandatory	15	6
MATH68082 - Design and Analysis of Experiments	2	Mandatory	15	6
MATH68122 - Markov Chain Monte Carlo	2	Mandatory	15	6
MATH68132 - Longitudinal Data Analysis	2	Mandatory	15	6