



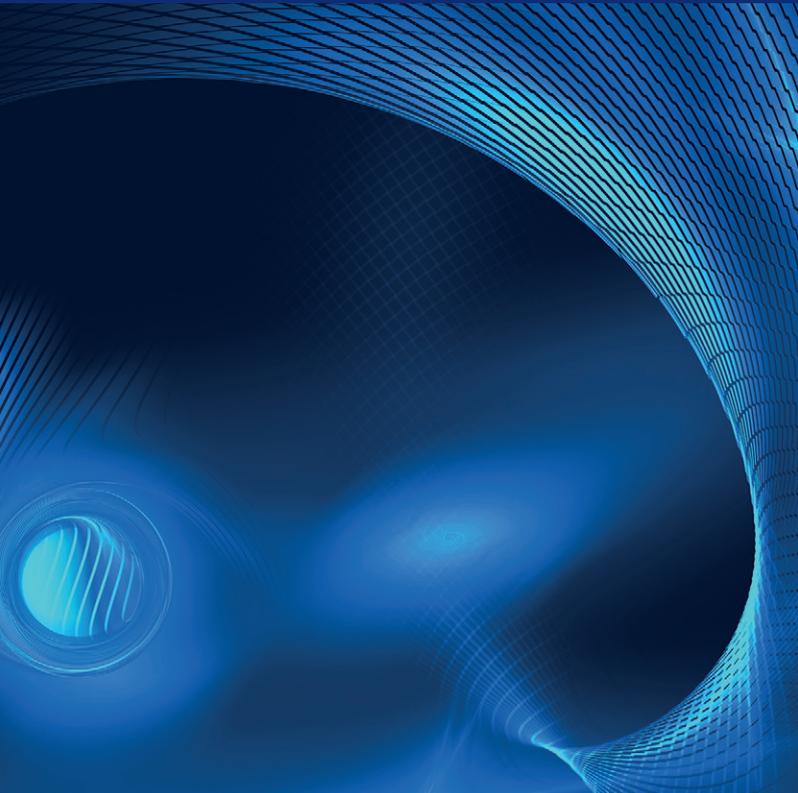
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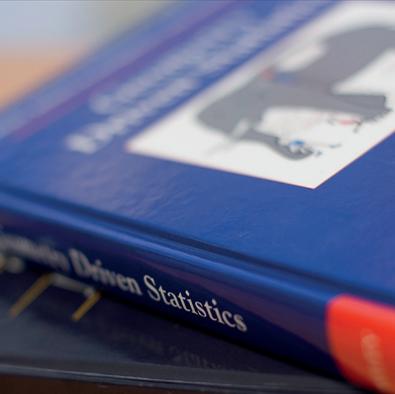
# MSc Statistics and Applied Probability

Study advanced and exciting new concepts at  
the frontier of current research

[nottingham.ac.uk/mathematics/masters](http://nottingham.ac.uk/mathematics/masters)



Gain in depth  
knowledge of both  
applications



Course is accredited  
by the Royal  
Statistical Society



Benefit from  
expert teaching  
at a research-led  
university

Provides solid basis  
for professional or  
research career





# Develop techniques and skills for a career in statistics or research

## Overview

Offering you the opportunity to broaden and deepen your knowledge in both statistics and applied probability, this course is beneficial for a professional career in statistics or as a solid basis for research in the areas of statistics or applied probability. Topics covered include advanced stochastic processes, queueing processes, epidemic models and stochastic financial models. The course is accredited by the Royal Statistical Society and is informed by the work being carried out in the Statistics and Probability Research Group.

## Content

Ranked within the top 10 nationally for research power and research quality, the School is one of the largest and strongest mathematics departments in the UK (Research Excellence Framework, 2014).

During this course you will:

- gain knowledge based on the work being carried out in the Statistics and Probability research group
- study an advanced and modern curriculum
- develop a deeper understanding of optional topics including advanced stochastic processes, queueing processes, epidemic models and reliability
- acquire the necessary skills for a research career in statistics

## Structure

The course is taught mostly through lectures, backed up with smaller seminar groups which are used to revisit more complex topics. The course is taken full-time over one year and is made up of compulsory and optional modules to give you the flexibility to study topics of interest.

There is also a substantial project that will allow you to develop your interest and expertise in a specific topic at the frontier of current research, as well as your skills in writing a full scientific report.

University of Nottingham has made every effort to ensure that the information in this leaflet was accurate when published. Please note, however, that the nature of the content means that it is subject to change from time to time, and you should therefore consider the information to be guiding rather than definitive.

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## Modules

Modules are mainly delivered via lectures and/or problem classes and take place on University Park Campus during the autumn and spring semesters of the academic year. You must take 120 credits and modules include:

### Compulsory:

- Fundamentals of Statistics (40 credits)
- Stochastic Models (20 credits)

### Optional (you must choose three from the following):

- Advanced Stochastic Processes (20 credits)
- Applied Multivariate Statistics (20 credits)
- Computational Statistics (20 credits)
- Stochastic Financial Modelling (20 credits)
- Time Series Forecasting (20 credits)
- Statistical Machine Learning (20 credits)

## Dissertation

The dissertation is worth 60 credits and is carried out during the summer. A substantial investigation will be carried out on a topic in statistics or probability. The study will be largely self-directed, although a supervisor will provide oversight and input where necessary.

The topic will be chosen by agreement between you and your supervisor. It could be based on the statistical analysis of a substantial dataset, an investigation into statistical methodology or an investigation into a topic of applied probability or probability theory. It is expected that most projects will contain an element of statistical computing.

Past projects include:

- Stochastic modelling of endemic diseases
- Statistical analysis of large internet traffic datasets

## Entry requirements

At least a lower second class honours (2:2) BSc degree (or international equivalent) in mathematics or a related subject with substantial mathematical content. Some knowledge of probability and statistics would be helpful to start the course with.

## Funding your studies

When looking at how to fund your postgraduate studies, it's worth taking the time to research your options, as funding is available from a variety of sources.

Find out more at  
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