

## The Department of Statistics

The Department of Statistics at LSE is one of the oldest and most distinguished in the UK. It has a rich research portfolio covering core areas of statistical inference and real applications, particularly in the economic, financial, actuarial, social and industrial arenas. The close collaboration between departments, its London location and strong international partnerships are reflected in the research life of the Department of Statistics through the members of staff, PhD students, postdoctoral research fellows and the thriving visitor and seminar programmes.



## Entry Requirements

Entry requirements to the MSc Statistics (Financial Statistics) are a good BSc degree (at least upper second class honours) with a significant mathematical content or equivalent in actuarial science, statistics, mathematical economics or mathematics. Well-qualified applicants who do not meet this requirement will be considered on merit.

Overseas students should consult the section on equivalence of non-UK qualifications at the Graduate Admissions website below.

## How to Apply

You should apply online here:

[lse.ac.uk/study/graduate/home.aspx](http://lse.ac.uk/study/graduate/home.aspx)

You will need to click on the Apply Online icon and follow the instructions.

You will also be given access to the Graduate Application Tracker via LSE for You, which will reflect the personal details held in the School's database and the up-to-date status on your application.

## How to contact us:

For further general information about the MSc programmes please contact the MSc Administrator at the Department of Statistics or visit the Departmental website:

[lse.ac.uk/statistics/home.aspx](http://lse.ac.uk/statistics/home.aspx)



# Statistics

**Statistical methodology and its interface with business, economics and finance**



## MSc Statistics (Financial Statistics)

The Financial Statistics stream of the MSc Statistics programme is an excellent choice for students wishing to pursue careers in the finance industry or as a stepping stone towards PhD study in statistics with financial applications.

Students will receive a thorough grounding in the theory and methods of statistical inference. Important elements in financial statistics such as financial time series, asset returns and portfolio allocation will be emphasised in theories and through modern data analytics. Teachings also include some aspects of continuous-time finance. Students will also learn to code in the R statistical computing environment.

### Winton Prizes

The Department of Statistics has joined forces with Winton to award two annual £500 prizes to recognise academic excellence on the MSc Statistics, MSc Statistics (Financial Statistics), and MSc Statistics (Social Statistics) programmes. The first is awarded to the student who attains the highest overall mark in their exams. The second is awarded to the research branch student who produces the best dissertation.



## Degree Structure

Our taught postgraduate courses are based around lectures, with problem classes and computer workshops. Most courses are assessed by a two-hour exam in the summer term although some contain an element of course work. A small number of courses are assessed by an exam during Week 0 of Lent Term. Please see the course guides on our website for more information.

### MSc Statistics (Financial Statistics) – 9 Months

i. Three compulsory courses:

- ST422 Time Series (H)
- ST425 Statistical Inference: Principles, Methods and Computation (F)
- ST436 Financial Statistics (H)

ii. Optional courses to the value of two full units from the following:

- ST405 Multivariate Methods (H)
- ST409 Stochastic Processes (H)
- ST411 Generalised Linear Modelling and Survival Analysis (H)
- ST416 Multilevel Modelling (H)
- ST418 Nonlinear Dynamics and the Analysis of Real Time Series (H)
- ST421 Developments in Statistical Methods (H)
- ST426 Applied Stochastic Processes (H)
- ST427 Insurance Mathematics (H)
- ST429 Probabilistic Methods in Risk Management and Insurance (H)
- ST433 Computational Methods in Finance and Insurance (H)
- ST435 Advanced Probability Theory (H)
- ST439 Stochastics for Derivatives Modelling (H)
- ST440 Recent Developments in Finance and Insurance (H)
- ST442 Longitudinal Data Analysis (H)
- ST443 Machine Learning and Data Mining (H)
- ST444 Statistical Computing (H)

H = Half Unit, F = Full Unit

Modules from the Methodology, Finance and Economics departments (among others) may be taken up to the value of one unit. Please see our website for more details.

### MSc Statistics (Financial Statistics) (Research) – 12 Months

The research branch is similar to the MSc Statistics (Financial Statistics) nine-month programme but involves a compulsory dissertation (ST499) which replaces one unit of optional courses. Dissertation topics are chosen in November, usually from a list provided by academic staff. Students then work on their project for the rest of the year, under the guidance of their supervisor, with a submission deadline in late August.

## Graduate Careers

There are excellent prospects for employment and further study for our graduates. Former MSc Statistics (Financial Statistics) students have taken up positions in various finance industries including consulting firms, banks, and insurance or marketing companies, where there is a strong need for well qualified statisticians to handle potentially vast financial data. Many go on to take higher degrees. Organisations employing recent MSc graduates include KPMG, China Reinsurance, Nomura and WorldQuant LLC.

“ The LSE MSc Financial statistics program is great for bridging my finance undergraduate knowledge and my PhD study now. This programme has also provided me with a good opportunity to communicate with many talented statisticians in the department; which motivated me to pursue further education within LSE. ”

**Cheng Qian** (2013/14), PhD candidate, London School of Economics.

“ Currently, I am a PhD candidate in Economics, concentrating on food demand system estimation, scanner data and commodity price analysis. What impressed me most about LSE was the absolutely world class faculties and its unbeatable location. Many of the faculty members are famous statisticians in the world. They are all demanding but also generous and friendly. The wonderful year I spent as a student in LSE made graduation a bitter-sweet moment. ”

**Wenying Li** (2013/14), PhD Candidate, University of Georgia.

“ The MSc Financial statistics programme was challenging but rewarding, in that it constantly improved one's problem-solving skills. I enjoyed the days when I was taught and guided by experts within the field. ”

**Meichen Jiang** (2013/14) Management Trainee, Bank of China.