

## Statistics

The Department of Statistics offers expert teaching and supervision in time series, stochastic modelling, financial mathematics, actuarial statistics, latent variable modelling and sample survey theory and methods. Actuarial science applies mathematical skills to a range of applied subjects, and helps to solve important problems for insurance, government, commerce, industry and academic researchers.

### Departmental Facts

The Department has a long history in the application of statistics to the social sciences and has developed an international reputation for the development of statistical methodology. It offers a thriving environment for students and houses the Decision Support and Risk Group. The Department is home to The Centre for the Analysis of Time Series (CATS), a well established research centre. CATS brings together the expertise of internationally recognised statisticians and physical scientists who have a common interest in non-linear analysis. Research is focused on situations of economic and physical interest, such as the analysis of weather series. CATS aims to promote awareness of the limitations of non-linear analysis and the dangers of confusing models with reality. In the 2008 Research Assessment Exercise, 15 per cent of the department's research was rated as 'world-leading' (the highest category) with a further 40 per cent considered to be 'internationally excellent'.

### Careers

Students will develop many employable skills, which can be applied to work in a wide variety of job sectors. Specific skills gained from studying statistics at LSE include:

- strong mathematical and finance skills;
- the ability to extract core information and excellent communication skills to explain appropriate strategies;
- an understanding of business processes.

Statistical work is important for many large commercial and industrial companies, government roles, the health service and numerous research councils and consultancies. In addition, statistics graduates may find work in banking; accounting and other financial services; insurance and pensions; education or social research.

### Statistics courses available to General Course students include:

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| ST102 Elementary Statistical Theory                      | ST227 Survival Models                             |
| ST103 Statistical Methods for Social Research            | ST300 Regression and Generalised Linear Models    |
| ST107 Quantitative Methods (Statistics)                  | ST302 Stochastic Processes                        |
| ST108 Probability and Statistics for the Social Sciences | ST304 Time Series and Forecasting                 |
| ST201 Statistical Models for Data Analysis               | ST305 Actuarial Mathematics: Life                 |
| ST202 Probability, Distribution Theory and Inference     | ST306 Actuarial Mathematics: General              |
| ST203 Statistics for Management Sciences                 | ST307 Aspects of Market Research                  |
| ST205 Sample Surveys and Experiments                     | ST327 Market Research: An Integrated Approach     |
| ST218 Projects in Applied Statistics                     | ST330 Stochastic and Actuarial Methods in Finance |
| ST226 Actuarial Investigations: Financial                | ST331 Decision Theory and Bayesian Statistics     |