



Leading education
and social research
Institute of Education
University of London

Bloomsbury Doctoral Training centre for the Social Sciences 5 ESRC Studentships for Postgraduate Training in **Quantitative Methods in Social and Economic Research**

The Doctoral Training Centre (DTC) is one of a network of 21 such centres across the UK, funded by the Economic and Social Research Council. The DTC is a consortium of four University of London colleges in the Bloomsbury area of central London: the Institute of Education, which leads the consortium, the London School of Hygiene and Tropical Medicine, Birkbeck College, and the School of Oriental and African Studies.

The Quantitative Methods cluster of the Doctoral Training Centre has **5 ESRC studentships** available for entry in October 2012. The cluster is a collaboration between the Department of Quantitative Social Science which includes the Centre for Longitudinal Studies at the Institute of Education, and the Department of Medical Statistics at the London School of Hygiene and Tropical Medicine.

We are seeking applicants for postgraduate training in the application of quantitative methods to substantive issues in the social sciences. A wide range of empirical applications would be considered, including those in the areas of health, education, labour markets, ageing, human development, living standards, and social policy. We are interested in people who wish to do research in areas such as these where this research is best addressed through quantitative approaches with a focus on the lifecourse. We are also interested in people who wish to develop new methods for application within the social sciences.

The studentships are open to Home/EU and International students.

The Quantitative Methods (QM) cluster has three Pathways for postgraduate training:

1. Economic and Social Statistics in Education
2. Policy Analysis and Evaluation
3. Longitudinal Analysis and Design

Duration of study

The awards are available on a full or part-time basis:

- '1+3' study, available on Pathways 1 and 2, involves one year of full-time (or two years part-time) study for the MSc in the Economics of Education (Pathway 1) or the MSc in Policy Analysis and Evaluation (Pathway 2), followed by three years of full-time (or five years part-time) research leading to award of the PhD.

- ‘+3’ study, available on all three Pathways, involves immediate entry to three years of full-time or five years part-time study leading to a PhD and assumes possession at entry of a Master’s degree that meets ESRC core training requirements.
- The ‘4’ route, available on Pathways 1 and 2 is for full-time students only. For the first two years of this route, students undertake PhD research alongside completion of the accredited taught modules of a research training Master’s programme. This is the equivalent in credits to the MSc on pathways 1 and 2 (except the dissertation).

Training on Pathways 1 and 2 is based at the Institute of Education (IOE), and students on these pathways will be registered as IOE students. Training on Pathway 3 will involve registration at either IOE or the London School of Hygiene and Tropical Medicine (LSHTM), with training normally involving input from both institutions. The MSc degrees in the ‘1+3’ or ‘+4’ routes are ideal for part-time study as teaching is in the evening or in intensive two-day blocks.

Who can apply?

We encourage applications from people with interests in applying or developing quantitative methods in the social sciences and with a background either in any quantitative social science such as economics, geography, psychology, sociology, and social policy or in other quantitative disciplines such as maths or statistics.

Candidates for a ‘1+3’ or ‘+4’ award must possess an upper second class honours degree or higher, or the equivalent. Candidates applying for a ‘+3’ award must have successfully completed by 30 September 2012 an appropriate Master’s degree, or the equivalent, that meets the [ESRC Postgraduate Training and Development Guidelines 2009](#). These studentships are open to both Home/EU students and International students. International students on a student visa would need to study on a full-time basis.

Our expertise

At **IOE**, the Department of Quantitative Social Science (DoQSS) specialise in applying quantitative methods to large, complex datasets to inform policy on education, health, labour markets, and child/adult wellbeing. Staff have leading expertise in applied economics, sociology, psychology, social statistics, econometric and statistical modelling, and the techniques of policy evaluation.

DoQSS hosts a number of research and resource centres. The Centre for Longitudinal Studies (CLS) is an ESRC Resource Centre managing three of Britain’s world renowned birth cohorts: the 1958 National Child Development Study, the 1970 British Cohort Study, and the Millennium Cohort Study. DoQSS also hosts the ADMIN node specialising in linked analysis of survey and administrative data, e.g. the Longitudinal Study of Young People in England (LSYPE) and the National Pupil Database (NPD), and the Centre for the Economics of Education specialising in applied economics of education research. The Department has excellent links with government and researchers are involved in two Department for Education research centres: The Centre for the Analysis of Youth Transitions (CAYT) and the Centre for Understanding Behavioural Change (CUBEC).

At **LSHTM**, the Department of Medical Statistics (DMS) is a centre of excellence for research into statistical methods for social and health science data, with an outstanding reputation for masters and research level teaching. Topics of expertise include missing data, longitudinal data, causal inference, and structural equation modelling. Staff make the major contribution to the Royal Statistical Society accredited MSc in Medical Statistics, which includes a broad

quantitative methods core appropriate for both social and medical data. (Please note that this MSc is not included in our ESRC-funded training pathways.)

For further details, including of the research interests of academic staff who could be potential PhD supervisors, please go to our [DoQSS](#), [CLS](#), and [DMS](#) Departmental websites.

Training Pathways

Economic and Social Statistics in Education

The [MSc Economics of Education](#), which starts the '1+3' option or '+4' option, enables students to combine economic concepts with QM to analyse educational issues. Possession of a first degree in economics is *not* essential for entry to the MSc. There is an emphasis on valid research designs to generate estimates of causal effects from data generated via social experiments, natural experiments, and non-experimental settings. Statistics training covers a range of models for continuous and limited dependent variables. Students are taught about major data sources for education research and about collection of new data. There are five modules – Economic Value of Education, Collecting Data, Quantitative Analysis II and III (i.e. Intermediate and Advanced Statistics), Evaluation Methods and Economic Appraisal – and on the '1+3' option (but not the '+4' option) a dissertation. In the +3 years, students would expect to use datasets such as LSYPE, NPD and the CLS birth cohorts to address their research topic.

Policy Analysis and Evaluation

The [MSc Policy Analysis and Evaluation](#), which starts the 1+3 structure, provides rigorous training in methods, especially QM, to enable students to design studies to evaluate policy and to use a range of models to analyse resulting data. Modules are taught in two-day blocks. Students take 3 compulsory modules (Statistical Analysis, Experimental & Quasi-Experimental Design, Research Synthesis for Policy and Practice) and options (from Research for Policy, Sampling Design/Practice, Survey Data Collection, Evaluation Methods and Economic Appraisal, Longitudinal Data & Analysis, Qualitative Analysis), and for the '1+3' option (but not the '+4' option) complete a dissertation. During +3 years, students apply QM to datasets such as the CLS birth cohorts and other longitudinal, cross-sectional, and administrative microdata.

Longitudinal Analysis and Design

This pathway draws on methodological and practical skills in design and use of longitudinal data in both IOE and LSHTM. Students specialising in health will normally be based at LSHTM and those in education and other substantive areas at IOE. Students will typically receive supervision from both partners. Besides working on their thesis topic, using for example datasets mentioned above, students will work alongside survey managers, data officers and researchers on short-term projects, giving practical insight into all stages of longitudinal research from consultation and design through data collection, cleaning and documentation and analysis.

Advanced Training

We will draw on extensive advanced training expertise in both IOE and LSHTM to meet students' needs with tailored programmes of further study in the +3 years. Students are able to take specialist short courses to further thesis research and professional development. Existing courses in advanced QM include missing data methods, statistical methods in epidemiology, longitudinal modelling, structural equation models, bootstrapping, and causal inference. We will also encourage students to take appropriate courses elsewhere e.g. at nearby ESRC research centre Cemmap at the Institute for Fiscal Studies and through the NCRM.

Possible Topics for PhD research

Examples of possible topics for PhD research include the following. The list is not intended to be exhaustive and we welcome research proposals in other areas:

- political cynicism, voting behaviour and social participation
- consequences of family break-up for children and young people
- division of labour between mothers and fathers and child development
- neighbourhood as cause and consequence of family poverty
- international comparisons of longitudinal evidence on childcare/pre-school and their outcomes, or on links between poverty and child health/behaviour/education
- children's peer networks, their determinants and consequences
- inter-ethnic partnerships and children's outcomes
- measuring the effectiveness of schools, universities or colleges
- international comparisons of factors affecting pupil performance
- why young people in the UK are reluctant to pursue STEM subjects at A-Level and degree
- job selection decisions of teachers
- rates of return to education for university drop-outs
- the impact of higher fees on university applications from students from poor backgrounds
- the links between ethnicity, language, social circumstance, pupil mobility and attainment
- pathways to health and happiness in early old age
- the transition from school to work in a changing socio-historical context
- young people's aspirations and outlook to the future
- statistical methods for missing data in surveys
- health and health behaviours
- initiation and maintenance of problem drinking
- desisting a criminal career: inter- and intra-generational influences
- promoting competence and resilience
- survey methodology, non-response and attrition, survey design and measurement issues
- multilevel modelling, structural equation modelling, sequence analysis, attitude measurement, sample design
- handling missing data in clustered studies - an investigation of competing approaches
- comparison of latent class models and machine learning methods to identify complex social and biological phenotypes
- the use of multiple imputation with sampling weights and other predictive estimands
- appropriate imputation for complex social surveys, such as the British Household Panel Survey
- sensitivity analyses for non-response in social science
- statistical methods for understanding the effect of social networks

Financial support

ESRC studentships pay tuition fees, plus an annual maintenance stipend of £15,590. In the +3 years (whether on the 1+3 or +3 route) or in the final 3 years of the +4 route, students will normally receive an *additional* stipend of £3,000 per year, if undertaking research involving advanced quantitative methods – we anticipate successful candidates will receive this supplement. Studentships also provide a Research Support Grant of up to £1,000 for each of the three years of +3 or 4 PhD study.

Application procedure

If you wish to apply for an ESRC studentship you should apply for entry **to IOE** by **1 FEBRUARY 2012**.

Please apply via UKPASS, the online postgraduate application system. Please go to the [IOE website](#) for links to the programme to apply for, PhD or MSc, and indicate that you are applying for an ESRC studentship in the 'Student Support Arrangements' box when registering your application at UKPASS. For direct PhD entry ('+3' study), you will need to attach a research proposal and references to help us to consider your application. At the same time you are encouraged to use the [DoQSS](#), [CLS](#), and [DMS](#) departmental websites and/or the contacts below to identify a potential supervisor. If we offer you a place to study, your supervisor will assist you with your application for an ESRC studentship.

You will also need to complete a separate ESRC studentship application form (available at the [Bloomsbury DTC website](#)), including a more detailed research proposal, to be submitted to the IOE Doctoral School by **27 FEBRUARY 2012**. You do not need to have been formally accepted for doctoral study when you make your application and you should not delay completing the ESRC form while you wait to hear about your doctoral application.

Contact the Doctoral School at IOE on 020 7612 6122 or doc.enquiries@ioe.ac.uk if you require further information or assistance about the process for doctoral applications.

Please contact Alison Freeman, DTC Co-ordinator, for more information about making your ESRC application: a.freeman@ioe.ac.uk

Further information

Intending applicants are strongly encourage to contact one of the following people, depending on the institution to which you would like to apply, for an informal discussion:

IOE: Professor Lorraine Dearden l.dearden@ioe.ac.uk

LSHTM: Dr James Carpenter James.Carpenter@lshtm.ac.uk