Short Courses in Quantitative Methods

UCL Q-Step Centre

June 2016 – London

The Department of Social Science at UCL Institute of Education is offering four short courses open to undergraduates interested in extending their knowledge of quantitative methods used in the social sciences. The courses are part of the UCL Q-Step Centre, one of 15 new centres across the UK that aim to produce a step change in this area of undergraduate training.

Each course is two days long. All courses will be held at UCL, in Bloomsbury in the heart of central London. You may apply to attend any or all of the courses. *There is no charge for attendance.*

Stata computing skills for research projects

You want to do some serious data analysis for a 3rd year dissertation? You would like to hone your computing skills to improve your position in the job market? There is a big difference between using a statistics package to work through exercises that support a lecture course and using it to do some real research. This course focuses on the latter. It will provide you with training in skills for work on your undergraduate dissertation, for further study, or for jobs after university – the skills covered are highly valued in the labour market. The course will focus on Stata, a leading computer package used in the social sciences. But the skills will be transferable to other packages too. The course will focus on (i) writing programmes ('syntax' files) of commands that can be edited/revised and that provide an 'audit trail' rather than using 'point and click', (ii) reading/handling datasets, and (iii) some of our favourite simple Stata procedures that we find really useful in our own research![1]

Impact evaluation – measuring the effect of policy

How many more people are in work because of a policy to help those on the margins of the labour market? Does including a free pen in a mail shot increase the donations that a charity receives? Correlation is not equal to causation – as any introductory quantitative methods course will tell you. The methods to identify the *causal* impact of policies of governments, firms, or NGOs, are a key element of quantitative methods training. The last 20 years have seen a revolution in the tools used by social scientists to identify causal impacts of policies. But this material is still rarely covered at the undergraduate level. A basic understanding of these tools is easily within your

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[1] While no prior knowledge of Stata is required, you need to be aware of how statistical software is typically used to analyse data e.g. through having had experience of using another software package.

reach as the main techniques are not mathematically challenging. We will introduce you to the pros and cons of randomized controlled trials – now rapidly gaining ground in the social sciences – and some of the 'quasi experimental' methods that are also heavily used.[2]

Survey design

How many people really do wish to see the UK withdraw from the EU? How much help do parents give their children in the labour market? Addressing questions such as these requires good survey data – true of research on a vast range of issues in the social sciences. Even if you have no plans to conduct your own survey, to interpret the wealth of existing survey data critically you need to understand how they are collected. This course will draw on the long experience we have of running three of the world-renowned British birth cohorts in our Centre for Longitudinal Studies (CLS). These studies follow large samples of people through their entire lives. You will learn more about different modes of data collection (face to face, phone, and web), the design of survey questions, response to surveys and how to try to maximize it, measurement error, and recall bias.

Longitudinal analysis

How much social mobility is there in Britain today, allowing people from disadvantaged backgrounds to climb up the socio-economic ladder? What is the impact of bullying in childhood on later life outcomes? Answering these sorts of questions requires analysis of 'longitudinal data' – repeated observation over time on the same individuals, families, or firms. Specifically, we will introduce you to using the birth cohorts run in CLS that contain a wealth of social science data. Longitudinal data are at the heart of many exciting developments in research in the social sciences as they have the potential to shed light on many issues of key policy interest. We will show you how to obtain the birth cohort data and how to start using them to address simple research questions. You will learn and practice methods to start realising the potential of longitudinal data, whether simple cross-tabulations with a time dimension ('transition matrices') through to regression models that exploit the fact that you have repeat observation over time in order to allow for unobservable factors.

	Course	Course leader	Dates
1.	Stata computing skills for research projects	Gill Wyness	June 13 – 14
2.	Impact evaluation – measuring the effect of policy	Lorraine Dearden	June 16 – 17
3.	Survey design	Kirstine Hansen	June 20 – 21
4.	Longitudinal analysis	Alissa Goodman	June 22 – 23

Enquiries on course content: contact George Ploubidis, g.ploubidis@ucl.ac.uk.

To apply: Please complete the registration form on page 3 and send Katherine Youel, k.youel@ucl.ac.uk   **Deadline 17:00 20th May 2016.**

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[2] You do need to be familiar with the basics of statistical inference – simple use of confidence intervals and hypothesis testing – and with linear regression analysis.

Registration form for Q Step Courses June 2016

Please complete the fields below and email this form to k.youel@ucl.ac.uk

First Name	
Surname	
Q Step courses requested	
Email address	
Contact phone number	
Details of Academic background	
University	
Degree	
Course studied	
Year of Study	

Please email this completed form to k.youel@ucl.ac.uk