

## Core Quantitative Methods Course Outline

Version 4: 14/2/2012

### Summary:

This is a 30-hour course covering the core quantitative methods with which every social science PhD student should have a degree of familiarity. The course uses the statistical software SPSS as this is the easiest to use of the widely used packages.

### Session model :

For sessions 1-5, this is as follows: 90 minute lecture; 15 minute break; 75 minute practical class in which students use SPSS to carry out the analyses/techniques discussed in the lecture. SPSS will be available in the classrooms used for teaching. (This is a change from previous arrangements using student laptops.)

### Course Outline

<b>Session/ date</b>	<b>Venue and time</b>	<b>Topic</b>	<b>Notes</b>	<b>Session Leader</b>
Session 1 Tuesday 28/02/12	WB304 Goldsmiths 4pm-7pm	Research design, measurement, and data handling in quantitative research	The SPSS session introduces SPSS as a data manipulating tool	Prof. Alan Pickering, Goldsmiths
Session 2 Tuesday 6/03/2012	WB304 Goldsmiths 4pm-7pm	Describing and summarising quantitative data: Measures of central tendency and dispersion	The session will include univariate data screening and cleaning; graphical methods for presenting data	Mike Griffiths, Goldsmiths
Session3 Tuesday 13/03/12	WB304 Goldsmiths 4pm-7pm	Statistical inference, hypothesis testing and sampling distributions; power and effect size	Statistical tests for univariate (one sample) data	Mike Griffiths, Goldsmiths
Session 4 Tuesday 20/03/12	WB304 Goldsmiths 4pm-7pm	Statistical tests for comparing groups	Parametric tests such as t-tests and one-way analyses of variance; including the underlying assumptions of the tests; plus nonparametric tests	Mike Griffiths, Goldsmiths
Session 5 Tuesday 27/03/12	WB304 Goldsmiths 4pm-7pm	Bivariate data: contingency tables and measures of association	Assumptions underlying statistical tests will be explored	Mike Griffiths, Goldsmiths
<b>Easter vacation</b>				

Session/ date	Venue and time	Topic	Notes	Session Leader
Session 6 Wednesday 02/05/12	Laws 112 Queen Mary 10am-1pm	Bivariate Data: correlation and linear regression	Assumptions underlying statistical tests will be explored	Dr Ana Galvao, Queen Mary
Session 7 Thursday 03/05/12	Laws 112 Queen Mary 10am-1pm	Multivariate Data: Multiple regression I	Includes assessing suitability of the data for multiple regression in relation esp. to the underlying assumptions	Dr Ana Galvao, Queen Mary
Session 8 Friday 04/05/12	Laws 112 Queen Mary 10am-1pm	Multivariate Data: Multiple regression II	More advanced aspects and issues	Dr Ana Galvao, Queen Mary
Session 9 Tuesday 8/05/12	WB304 Goldsmiths 4pm-7pm	Q and A session regarding the assessment	A session in which tutors and students go through the assessment and offer guidance on what is required and how to deliver it	Prof. Alan Pickering, Goldsmiths
<b>Deadline for hand-in of the assessment: 4pm Friday 25<sup>th</sup> May 2012</b>				
10 Date TBA	TBA	Guided peer marking of the assessment	Work will be anonymously marked by fellow students under guidance of tutor	Prof. Alan Pickering, Goldsmiths

Key practical preparations for the Course:

1) Students should get, from their home university, a copy of SPSS for use on a home computer. It is important to practice the methods taught between classes. This practice is most easily done at home.

For QM students SPSS is available here:

<http://qm-web.its.qmul.ac.uk/frontoffice/Liaison/software.shtml>

If you have problems accessing it, the first line of query is: [its-helpdesk@qmul.ac.uk](mailto:its-helpdesk@qmul.ac.uk)

For Goldsmiths students SPSS is available here:

<http://www.gold.ac.uk/it/apps/spss/>

If you do have problems with **installing the software only**, please email [helpdesk@gold.ac.uk](mailto:helpdesk@gold.ac.uk).

- 2) Students should get a student ID for the university that is not their normal “home university”. This is a simple procedure and will allow you to access the computers when attending sessions away from your home university. All you have to do is complete a form. The forms will be available very shortly on the DTC website (<http://londonsocialscience.org.uk/core.html>). If you have any problems with this, then please contact Alan Pickering ([a.pickering@gold.ac.uk](mailto:a.pickering@gold.ac.uk)).

#### *The Assessment*

For the assessment you will be given a dataset at the outset of the course and a series of research questions which need to be answered by performing statistical analyses on the dataset. The analyses required will naturally be based on those taught during the course. The assessment will be written up in the form of the “results section” of a research report or journal paper. See the above table for the hand-in deadline.

#### *Course Texts*

There are many general statistics books which are excellent and cover the material included in this course. Some of these also use SPSS as the statistical package and show you how to execute the analyses in SPSS. We recommend either of the books below as being very readable.

Field, A. (2009). *Discovering statistics using SPSS* (3<sup>rd</sup> edition). Sage.

<http://www.uk.sagepub.com/booksProdDesc.nav?prodId=Book233183&>

Howitt, D, & Cramer, D. (2011). *Introduction to SPSS statistics in psychology*. Pearson.

<http://www.pearsoned.co.uk/bookshop/detail.asp?item=10000000307065>

N.B. Both these books cover much more than the topics covered in this course, and they have a bias towards examples from psychological research, but psychology examples are generally easy to understand by people from other fields.

#### *Contact*

Professor Alan Pickering ([a.pickering@gold.ac.uk](mailto:a.pickering@gold.ac.uk)) with any queries about the course.