



Module Title:	Advanced Quantitative Methods	Module Coordinator: Dr Svetlana Makarova
Module Code:	SEESGS46	Pre-requisite: SEESGS15 Quantative Methods
Credit Value:	15	Runs in (2013/14): Term 2
		Provisionally Taught at: Wed 11-1. Tutorials: tbc
Compulsory for:	MA CBE, MA CE&P, IMESS (E&B Track), MRes (1 Year), Optional Core for MRes (2 Year, Social Sciences Track)	
Open to:	All MA students (dependent upon pre-requisite, personal timetable and availability)	

Module Outline

The AQM course builds on the foundation techniques taught in 'Quantitative Methods' during Term 1. It is designed to master students' ability in empirical econometric analysis of economic and social sciences data. The course starts from advanced topics in multiple regression analysis followed by more specific analysis of time series data, panel data modelling and introduction to limited depended variable models.

This course caters for students from diverse backgrounds with different levels of statistical knowledge. For those with a limited statistical background there is the opportunity to gain more quantitative skills, for those with limited experience in using statistical software classes in *Stata* will be on help and for those with more experience there is the opportunity to hone skills and undertake original quantitative research at a more advanced level. There is an emphasis throughout on the use, interpretation and understanding of results rather than proofs, which will be kept at an elementary/intermediate level. The course can though act as a lead into a more theoretical econometrically oriented course.

At the end of the module you should have fulfilled the following aims and objectives:

Aims:

1. To equip students with intermediate level econometric techniques.
2. To enable postgraduate students to understand and apply econometrics and statistical techniques to real life economic and social sciences data.
3. To prepare postgraduate students for more advanced specialist econometric courses and research.
4. To develop an appreciation of the role of econometrics and statistical analysis in the social sciences – both strengths and weaknesses.
5. To make accessible applied econometric literature.

Objectives:

By the end of the course students will be equipped with the technical, statistical and interpretative skills and will be able to critically appraise published research and to design and carry out independent empirical research projects. These will constitute the foundation skills appropriate for embarking on a social science/economics research degree.

Assessment Methods

Assessment Style: 1 x 5000w *Stata* project

Assessment Weighting: 100%

Reading

There is no single core text for this course as we cater for a range of levels. Many of the key resources are available online. However there are books (1 - 3) which refer to *Stata* directly and others with wider coverage of topics for Social Scientists (4 - 6). (7) is also highly recommended, as an introductory text, for anyone serious about using *Stata* for econometrics.

1. Stock, J.H. and Watson, M.W (2011), *Introduction to Econometrics*. 3rd ed., Pearson International Edition.
2. Wooldridge, J. M. (2012), *Introductory Econometrics: A Modern Approach*. 5th ed., South Western.
3. Dougherty, C. (2011) *Introduction to Econometrics*, 4th ed., OUP, Oxford.
4. Charemza, W. and Deadman, D. (1997), *New Directions in Econometric Practice*. 2nd ed., Edward Elgar.
5. Verbeek M. A. (2012), *Guide to Modern Econometrics*, 4th ed., Wiley.
6. Rabe-Hesketh S., Skronda A. (2010) *Multilevel and Longitudinal Modeling Using Stata*, 2nd ed., Stata Press.
7. Baum, C. F. (2006) *An Introduction to Modern Econometrics Using Stata*. Stata Press.
8. Kohler, U. and Kreuter, F. (2005) *Data Analysis Using Stata*. Stata Press.
9. Hamilton, Lawrence C. (2003) *Statistics with Stata*. Duxbury.

There are a range of other accessible texts covering basic applied statistics and some introductory econometrics and the *Stata* supporting website (<http://www.ats.ucla.edu/stat/stata/>) is excellent.

In addition, there is a **Moodle page** for this course (www.ucl.ac.uk/moodle) which should be regularly checked for new lecture notes, class exercises and other materials and information related to the course.