EC422 Applied Econometrics
2014/2015

Lectures:	Wednesday	9.00-11.00	Darcy-Thompson Theatre
	Thursday	11.00-12.00	Darcy-Thompson Theatre
Tutorials	Monday	3.00 – 4.00	TBA
	Tuesday - Thursday	4.00 – 5.00	TBA
Lab Sessions	Monday	3.00-4.00	Friary Suite
	Wednesday	4.00 – 5.00	Cairnes Suite
	Tuesday and Thursday	4.00 – 5.00	Friary Suite

Individuals will be assigned to lab and tutorial groups. Labs and tutorials will be held in alternate weeks commencing in week 3 of the semester.

Lecturer: Dr. Stephen Hynes, St. Anthony's-Cairns Bldg., E-mail: stephen.hynes@nuigalway.ie

Theory Tutor: Jason Harold, J.HAROLD2@nuigalway.ie
Lab tutor: Padraic Ward, padraic.ward@nuigalway.ie

Course Books:

The main course book is

Econometrics by Example: Damodar Gujarati. Palgrave Macmillan.

Students can supplement this with readings from any good introductory econometrics book such as:

Basic Econometrics: Damodar N. Gujarati and Dawn C. Porter, McGraw-Hill. 2009.

Introductory Econometrics: A Modern Approach: Jeffrey M. Wooldridge, (European Edition), 2013.

Econometrics by Example: Damodar Gujarati. Palgrave Macmillan. 2011.

Econometrics. Samuel Cameron. McGraw-Hill. 2005

Introduction to Econometrics, James H. Stock and Mark W. Watson, Pearson, International edition, 2nd ed., 2007.

Undergraduate Econometrics: Carter Hill, William Griffiths, George Judge (HGJ), Wiley and Sons 1997 or second edition 2000. Good on the main practical points.

Supplementary Books

A Guide to Econometrics Peter Kennedy (PK), Blackwell, Excellent Discussion of Topics.

Statistical Techniques in Business and Economics, Robert D. Mason, Douglas A. Lind and William G.. Marchal (STBE). McGraw-Hill.

The lectures are framed around the material covered in <u>*Econometrics by Example:*</u> <u>Damodar Gujarati</u>

Course Summary and Objectives – Econometrics (EC422)

Our main interest in the course is in examining the assumptions made and concepts used in classical linear regression analysis. It is an introductory course so some of the complications are not dealt with in detail. The principal objective is that you gain an understanding of regression analysis, the statistics underlying it and its application in practice. This involves a mixture of theoretical and practical work – so the sessions on the computer, the assignments and the lectures are all part of the course and feed into each other. The interdependency of the material and activities means that it can be difficult to catch up if you miss sessions. In the first few weeks we review the basic concepts of regression analysis including simple two and multiple variable models as well as interval estimation. Later in the course, we examine alternate functional forms, dummy variables, and issues of multicollinearity, heteroscedasticity, autocorrelation, use of time series and qualitative response models in regression analysis. A project is used to provide the student with experience in the development, estimation and interpretation of an econometric model.

Students are strongly encouraged to attend labs and tutorials as well as lectures.

Course Timetable and Outline

Computer and tutorial timetables

Labs and tutorials will commence in week 3. Students will be assigned to a lab and tutorial session. While every effort will be made to accommodate student preferences in regard to classes, timetabling may require students to be assigned to groups that do not match their first choice. **It is <u>the responsibility of the student to ensure that they have been assigned to a lab and tutorial group.</u>** Labs and tutorials will be held every week, groups will meet in labs or tutorials held in alternate weeks. Anyone who has a timetabling conflict with all computer hours is requested to contact me not later than Wednesday of week 2 providing proof of conflict. Lab sessions will be used to provide the students with an introduction to the econometrics package STATA which they will use for completion of their project. Tutorial sessions will be used to work through problem sheets as well as to afford students the opportunity to ask questions. Problem sheets will be distributed each week beginning in week 3, for completion. Students are also obliged to complete a group project details of which will be distributed by week 5. The project should be submitted not later than week 12.

Assessment
70% Coursework, 30% mid-term in-class exam

There will be 2 assignments (one theoretical, one practical), each worth 15% of course marks (30% together), and there will be an econometrics (group) project worth 40% of course

marks. The latter will entail lab based estimation and interpretation of empirical data. Details of the projects will be distributed by week 5 of the course.

Notes for this course will be made available on Blackboard. It must be emphasised these are not intended as a substitute to reading. Notes will not be made available until after lectures.

You should also check Blackboard each Monday for announcements etc.

Lectures Overview

Week 1: Introduction and a Review of Statistics

Week 2: An overview of simple and multiple linear regression analysis

Week 2: Functional forms

Week 3: Qualitative response models

Week 4: Multicollinearity

Week 5: Heteroscedasticity

Week 5: Autocorrelation

Week 6: Model specification and Data Issues

Week 7: Logit and Probit Models

Week 8: Count Data Models

Week 9: Time Series Models

Week 10: Panel Data Models

Week 11: Instrumental Variables and Two Stage Least Squares

Week 11: Review