Methods of Economic Investigation II
EC 403
Part I

Michaelmas Term, 2002

Instructor: Oliver B. Linton: S583; tel. 955-7864; email: lintono@lse.ac.uk; web page http://econ.lse.ac.uk/staff/olinton/
Secretary: Pat Nutt; S565; tel. 955-7868.
Office Hours: TBA.
Time and Location: Monday 9-11, D502.
Classes: 1 hour weekly to begin in week 3.
Prerequisites: This course is for the MSc in Economics as an advanced alternative to Methods of Economic Investigation I and for other graduate students with permission of the instructor. It is primarily intended for students who intend to pursue a career in research. Students should have completed an undergraduate level course in econometrics and statistical theory. Linear algebra and multivariate calculus will be used frequently. Knowledge of statistical distribution theory and inference is essential.
Course Description: This course is intended to provide a basic knowledge of econometric theory relevant for carrying out empirical work in economics. The static linear regression model is the main focus of the course although extensions to dynamic models, simultaneous equation systems, nonlinear regression, panel data, and binary choice models are also pursued. Estimation and testing methods discussed will include those based on least squares, weighted least squares, maximum likelihood, instrumental variables, and the generalized method of moments. The course is divided in two parts: Part I is taught by myself in Michaelmas term, while Part II is taught by M. Schafgans in Lent term.
Reading: There will be typed up notes in pdf format available from my web page a week in arrears. Please note there is no set book for this course, although

P. A. RUUD, *An Introduction to Classical Econometric Theory* Oxford University Press, 1999.

which is available at Waterstones, covers most of the same material at a similar level. Also recommended are:

W.H. Greene *Econometric Analysis* 3rd Edition, Prentice Hall.

R. Davidson and J. MacKinnon *Estimation and inference in econometrics* Oxford University Press, 1993

T. Amemiya *Advanced Econometrics.* Harvard University Press, 1985

J. Johnston *Econometric Methods* 3rd edition. McGraw Hill.

G. Judge et al. *A course in econometrics.* Wiley, 1988.

G. Maddala *Econometrics.* McGraw Hill, 1977.

Some books on statistics which may also be useful

A. Mood, F. Graybill, and D. Boos. *Introduction to the Theory of Statistics.* McGraw Hill.

G. Casella and R.L. Berger. *Statistical Inference.* Duxbury Press.

J.A. Rice. *Mathematical Statistics and Data Analysis* [2nd edition]. Duxbury Press.

Grading: There will be five problem sets this term; these will be discussed in class. These exercises must be attempted by all students - for your own good. There will be *one* three hour exam at the end of the year which will determine your grade for the course. Some of the exercises will include computer work, and can be completed using EViews, which is available on the network. We will use some data that I have located in the network outlook folder `outlook/public folders/ all public folders/ departments/ economics/ ec403.`

There is a companion set of lectures given by Staff in the New Theatre (E171) on Thursday 10-11, designed to illustrate the application of the methods discussed in the theoretical lectures. Although these lectures are designed primarily for MEI 1, and are optional, and the material in them is not directly examinable for either course, I strongly urge you to attend them because they should help your understanding of the theoretical concepts.