Econometrics B | ECU33092

Year	Junior Sophister
ECTS Credits	5
Contact Hours	22 hours of lectures and 10 hours of computer workshops
Pre-Requisite	ECU22031 & ECU22032 Mathematical and Statistical Methods and ECU33091
Semester	2
Module Leader and Lecturer	Professor Gaia Narciso
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Module Outline:

This module provides an introduction to the theory and methods of modern econometrics. It begins by reviewing and extending the econometric material covered in Econometrics A.. Following this students are guided through the fundamental principles of econometrics and working through to more advanced topics as the module progresses. The module provides a balance between core theoretical material and an extensive applied component which aims to develop student's practical skills necessary to conduct independent applied research.

Topics Covered Include:
- Qualitative Choice Models: binary dependent variables – the linear probability and probit models
- Introduction to Time-Series Analysis: Stationarity/non-stationarity; unit roots and cointegration; MA, AR and ARMA models
- Misspecification of Disturbance Terms: Autocorrelation.
- Instrumental Variable Analysis
- Experiments and Quasi-experiments.

- Predictions with many regressors and big data.

Module Learning Outcomes:

On successful completion of this module, you will be able to:

- Confidently discuss the problem of identification;
- Estimate and test models using instrumental variables and two stage least squares;
- Perform basic time series analysis;
- Use the techniques developed to test economic models;
- Use Stata to estimate econometric models;
- Present a research topic and research plan and write an empirical paper on an applied research topic.

Assessment:

- 2 Homework Assignments accounting for 10% of the overall grade.
- A project worth 30% of the overall grade.
- The annual in-person exam is worth 60% of the overall grade.

Recommended Reading List:

Stock, J.H. and M.W. Watson. Introduction to Econometrics, Pearson (4e), 2019.

Angrist, J.D. and Pischke, J. *Mastering Metrics*, Princeton University Press, 2015