

School of Economics and Finance

ECON 301 ECONOMETRICS

Trimester One 2011

COURSE OUTLINE

Names and Contact Details

Dean Hyslop (course coordinator)

RH 310, Tel. 463 6964

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Contact with the lecturer is best initiated by e-mail or through making an appointment.

Trimester Dates

Teaching Period: Monday 28 February – Friday 3 June 2011

Study Period: Monday 6 June – Thursday 9 June 2011

Examination Period: Friday 10 June – Saturday 2 July 2011 (inclusive)

Withdrawal from Course

1. Your fees will be refunded if you withdraw from this course on or before 11 March 2011.
2. The standard last date for withdrawal from this course is 14 May. After this date, students forced to withdraw by circumstances beyond their control must apply for permission on an '*Application for Associate Dean's Permission to Withdraw Late*' including supporting documentation.

The application form is available from either of the Faculty's Student Customer Service Desks.

Class Times and Room Numbers

Lecture

Wednesday, Friday

11:30 – 14:20 pm

RWW413

Tutorial

A weekly tutorial will be held in a computer lab (RWW 102), beginning in the second week of the trimester. These tutorials will be either on Wednesday or Friday 12:40 – 1:30 pm, and determined in the first lecture according to the preferences and constraints of the class. To access the student computer labs, you will need to set up your username and password with the Student Computer Services (SCS).

Course Content

Econometrics is concerned with the construction, estimation, testing, and use of economic and financial models. Sound applied econometric work requires that careful attention be paid to econometric theory, as well as to the theory on which the empirical model is based and the construction of data. To understand econometrics, a considerable amount of mathematical reasoning and theory is required. But since the ultimate goal is actual estimation and evaluation, hands-on experience with data and econometric software is also required. For the hands-on econometric work, econometric computer software R will be used.

Introductory material covered in QUAN 201 will be reviewed and expanded into more advanced level, in terms of both the econometric theory and the level of complexity of the models. Advanced econometric topics may include generalized least squares, instrumental variables methods, stationary time series models, estimation of simultaneous equation systems, non-linear least squares, maximum likelihood estimation, models with panel data, and models with limited dependent variables. Furthermore:

- Matrix algebra specifications will be used. By using matrix algebra, the fundamental results in econometrics can be presented in an elegant and compact manner.
- Some computer programming will be done in implementing econometric theory. Programming econometric formulas will enhance students' understanding of formulas. Through programming, theoretical results that have not been incorporated as automatic commands in a software package can be implemented in empirical work.

Readings

Textbook – this is a *recommended* not *required* text.

Wooldridge, J M, *Introductory Econometrics: A Modern Approach*, 4th edition, Thomson/South-Western, 2009.

Other useful references include

Griffiths, W E, R C Hill, and G G Judge, *Learning and Practicing Econometrics*, John Wiley & Sons, 1993.

Johnston, J, and J. DiNardo, *Econometric Methods*, 4th edition, McGraw Hill, 1997.

Verbeek, M, *A Guide to Modern Econometrics*, 3rd edition, John Wiley & Sons, 2008.

Course Web

Selective course material will be available at the VUW Blackboard website.

Course Learning Objectives

By the end of this course, students should be able to

- C1 use matrix algebra to specify and derive characteristics of linear regression models
- C2 apply Generalised Least Squares
- C3 apply instrumental Variable (IV) estimation
- C4 set out the identification issues in simultaneous equations models, and estimate such models
- C5 apply Non-linear Least Squares and Maximum Likelihood Estimation
- C6 apply common binary choice and other limited dependent variable models
- C7 apply common panel data models
- C8 use econometric software to implement the above techniques in appropriate situations

Course Delivery

The course topics are as follows (with Wooldridge text references):

- Generalised least squares methods for Heteroskedasticity and Autocorrelation – chapter 8 (mainly 8.1-8.4) and chapter 12 (mainly 12.1-12.3)
- Instrumental variables methods – chapter 15 (mainly 15.1-15.5)
- Simultaneous equations systems – chapter 16 (mainly 16.1-16.3)
- Maximum likelihood estimation of non-linear models – appendix C (C.4)
- Binary choice and limited dependent variables models – chapter 17 (mainly 17.1, 17.2, 17.4, 17.5)
- Panel data models – chapters 13 & 14

Expected Workload

ECON 301 is a 15-point course, and on the basis of VUW having designated one point = 10 hours work, expected work load would total 150 hours. If that workload were spread over 12 weeks, the expected load would average around 12.5 hours per week. This would involve attending classes, plus reading, studying and completing assignments. The 12.5 hours would of course vary for individual students, depending on the student's previous knowledge and understanding, and the final grade to which the student aspires.

Assessment Requirements

Assignments	20% (Four @ 5% each); C1-C8.
Mid-trimester test	20%, in lecture Wednesday 4 May, 50 minutes; C1-C4.
Final examination	60%, during the examination period, 2 hours; C1-C8.

If you are not able to sit the mid-trimester test for any reason, then your final examination will be weighted 80% towards the final grade. Assignments may include both problem solving and computer tasks.

Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning objectives as required for accreditation and audit purposes. The findings may be used to inform changes aimed at improving the quality of FCA programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

Examinations

Students who enrol in courses with examinations are obliged to attend an examination at the University at any time during the formal examination period. The final examination for this course will be scheduled at some time during the period from Friday 10 June – Saturday 2 July 2011.

Penalties

Late submission of assignments will not be accepted without prior approval.

Mandatory Course Requirements

Mandatory course requirements will be satisfied if all assessment requirements are completed.

Class Representative

A class representative will be elected in the first class, and that person's name and contact details will be available to VUWSA, the Course Coordinator and the class. The class representative provides a communication channel to liaise with the Course Coordinator on behalf of students.

Communication of Additional Information

Additional information or information on changes will be conveyed to students through the VUW Blackboard website.

For the following important information follow the links provided:

Academic Integrity and Plagiarism

<http://www.victoria.ac.nz/home/study/plagiarism.aspx>

General University Policies and Statutes

Find key dates, explanations of grades and other useful information at www.victoria.ac.nz/home/study.

Find out about academic progress and restricted enrolment at www.victoria.ac.nz/home/study/academic-progress.

The University's statutes and policies are available at www.victoria.ac.nz/home/about/policy, except qualification statutes, which are available via the Calendar webpage at www.victoria.ac.nz/home/study/calendar (See Section C).

Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at www.victoria.ac.nz/home/about_victoria/avcacademic/default.aspx

AVC (Academic) Website: information including: Conduct, Academic Grievances, Students with Impairments, Student Support

http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx

Faculty of Commerce and Administration Offices

<http://www.victoria.ac.nz/fca/studenthelp/>

Manaaki Pihipihinga Programme

http://www.victoria.ac.nz/st_services/mentoring/