

School of Economics and Finance

QUAN 301 ECONOMETRICS

Trimester Two 2009

COURSE OUTLINE

Names and Contact Details

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

Trimester Dates

Teaching Period: Monday 13 July to Friday 16 October 2009

End of Year Study Period: Monday 19 October to Monday 26 October 2009

Examination Period: Tuesday, 27 October to Saturday 14 November 2009 (inclusive)

Note: Students who enrol in courses with examinations should be able to attend an examination at the University at any time during the formal examination period.

Withdrawal dates: Information available via

<http://www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx>

Class Times and Room Numbers

Lecture

Monday	1:40 – 2:30 pm	RWW 127
Wednesday, Friday	11:30 – 12:20 pm	RWW 127

Tutorial

A weekly tutorial will be held in a computer lab (RWW 302). It will be run either on Monday 3:40-4:30 pm or on Friday 9:30-10:20 am, beginning in the second week of the trimester. Only one of the suggested tutorial times will be offered; choice of the time will be determined by majority preference as revealed at the first lecture.

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 EVIEWS 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 (and possibly non-stationary) time series models, estimation of 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, compact, and uncluttered 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.

Course Learning Objectives

- C1 will understand and use matrix algebra to specify and derive characteristics of linear regression models
- C2 will understand and use the econometric package EVIEWS including simple computer programming in EVIEWS to implement econometric theory
- C3 will know how and when to apply Generalised least squares
- C4 will apply time series modelling procedure for stationary time series
- C5 will understand and apply instrumental Variable (IV) estimation
- C6 will understand and use Systems of Equations
- C7 will use Non-linear Least Squares and Maximum Likelihood Estimation
- C8 will understand and apply binary choice models
- C9 will understand and apply other limited dependent variable models
- C10 Will understand and apply panel data models

Course Delivery

The topics for the 2009 course are organised as follows:

Weeks 1–6: (Dean Hyslop)

- Generalised least squares methods for Heteroscedasticity and Autocorrelation
- Instrumental variables methods
- Stationary times series models
- Systems of equations

Weeks 7–12: (Mohammed Khaled)

- Non-linear least squares and maximum likelihood estimation
- Binary choice models
- Limited dependent variables
- Panel data models

Expected Workload

QUAN 301 is a 24-point course, and on the basis of VUW having designated one point = 10 hours work, expected work load would total 240 hours. If that workload were spread over 12 weeks, hours expected would average around 20 hours per week. This would involve attending classes, plus reading, studying and completing assignments. The 20 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.

Readings

Textbook

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

Other References

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.

Khaled, M, *Introduction to Modern Econometrics with Applications*, Pearson/Prentice-Hall, 2008.

Wooldridge, J M, *Introductory Econometrics: A Modern Approach*, 3rd edition, Thomson/South-Western, 2006.

Course Web

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

Assessment Requirements

(Including the associated learning objectives)

Assignments 20% (Four @ 5% each); C1-C10.

Mid-trimester test 20% (weeks 1–6), 21 August 2009, 1 hour; C1-C6.

Final examination 60% (1/3 weeks 1–6, and 2/3 weeks 7–12), during the examination period, 2 hours; C1-C10.

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.

Note: 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

The final examination for this course will be scheduled at some time during the period from Tuesday 27 October to Saturday 14 November 2009.

Penalties

Unapproved late submission of assignments will incur a penalty of 10% per day up to two days. Unauthorised submissions beyond that will not be marked.

Mandatory Course Requirements

To pass this course, students must attend at least 8 tutorials and obtain at least 50% of the overall marks.

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

<http://www.victoria.ac.nz/home/about/policy/academic.aspx>

Faculty of Commerce and Administration Offices

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

Manaaki Pihipihinga Programme

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