

School of Economics and Finance

## **QUAN 301 ECONOMETRICS**

Trimester Two 2007

### **COURSE OUTLINE**

---

#### **Contact Details**

Dr. Kunhong Kim (course coordinator)

RH 425, Tel. 463 5786

Email: [Kunhong.Kim@vuw.ac.nz](mailto:Kunhong.Kim@vuw.ac.nz)

Office Hour: 3 – 5pm, Wednesday

Dr. Jin Seo Cho

RH 303, Tel. 463 6149

Email: [Jinseo.Cho@vuw.ac.nz](mailto:Jinseo.Cho@vuw.ac.nz)

Office Hour: to be discussed

#### **Class Times and Room Numbers**

Monday, Tuesday, Friday

4:40 – 5:30 p.m.

RHLT 3

The final examination will be held at the place and the time, in the period of 19 October – 10 November, to be announced later by the university authority.

#### **Tutorial Time and Location**

Tutorials will be held in a computer lab (RWW 302). You will be allocated to one of the two tutorial sessions that will be run on Thursdays beginning in the second week of the trimester.

**Thursday 3:40 – 4:30 p.m. or 4:40 – 5:30 a.m.**

To access the student computer labs, you will need to set up your username and password with the Student Computer Services (SCS).

#### **Course Objectives and 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 include instrumental variable estimations, generalized method of moments estimation, maximum likelihood estimation, unit roots, cointegration, error-correction models, etc. Furthermore:

- Monte-Carlo simulations will be conducted in order to investigate properties of estimators. Simulation exercises will provide very useful insights into sampling distribution.
- 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.

The course is designed for completing students to:

- be familiar with the main forms of regression models;
- be competent in the use of the econometric package EVIEWS;
- be able to carry out their own applied work to an acceptable standard;
- be able to understand and critique reports on journal articles using applied regression analysis;
- have covered the foundations for a graduate course in econometrics.

### Course Organization

Theme I: Introduction to Time Series Analysis

- Review of probability theory, statistics, and matrix algebra
- Linear regression models and matrix notation
- Generalised least squares in matrix notation, autocorrelation
- Stationary times series models
- Non-stationary time series
- Time series regression with non-stationarity

Mid-Trimester Exam

Theme II: Introduction to the Instrumental Variable (IV) and Generalised Method of Moments (GMM) Estimations and Inferences

- Preliminaries for IV and GMM estimations
- IV Estimation
- Inferences with IV
- GMM estimation
- Inferences with GMM
- Maximum likelihood estimation and its relationship to GMM estimation

## **Readings**

### Textbook

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

### Other References

Verbeek, M, *A Guide to Modern Econometrics*, 2<sup>nd</sup> edition, John Wiley & Sons, 2004.

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

### Course Web

Selective course material will be available at the blackboard.

## **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.

## **Assessment Requirements**

Assignments	20%
Mid-trimester test	20%
Final examination	60% (1/3 from the first half, 2/3 from the second half)

Assignments will include both problem solving and computer tasks.

## **Mandatory Course Requirements**

To pass this course, students must attend at least 8 tutorials.

## **Communication of Additional Information**

Additional information or information on changes will be conveyed to students through blackboard.

## **Faculty of Commerce and Administration Offices**

### Railway West Wing (RWW) - FCA Student and Academic Services Office

The Faculty's Student and Academic Services Office is located on the ground and first floors of the Railway West Wing. The ground floor counter is the first point of contact for general enquiries and FCA forms. Student Administration Advisers are available to discuss course status and give further advice about FCA qualifications. To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

### Easterfield (EA) - FCA/Education/Law Kelburn Office

The Kelburn Campus Office for the Faculties of Commerce and Administration, Education and Law is situated in the Easterfield Building - it includes the ground floor reception desk (EA005) and offices 125a to 131 (Level 1). The office is available for the following:

- Duty tutors for student contact and advice.
- Information concerning administrative and academic matters.
- Forms for FCA Student and Academic Services (e.g. application for academic transcripts, requests for degree audit, COP requests).
- Examinations-related information during the examination period.

To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

## **General University Policies and Statutes**

Students should familiarise themselves with the University's policies and statutes, particularly the Assessment Statute, the Personal Courses of Study Statute, the Statute on Student Conduct and any statutes relating to the particular qualifications being studied; see the Victoria University Calendar or go to [www.vuw.ac.nz/policy](http://www.vuw.ac.nz/policy).

For information on the following topics, go to the Faculty's website [www.vuw.ac.nz/fca](http://www.vuw.ac.nz/fca) under Important Information for Students:

- Academic Grievances
- Academic Integrity and Plagiarism
- Student and Staff Conduct
- Meeting the Needs of Students with Impairments
- Student Support

## **Manaaki Pihipihinga Programme**

Manaaki Pihipihinga is an academic mentoring programme for undergraduate Māori and Pacific students in the Faculties of Commerce and Administration, and Humanities and Social Sciences. Sessions are held at the Kelburn and Pipitea Campuses in the Mentoring Rooms, 14 Kelburn Parade (back courtyard), Room 109D, and Room 210, Level 2, Railway West Wing. There is also a Pacific Support Coordinator who assists Pacific students by linking them to the services and support they need while studying at Victoria. Another feature of the programme is a support network for Postgraduate students with links to Postgraduate workshops and activities around Campus.

For further information, or to register with the programme, email [manaaki-pihipihinga-programme@vuw.ac.nz](mailto:manaaki-pihipihinga-programme@vuw.ac.nz) or phone (04) 463 5233 ext. 8977. To contact the Pacific Support Coordinator, email [pacific-support-coord@vuw.ac.nz](mailto:pacific-support-coord@vuw.ac.nz) or phone (04) 463 5842.