TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

School of Economics and Finance

ECON 408 ADVANCED ECONOMETRICS A

Trimester 1, 2016

COURSE OUTLINE

Prescription
In-depth coverage of advanced econometric theory. Topics may include the estimation and inference of linear and non-linear models, irregular linear and/or non- linear models, quasi-maximum likelihood, and GMM estimation and inference.

Course Learning Objectives
By the end of this course students should be able to:

1. understand advanced econometric estimation methods and their asymptotic properties,
2. use Monte Carlo and Bootstrap simulation approaches to analyse how econometric methods work in different contexts,
3. apply econometric methods to analyse economic data.

Course Content
This course focuses on advanced econometric theory and methods for microeconomic data.
It will begin with a discussion of relevant asymptotic theory that underlies the econometric theory of most methods, followed by a discussion of computational-based sampling (Monte Carlo) methods that complement the asymptotic theory, are widely used in econometrics, and will be used in practical assignments throughout the course ... and beyond! The course will then provide a systematic coverage of the main generic estimation methods used in econometrics.

The course will cover the following topics:
- Asymptotic theory: D&M (1993, Chap 4) and Wooldridge (2010, Chap 2 and 3)
- Computational-based sampling methods: D&M (1993, Chap 21)
- A review of linear regression methods: D&M (2004, Chap 1-4) and Wooldridge (2010, Chap 4, 5, and 10)
- Multivariate systems of equation estimation: D&M (2004, Chap 12)
- Maximum likelihood estimation: D&M (2004, Chap 10)
- Generalised method of moments (GMM) estimation: D&M (2004, Chap 9)

A more detailed reading list is provided below. Yu-Wei Luke Chu will teach the first half of the course (weeks 1-6), and the second half (weeks 7-12).

Trimester Dates
Teaching Period: Monday 29th February – Friday 3rd June
Study Period: Monday 6th June – Thursday 9th June
Examination Period: Friday 10th June – Wednesday 29th June (inclusive)

Withdrawal from Course
1. Your fees will be refunded if you withdraw from this course on or before Friday 11th March 2016.
2. The standard last date for withdrawal from this course is Friday 13th May 2016. 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 or online.

Names and Contact Details
Course coordinator & lecturer: Yu-Wei Luke Chu
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Lecturer: TBA

Course Administrator: Rachel Zhang
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Class Times and Room Numbers

Lectures
Tuesday: **9:30 - 11:20pm** in **RWW127** (Railway West Wing, Pipitea)

Course Delivery
This course will be delivered by one 2-hour lecture per week.

Readings
No set textbook is assigned for this course. However, the following texts are recommended as useful references.

- Davidson, Russell, and James G. MacKinnon (1993), Estimation and Inference in Econometrics, Oxford University Press.
- Davidson, Russell, and James G. MacKinnon (2004), Econometric Theory and Methods, Oxford University Press.
- Wooldridge, Jeffrey M. (2010), Econometric Analysis of Cross Section and Panel Data, MIT Press, Cambridge, Massachusetts (2nd edition).

Journal Articles

Weak Instruments

- Angrist, Joshua D., and Alan B. Krueger (1991), "Does Compulsory Schooling Attendance Affect Schooling and Earnings?", Quarterly Journal of Economics, Vol. 106, No. 4, pp. 979–1014.
- Bound, John, David A. Jaeger and Regina M. Baker (1995), "Problems with Instrumental Variables Estimation when the Correlation Between the Instruments and the Endogenous Explanatory Variables is Weak", Journal of the American Statistical Association, Vol. 90, No. 430, pp. 443–450.
- Imbens, Guido W., and Joshua D. Angrist (1994), "Identification and Estimation of Local Average Treatment Effects", Econometrica, Vol. 62, No. 2, pp. 467–475.

Mandatory course requirements

There are no mandatory requirements for this course.

If you believe that exceptional circumstances may prevent you from meeting the mandatory course requirements, contact the Course Coordinator for advice as soon as possible.

If you cannot complete an assignment or sit a test or examination, refer to
www.victoria.ac.nz/home/study/exams-and-assessments/aegrotat

Expected Workload

You are expected to spend roughly 150 hours completing this course. This includes preview, lecture attendance, and review and study for assignments, test and exams. On average this is roughly 10 hours per week from the start of the course until the final exam, but the load may vary over time and across students.

Assessment

The Assessment Handbook will apply to all VUW courses: see
http://www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf.

Assignments	**30%**	(4 assignments x 7.5%)
Mid-trimester test	**35%**	(date will be announced in the first class)
Final Exam	**35%**	

The midterm test covers the first half of the course, while the final exam covers only the materials in the second half of 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 following period:

Friday 10th June – Wednesday 29th June (inclusive)

Penalties

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

Materials and Equipment

There will be approximately four assignments throughout the course, involving a combination of theoretical and hands-on applied examples. These assignments are intended to improve your understanding of the material, and will contribute to your final course grade. You are encouraged to use the econometric software R and Stata. R is freeware and can be downloaded from the following website: http://www.r-project.org/. However, it is acceptable to use alternative software such as GAUSS, or MATLAB if you prefer.

Student feedback

Student feedback on University courses may be found at
www.cad.vuw.ac.nz/feedback/feedback_display.php.

Class Representative

A class representative will be elected in the first class, and that person's name and contact details made 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 will be posted on Blackboard.

Link to general information
For general information about course-related matters, go to
http://www.victoria.ac.nz/vbs/studenthelp/general-course-information

Note to Students
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 academic audit. The findings may be used to inform changes aimed at improving the quality of VBS programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

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