

School of Economics and Finance

## **ECON 409: ADVANCED ECONOMETRICS B**

Trimester 2, 2016

### **COURSE OUTLINE**

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#### **Prescription**

In-depth coverage of econometric methods for time series and models for panel data.

#### **Course Learning Objectives**

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

- Demonstrate understanding and mastery of the theory underpinning the panel data and time series models presented.
- Assess the utility, merits and limitations of these theoretical models.
- Understand how and when these models are used in practice.

#### **Course Content**

ECON 409 will focus on the econometric modeling and analysis of two broad types of data: panel (or longitudinal) data and time series. The first 6 weeks of the course will cover panel data, the second 6 weeks will cover time series.

The panel data section will cover panel data analysis focusing on issues that motivate the use of panel data, the main econometric models used to analyse panel data, and methods to handle issues that arise in such analysis. Topics expected to be covered are: static and dynamic linear models, and static and dynamic non-linear models.

The time series section will provide an introduction to advanced econometric time series models and their analysis. Topics expected to be covered include: concepts and models underpinning non-stationary time series, co-integration and error correction models, and vector auto-regression models.

#### **Trimester Dates**

Teaching Period: Monday 11<sup>th</sup> July – Friday 14<sup>th</sup> October

Study Period: Monday 17<sup>th</sup> October – Thursday 20<sup>th</sup> October

Examination Period: Friday 21<sup>st</sup> October – Saturday 12<sup>th</sup> November (inclusive)

#### **Withdrawal from Course**

1. Your fees will be refunded if you withdraw from this course on or before Friday 22<sup>nd</sup> July 2016.
2. The standard last date for withdrawal from this course is Friday 23<sup>rd</sup> September 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**

Lecturer/Coordinator: Mohammed Khaled  
Email: [mohammed.khaled@vuw.ac.nz](mailto:mohammed.khaled@vuw.ac.nz)  
Office: RWW...  
Phone: 463-5787  
Office hours: Tuesday 12.30-1.30pm or by appointment

Course Administrator: Rachel Zhang  
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Office: RWW...  
Phone: 463-....

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

Tuesday 9.30-11.20 am RWW 127

### **Course Delivery**

The course is delivered by a two-hour weekly lecture and approximately four assignments throughout the course, involving a combination of theoretical and hands-on applied examples. These contribute to your final course grade.

The assignments form an integral part of the course. They augment the lecture notes, enhance the student's understanding of the course material, and provide essential practice in applying the theory and techniques given.

### **Readings**

An understanding of the course material should enable you to read, understand and apply much of the basic material in standard econometric graduate texts such as:

Woolridge, J. (2010) *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2<sup>nd</sup> edn.

Enders, W. (1994) *Applied Econometric Time Series*. Wiley, 3<sup>rd</sup> edn.

Verbeek, M. (2008) *A Guide to Modern Econometrics*. Wiley, 3<sup>rd</sup> edn.

An extensive set of additional more specialised references will be provided during the course when appropriate.

### **Mandatory course requirements**

None, but it is important to complete all internal assessments, in case you need to apply for an aegrotat. If you cannot complete an assignment or sit a test or examination, refer to [www.victoria.ac.nz/home/study/exams-and-assessments/aegrotat](http://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 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>.

Assessment will be based on a combination of internal assessment (up to four assignments and a

two-hour midterm test) and a two-hour final exam. The midterm test will be held soon after the mid-trimester break, at a time to be determined. The final exam will be scheduled by the University during the examination period. The panel data assignments are due approximately in weeks 2 and 4 of August, and the time series assignments in weeks 1 and 3 of October.

The overall assessment will be:

- 20% from assignments (course learning objectives relating to panel data & time series)
- 40% from the midterm test (course learning objectives relating to panel data)
- 40% from the final exam (course learning objectives relating to time series)

### **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 21st October – Saturday 12<sup>th</sup> November (inclusive)

### **Penalties**

Coursework submitted late will not be graded.

### **Materials and Equipment**

The econometric software referred to in this course is R (downloadable free from <http://www.r-project.org/>). This is also available in the University's computer labs. You are welcome to use any other similar software for your assignments (e.g., Stata or EViews) that you like.

### **Student feedback**

Student feedback on University courses may be found at [www.cad.vuw.ac.nz/feedback/feedback\\_display.php](http://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 conveyed to students via Blackboard. Sometimes you will also be sent emails. These will be sent to the address you supplied with your enrolment unless you advise otherwise.

### **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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