

School of Economics and Finance

## QUAN 201 INTRODUCTION TO ECONOMETRICS

Trimester 1, 2014

### COURSE OUTLINE

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#### Names and Contact Details

Course coordinator & lecturer: Prof. Dean Hyslop  
Office: RH 310, Ph. 463-6964  
Email: [Dean.Hyslop@vuw.ac.nz](mailto:Dean.Hyslop@vuw.ac.nz)  
Office hours: Wednesday 12.30–2pm, or by appointment

Administration: Alice Fong, RH 318, Ph. 463-5353  
[Alice.Fong@vuw.ac.nz](mailto:Alice.Fong@vuw.ac.nz)

#### Trimester Dates:

Teaching Period: Monday 3 March – Friday 6 June  
Study Period: Monday 9 June – Thursday 12 June  
Examination Period: Friday 13 June – Wednesday 2 July (inclusive)

#### Course Delivery

This course will be delivered by two lectures per week, and a tutorial/computer-lab in 8 of the 12 weeks.

#### Class Times and Room Numbers

##### Lectures:

Wednesday and Friday, 11.30am–12.20pm in **RH LT2**

Tutorials: Fridays in **RWW102** (the Railway West Wing building Cybercommons), at the following times: 9.30–10.20am; 10.30–11.20am; 12.40–1.30pm; and 1.40–2.30pm.

Arrangements for tutorial group allocations will be posted on Blackboard. If you have any difficulties with these, please contact Alice Fong ([alice.fong@vuw.ac.nz](mailto:alice.fong@vuw.ac.nz)), RH 318. To access the student computer labs, you will need to set up your username and password with the Student Computer Services (SCS).

The tutorials are expected to be held in **weeks 2-4, 6, 8-11**, but will be confirmed as the course progresses. To access the student computer labs, you will need to set up your username and password with the Student Computer Services (SCS).

##### Mid-trimester test:

**Wednesday 7<sup>th</sup> May, 5.40-6.30pm** in **RH LT1** (50 minute test, covering material from weeks 1–6).

## Course Content

This course provides an introduction to the theory and practice of econometrics, and will prepare you for more advanced econometrics and economics courses. Econometrics is concerned with the development, estimation, testing, and use of economic and financial models. Econometrics requires careful attention is paid to each of statistical theory, the (economic) theory on which the statistical model is based, and the collection and properties of the data used.

Throughout the course, emphasis will be placed on an intuitive understanding of the issues rather than on rigorous arguments, and concepts will be illustrated with economics applications. As the ultimate goal of econometrics is estimation and evaluation of models, hands-on experience with data and econometric computer software is essential. For this purpose, the econometric software package *R* will be used: *R* is freeware, and can be downloaded from the following website: <http://www.r-project.org/>.

## Readings

Textbook:

There is *no required text* for this course. However, I find the following text a good econometrics reference text, and I will reference relevant sections from this text:

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

## Assessment Requirements (including the associated learning objectives)

Assignments: 25% (probably 4 at 3 weekly intervals): C1–C5

Mid-trimester Test: 25% (50 minutes, covering material from weeks 1–6): C1–C2

Final examination: 50% (2 hours, during the examination period): C1–C4

The course assignments will include both problem solving and computer tasks. The use of computers will not be required for either the midterm or final examination.

From Trimester 1, 2014, a revised Assessment Handbook will apply to all VUW courses: see <http://www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf>. In particular, there will be a new grade scheme, in which the A+ range will be 90-100% and 50-54% will be a C-.

## Penalties

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

## Materials and Equipment

If you have your own computer, I strongly recommend that you download a copy of the econometric software package *R* from the following website: <http://www.r-project.org/>. You will then be able to configure it as you prefer, and be able to use it when and where you please.

## Prescription

The course briefly reviews key statistical concepts and gives a detailed discussion of the simple regression model, followed by treatment of multiple regression models. Case studies use econometric computer software.

## Course Learning Objectives

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

- C1 estimate a relation between two variables using Ordinary Least Squares (OLS), explain how OLS estimators behave in terms of their probability distributions, test hypotheses on the relation between variables using  $t$ -values and  $p$ -values, and measure goodness of fit in a regression
- C2 estimate a relation between three or more variables using the OLS method, and test two or more hypotheses jointly using  $F$ -tests or *chi-square* tests
- C3 use dummy variables to measure categorical explanatory variables, then test for any associated structural change in the relation between variables
- C4 explain the effects of non-constant error variance in estimation and hypothesis tests, and how to adjust the tests and/or estimation to account for these problems
- C5 use an econometric computer program to implement the methods listed above

## Expected Workload

QUAN 201 is a 15-point course. Based on VUW having designated one point = 10 hours work, the expected workload would total 150 hours: spread over 15 weeks, the expected workload would average around 10 hours per week. This would involve attending lectures & tutorials, plus reading, studying and completing assignments. The 10 hours weekly average may vary for individual students, depending on their previous knowledge and understanding, and their interest and aspirations associated with the course material.

## 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: from 13<sup>th</sup> June – 2<sup>nd</sup> July (inclusive).

## Mandatory Course Requirements

There are no mandatory requirements for this course.

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)

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

## 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)

## 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.

**Withdrawal from Course**

1. Your fees will be refunded if you withdraw from this course on or before Friday 14<sup>th</sup> March 2014.
2. The standard last date for withdrawal from this course is Friday 16<sup>th</sup> 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.

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