THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

BUSINESS SCHOOL

Course Outline
2017
ECON 221: INTRODUCTION TO ECONOMETRICS (15 POINTS)

Semester 2 (1175)

Course Prescription

An introduction to model building and empirical research methods in economics. Emphasises the use and interpretation of single equation regression techniques in formulating and testing microeconomic and macroeconomic hypotheses. Cross-section and time-series modelling, as well as qualitative choice models will be covered. There will be examples of the uses of econometrics in a variety of areas through statistical analysis, problem solving and econometric estimation using a statistical computer package.

Programme and Course Advice

Prerequisites: ECON 101 Microeconomics *or* ECON 191 Business Economics *or* ECON 111 Macroeconomics or MATHS 108 *or* 150 *or* 153 or STATS 101 *or* 102 *or* 108 *or* 125 *or* 191.

This course builds on knowledge of introductory economics, requiring some knowledge of algebra (such as logarithmic functions). For further study in econometrics with a theoretical emphasis, students can progress to ECON 321 Econometrics. For further study in econometrics with an empirical emphasis, students can progress to ECON 322 Applied Econometrics.

This is a recommended course for all students interested in Economics, and is a prerequisite for the Honours and Master's programmes in Economics. It is one of the prerequisites for the Stage III Economics courses ECON 321 Econometrics and ECON 322 Applied Econometrics.

Goals of the Course

The course will provide a base of understanding for students when conducting econometric research, as well as understanding applied econometric results. These skills may be enhanced by further econometric courses.

Learning Outcomes

By the end of this course it is expected that the student will:

1. know the basic principles of econometric analysis;
2. be able to understand both the fundamental techniques and wide array of applications involving linear regression estimation;
3. be able to understand the assumptions that underpin the classical regression model;
4. know how to apply regression analysis to real-world economic examples and data sets for hypothesis testing and prediction; and
5. be able to recognise and make adjustments for a number of common regression problems.

Content Outline

Topics to be covered include (with corresponding text book chapters: J.M. Wooldridge, M. Wadud and J. Lye, *Introductory Econometrics*, 1st edition, 2017):

Week 1-3: Introduction and Fundamentals of Statistics (Chapters 1, 2, 3)
Week 4: Simple Regression Model (Chapter 4)
Week 5: Multiple Regression Analysis (Chapter 5)
Week 6: Hypothesis Testing (Chapter 6)
Week 7: Model Specification (Chapter 7)
Week 8: Binary variables (Chapter 8)
Week 9: Heteroskedasticity (Chapter 9)
Week 10: Basic regression analysis with time series data (Chapter 10)
Weeks 11-12: Time-series and Serial Correlation (Chapters 11, 12)

Learning and Teaching

This course is taught in the first and second semesters. There will be three hours of lectures and a one-hour tutorial per week.

Tutorials are an integral part of the course, and it is expected that much of the learning and application of econometric concepts will be achieved through these tutorials. It is also expected that you will spend additional hours of reading, problem solving and econometric estimation each week.

Teaching Staff

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Learning Resources

Recommended Texts:

J.M. Wooldridge, *Introductory Econometrics*, 6th edition, 2016, South-Western.

(5th edition is fine too)

J.M. Wooldridge, M. Wadud and J. Lye, *Introductory Econometrics*, 1st edition, 2017, South-Western (this is the shorter Asia-Pacific edition)

We follow Wooldridge's book closely. (6th, 5th or Asia-Pacific editions are very similar, except more topics are included in the general 5th and 6th edition) You will find it essential for success in the course to regularly follow the textbook readings and applications on the topics covered. There are helpful questions at the end of each chapter.

Main Supplementary Reading:

J.H. Stock and M.W. Watson, *Introduction to Econometrics*, 3nd edition, 2007, Pearson Education: Addison Wesley.

Lecture slides will be available on CANVAS weekly.

Learning Resources *continued*

Additional resources:

The following are other useful introductory econometrics books, and they are available in the General Library.

A.H. Studenmund, *Using Econometrics: A Practical Guide,* 5th edition, Addison Wesley, 2006.

Damodar Gujarati, *Essentials of Econometrics*, 3rd edition, McGraw Hill, 2006.

D. Gujarati and D. Porter, *Basic Econometrics*, 5th edition, McGraw-Hill, 2009.

Tutorials: Weekly tutorial questions will be available on CANVAS. Solutions to the tutorial questions are handed out in tutorials and will be available on CANVAS during the week after the tutorial. The tutorials emphasise applications of regression analysis.

There will also be the use of the statistical package *STATA* for empirical exercises. The *STATA* software is available on the student network, and students will have a hands-on introduction to the use of the *STATA* package in tutorials earlier in the semester

Assessment

Coursework = 50% of the overall mark, and the Final Examination = 50%.

Coursework consists of **two Assignments** worth 8% each and **one Test** worth 34% of the final mark.

Plussage does ***NOT*** apply.

Assignments will be spread over the semester's work, and should be handed in to the Business and Economics Student Bookshop/Assignment room, Level 0, Owen G. Glenn Building.

The mid-semester test is an evening test scheduled after the mid-semester break, and it covers topics in weeks 1-6. More details will be provided at lectures and on CANVAS.

Mid Semester Test Date	
Semester 2	TBA

The final exam covers all the topics.

Students must be able to show understanding of the course material and extend the mechanics of linear regression analysis. Emphasis will be placed on the ability to: (1) correctly interpret coefficients in the context of specific regression models, (2) construct appropriate regression specifications that can be used to test economic hypotheses of interest; (3) recognise and understand the consequences when confronted with a variety of common regression problems, and (4) understand appropriate modelling solutions for econometric modelling.

Learning Outcome	Assignment 1	Assignment 2	Test	Final Examination
1	X	X	X	X
2	X	X	X	X
3	X	X	X	X
4	X	X	X	X
5		X		X

CHEATING AND PLAGIARISM

The University of Auckland regards cheating as a serious academic offence.

Plagiarism is a form of cheating. In coursework assignments submitted for marking, plagiarism can occur if you use the work and ideas of others without explicit acknowledgment. Work can be plagiarised from many sources, including books, journal articles, the internet, and other students' assignments. A student's assessed work may be reviewed against electronic source material using computerised detection mechanisms. Upon reasonable request, students may be required to provide an electronic version of their work for computerised review.

The way of avoiding plagiarism is to reference your work properly. If you are in doubt about how to reference properly, ask someone – your lecturers, tutors and the Student Learning Centre are good places to start. Please refer to the following website for further information about academic referencing: www.cite.auckland.ac.nz/

The document *Guidelines: Conduct of Coursework* provides further advice on how to avoid plagiarism. It can be found at: https://policies.auckland.ac.nz/policies/Policies/policy-display-register/guidelines-for-the-conduct-of-coursework.pdf

The penalties for plagiarism can be severe, including losing some or all of the marks for the work. Major offences can be sent to the University's Discipline Committee, where further penalties can be imposed.

THIRD PARTY ASSISTANCE WITH COURSEWORK

While you are encouraged to improve your coursework writing skills and are permitted to seek assistance from third parties you are advised that there are important limits on the amount and type of assistance that can be given to you in completing your assignments, including group work. Third parties include fellow students, reading groups, friends, parents, SLC tutors, and paid-for professional editing services.

There is a set of guidelines which clearly indicates the type of advice and assistance that can be given. If you are seeking the assistance of any third party you are required to give a copy of the guidelines to the person prior to them helping or assisting you.

You are also required to only seek and accept help using a printed version of your work, not an electronic version. You must keep a copy of this printed version and produce it if required. A copy of the guidelines is available at: www.business.auckland.ac.nz/thirdpartyassistance

HELP WITH ACADEMIC REFERENCING

Acknowledgement of sources is an important aspect of academic writing. The University's Referen©ite website www.cite.auckland.ac.nz provides students with a one-stop online resource for academic referencing needs. Referen©ite explains the essentials of referencing and how to avoid plagiarism. It also includes practical tools to help students reference correctly, use references effectively in writing, and gives fast access to some major reference formats with examples.

INCLUSIVE LEARNING

Students are urged to discuss privately any impairment-related requirements face-to-face and/or in written form with the course convenor/lecturer and/or tutor.

STUDENT FEEDBACK

Student feedback is encouraged in this course. During the semester, students may directly submit their feedback to the lecturer through a face-to-face appointment, or they may wish to submit feedback through the class representative.

Class representatives

At the beginning of each semester, you will elect a class representative for the course[1]. The role of the class representative is to gather feedback from students in the course and bring this to the lecturer and/or the Department. Class representatives' email addresses are posted on CANVAS and you are encouraged to contact them with feedback relating to the course. You are also encouraged to talk to the class representatives in person.

Staff-Student Consultative Committee

Class representatives also submit feedback to the Department of Economics Staff Student Consultative Committee (SSCC), which meets up to three times per semester to gain feedback regarding the course. Only class representatives may attend the SSCC meetings, and they will ask the class for feedback before the SSCC meeting.

Course and teaching evaluations

At the end of the semester, you could have the opportunity to submit an evaluation of the course in a formative feedback questionnaire.

[1] An election will not take place if the number of applicants for the class representative positions equals the number of positions available.