UNSW Business School

School of Economics

ECON2206
Introductory Econometrics

Course Outline

Semester 1, 2017

Part A: Course-Specific Information

Students are also expected to have read and be familiar with **Part B Supplement to All Undergraduate Course Outlines**. This contains Policies on Student Responsibilities and Support, Including Special Consideration, Plagiarism and Key Dates. It also contains the BUSINESS SCHOOL PROGRAM LEARNING GOALS.

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1 STAFF CONTACT DETAILS

Lecturer-in-charge:	Prof Denzil Fiebig
Room:	UNSW Business School 444
Phone No:	9385 3958
Email:	d.fiebig@unsw.edu.au
Consultation Times:	Tuesday 2-5pm
Tutors:	Bianca Bonollo
	Kane Hausfeld
	Khilan Vekaria
	Patrick Vu

1.1 Communications with staff

You should feel free to contact your lecturer about any academic matter. However, for efficiency, all enquiries about the subject material should be made at lectures or tutorials or during consultation time. Discussion of course subject material will **not** be entered into via lengthy emails.

1.2 PASS

The PASS scheme introduced in the UNSW Business School to help undergraduates was extended to Introductory Econometrics for the first time in 2015 and it will continue to be offered in 2017. PASS will offer extra support in this course in the form of study groups, led by experienced third and fourth year students. Students enrolled in this course can join them on a voluntary basis with no need to book. Many students have found PASS helpful as it provides both extra problems for practice and discussion in a group setting and advice from good students who have already completed the course. It also provides an informal atmosphere with the opportunity to ask any questions that students may be hesitant to ask staff. The PASS sessions will start in Week 3 and the timetable will be available from the Course Website in Week 2.

2 COURSE DETAILS

2.1 Teaching Times and Locations

Lecture (Weeks 1-12): Tuesday 11:00am – 1:00pm, Ainsworth G03.
Students should print out the relevant lecture slides before attending the lectures.
There is no lecture in Week 8 because of the Anzac Day public holiday.

Tutorials (Weeks 2-13): See online UNSW timetable. Students should read relevant materials and attempt the tutorial questions before attending the tutorial classes. (See Computing section for special arrangements for week 3 tutorials. **There are no Tuesday tutorials in Week 8 because of the Anzac Day public holiday.** Students should attend one of the Wednesday tutorials in this week.)

Computing
This subject requires econometric/statistical software for many homework problems and both the assignment and the project. The preferred software is Stata and you may only use another statistical package with the explicit permission of the lecturer.

Stata 14 is the most recent version and is currently available in the Business School computing labs for all students formally enrolled in the course. (Previous Stata versions are also likely to be adequate for this course.)

Computing labs (Weeks 3-13): The following labs will be available at specified times for use by students enrolled in ECON2206. Students may use any of the labs at other times subject to availability.

Day	Time	Computer Lab
Monday	11:00-13:00	Matthews 211
Thursday	09:00-11:00	Matthews 211
Thursday	16:00-18:00	Quad 1043

All Week 3 tutorials will be held in computer labs according to the following schedule.

Tutorial Time	Section	Class No.	Computer Lab
Tuesday 13:00	T13A	3017	Matthews 211
Tuesday 15:00	T15A	3019	Matthews 211
Wednesday 09:00	W09A	3020	Quad G021
Wednesday 10:00	W10A	3021	Matthews 211
Wednesday 11:00	W11A	3022	Quad 1043
Wednesday 12:00	W12A	3023	Quad 1043
Wednesday 13:00	W13A	10839	Matthews 211
Wednesday 14:00	W14A	3024	Matthews 211
Wednesday 15:00	W15A	3025	Matthews 211
Wednesday 17:00	W17A	3026	Quad 1043
Wednesday 18:00	W18A	3027	Quad G021

In addition, UNSW IT has launched a new service 'myAccess' that will provide you with remote access to Stata (and other specialised software applications) so you can complete all course computing on your own device in your own time in a location of your choice. Simply go to the dedicated myAccess website at https://myaccess.unsw.edu.au and use your zID and zPass to log into the service. You will need to complete some essential checks of your device and install a Citrix receiver on your device first in order to use the service. User guides on the myAccess website provide you with step-by-step instructions on how to complete these checks, install on multiple devices and operating systems and how to save, print and download files.

Finally, if students want to purchase their personal copy of Stata they can do so directly from the provider at http://www.surveydesign.com.au/buygradplan.html through the Australian GradPlan arrangements at a cost that varies depending on plan chosen.

2.2 Units of Credit

The course is worth 6 units of credit. There is no parallel teaching in this course.

2.3 Summary of Course

This course introduces the use of econometrics to explore and estimate economic relationships using linear regression models. Extensions covering statistical complications such as heteroskedasticity, data issues such as proxy variables, and regression with time series data will also be included. Practical computer applications feature throughout. The course will give students a basic understanding of methods required to model the inter-relationship between variables and prepare them for further studies of econometric methods.

2.4 Aim and Relationship to Other Courses

This course (ECON2206) provides an introduction to econometrics, which involves the application of statistical methods in the analysis of economic data. ECON2206 is a prerequisite for ECON3208 (Econometric Methods) and ECON3209 (Statistics for Econometrics).

2.5 Presumed knowledge

ECON1202 Quantitative Analysis and ECON1203 Business & Economics Statistics (BES), or equivalent courses, are prerequisites for ECON2206. The material covered in these courses is treated as assumed knowledge.

2.6 Student Learning Outcomes

The Course Learning Outcomes are what you should be able to DO by the end of this course if you participate fully in learning activities and successfully complete the assessment items.

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all undergraduate coursework students in the Business School. Program Learning Goals are what we want you to BE or HAVE by the time you successfully complete your degree. You demonstrate this by achieving specific Program Learning Outcomes - what you are able to DO by the end of your degree. For more information on the Undergraduate Program Learning Goals and Outcomes, see Part B of the course outline.

The following table shows how your Course Learning Outcomes relate to the overall Program Learning Goals and Outcomes, and indicates where these are assessed:

Program Learning Goals and Outcomes		**Course Learning Outcomes**	**Course Assessment Item**
This course helps you to achieve the following learning goals		*On successful completion of the course, you should be able to:*	*This learning outcome will be assessed in the following items:*
1	Knowledge	List and explain the assumptions underlying regression models. Use Stata to analyse data. Present regression analysis results.	• Tutorial assignments • Course project • Final Exam
2	Critical thinking and problem solving	Use econometric models and methods to interpret and analyse real data in economics, finance and other social sciences.	• Tutorial assignments • Course project • Final Exam
3a	Written communication	Construct written work which is logically and professionally presented.	• Tutorial assignments • Course project • Final Exam

3b	Oral communication	Communicate ideas in a succinct and clear manner.	Not specifically assessed.
4	Teamwork	Work collaboratively to complete a task.	• Course project
5a.	Ethical, environmental and sustainability considerations	Identify and assess environmental and sustainability considerations in problems in economics and business. Understand the ethical responsibilities associated with reporting econometric results.	• Course project
5b.	Social and cultural awareness	Not specifically addressed in this course.	Not specifically assessed.

3 LEARNING AND TEACHING ACTIVITIES

3.1 Approach to Learning and Teaching in the Course

The philosophy underpinning this course and its Teaching and Learning Strategies are based on "Guidelines on Learning that Inform Teaching at UNSW". These guidelines may be viewed at: www.guidelinesonlearning.unsw.edu.au. Specifically, the lectures, tutorials and assessment have been designed to appropriately challenge students and support the achievement of the desired learning outcomes. A climate of inquiry and dialogue is encouraged between students and teachers and among students (in and out of class). The lecturers and tutors aim to provide meaningful and timely feedback to students to improve learning outcome.

3.2 Learning Activities and Teaching Strategies

The examinable content of the course is defined by the references given in the Lecture Schedule, the content of Lectures, and the content of the Tutorial Program.

Lectures
The purpose of lectures is to provide a logical structure for the topics that make up the course; to emphasize the important concepts and methods of each topic; and to provide relevant examples to which the concepts and methods are applied.

Tutorials
Tutorials begin in Week 2 and are an integral part of the subject. Tutorial presentations, discussions, solutions to problems are designed to help students deepen their understanding and practise learnt material.

Out-of-Class Study
While students may have preferred individual learning strategies, it is important to note that most learning will be achieved outside of class time. Lectures can only provide a structure to assist your study, and tutorial time is limited.

An "ideal" strategy (on which the provision of the course materials is based) might include:

1. Read the relevant chapter(s) of the text and relevant lecture slides **before the lecture.** This will give you a general idea of the topic area.
2. Attend lectures. Here the context of the topic in the course and the important elements of the topic are identified. The relevance of the topic should be explained.

3. Attempt tutorial questions before attending the tutorial class. This helps you identify issues that can be clarified or resolved in the tutorial class.

4 ASSESSMENT

4.1 Formal Requirements

To be eligible for a passing grade in this course, students must achieve a composite mark of at least 50 per cent.

There is no requirement to pass each component of assessment but achievement of a satisfactory mark (>40%) on completed components is a prerequisite for any special consideration request you apply for.

4.2 Assessment Details

Assessment Tasks	Weight	Length	Due Date
Tutorial Assignment	15%	≤ 4 pages	Tut time, Week 5
Course Project	25%	≤ 10 pages	Tut time, Week 12
Final Exam	60%	2 hours	University Exam Period
Total	100%		

Work commitments, holiday or travel or wedding plans, are NOT valid excuses for failing to complete any of the assessment tasks.

4.3 Tutorial Assessments

Tutorials start Week 2. The Tutorial Program questions will be posted on the course website. Each week a series of problems based on the lecture material will be set. You should attempt all questions before attending tutorial classes. Attending at least 80% of tutorials is a UNSW requirement and is a prerequisite for any special consideration request you apply for.

Tutorial assignment (due Week 5, week starting March 27) will be collected and marked as the Tutorial Assessment. The tutorial assignment will account for 15% of your total assessment for the course.

The assignment must be handed in to ***the tutor at (or before) the beginning of your tutorial class*** in Week 5. Otherwise a mark of zero will be given. Staff members other than your tutor will NOT accept your assignment.

The tutorial assignment is designed to assess your understanding of regression models, your ability to interpret regression results and appraise the quality of a model. The tutorial assignments involve analysing data with Stata. The criteria used for marking the assignment are correctness and clarity of the answers presented. The tutorial assignment and the course project (see below) are designed to assess progress toward learning goals listed in section 2.6.

4.4 Course Project

The project involves a substantive econometric analysis of an applied economic problem that will require the analysis of a data set using regression methods. The project will progress in two stages with the first stage involving assessable work in tutorials in weeks 5 and 6. This work will be conducted in groups assigned by the tutor. Stage 2 will involve the analysis of data that will emerge after the Stage 1 tasks are completed. The analysis and production of the project report will again be group based but in this case students will be free to choose their own groups.

The project will draw on material covered in weeks 1-10 of lectures. More details on the Course Project, will be given in separate files to be distributed in lectures and which will be posted on the course website.

4.5 Late Submission of Tutorial Assignment and Course Project

20% of the value of the submission will be deducted for each day (24 hours). This rule is applicable to both hardcopy and softcopy submissions. Work submitted more than five days late will not be marked. If you delay submission, it is your responsibility to hand the assignment to your tutor. Staff members other than your tutor will NOT accept your project reports.

4.6 When Sickness Affects Your Submission

If you are unable to hand in your assignment or course project because of sickness, you must apply for special consideration. Applications for special consideration must be **lodged online through myUNSW within 3 working days of the assessment** (Log into myUNSW and go to My Student Profile tab > My Student Services channel > Online Services > Special Consideration). Then submit the originals or certified copies of your supporting documentation and a completed Professional Authority form (pdf - download here) to Student Central.

Work commitments, holiday or travel or wedding plans are NOT valid excuses for failing to submit your assignments or course project.

4.7 Final Examination

The final exam will be held in the University examination period and will be 2 hours long. The final exam will cover the entire course. Further information on the content and structure of the Final Exam will be provided towards the end of session.

The final exam is designed to assess knowledge of econometric concepts, your understanding of regression models and the application of regression methods to real world problems. The questions will involve interpretation of regression results, basic calculations, hypothesis testing, and evaluation of regression models. The final exam is designed to assess achievement of some learning goals in 2.6.

4.8 Quality Assurance

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential and will not be related to course grades.

5 COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students and other stakeholders about the courses offered in the School and continual improvements are made based on this feedback. UNSW's myExperience Survey Tool is one of the ways in which student evaluative feedback is gathered. You are strongly encouraged to take part in the feedback process.

6 COURSE RESOURCES

The website for this course is on UNSW Moodle at http://moodle.telt.unsw.edu.au. The course website contains copies of: Course Outline, Lecture Slides; Tutorial Questions; Data sets required for the tutorial questions; How to Use Stata; examples of Stata programs; and Announcements. Students should consult this website at least once a week as it contains important information about the course. **It will be assumed that all students have seen Announcements posted on the course website.**

The required textbook for this course is:

- Wooldridge, J.M. (2016), *Introductory Econometrics: A Modern Approach*, 6th Edition, South-Western

This textbook is currently in stock at the UNSW bookstore, and copies are held in Open Reserve in the Main Library. Previous editions of this text will also be a suitable reference, but be aware that any page number references appearing in course material will relate to the latest edition and not to previous editions. There is also a more recent "Asia-Pacific" version but this does not cover all of the required material and so is not recommended.

The following book provides an alternative presentation of similar material:

- J.H. Stock and M.W. Watson (2012) *Introduction to Econometrics*, 3rd Edition, Pearson.

More advanced treatment of the topics covered in the course are presented in the textbooks:

- W. Greene (2012) *Econometric Analysis*, 7th edition, Pearson.
- A.C. Cameron and P. Trivedi (2005) *Microeconometrics: Methods and Applications*, Cambridge University Press.

7 COURSE SCHEDULE

7.1 Lecture Schedule

The schedule below is an approximation. Its order and contents may vary. The date in the first column is the Tuesday for each week which is the lecture date. Tuesday April 25 (Anzac Day) is a public holiday. If your tutorial is scheduled for this day, you should make a special arrangement to attend another tutorial that week. There will be no lectures on Anzac Day.

LECTURE SCHEDULE	
Week	**Topic**
Week 1 **28 February**	Introduction to econometrics & regression, Wooldridge Ch 1, 2.1
Week 2 **7 March**	Simple/Multiple Regression Model, Wooldridge Ch 2.2-2.6, 3.1-3.2
Week 3 **14 March**	Multiple Regression: Estimation/Inference, Wooldridge Ch 3.3-3.6, 4.1-4.2
Week 4 **21 March**	Multiple Regression: More Inference, Wooldridge Ch 4.2-4.6
Week 5 **28 March**	Asymptotics & Further Issues, Wooldridge Ch 5.1-5.2 (not 5.2a), 6 (not 6.1a) **Assignment Due** **Assessable tutorial-based project work 1**
Week 6 **04 April**	Qualitative Information, Wooldridge Ch 7 **Assessable tutorial-based project work 2**
Week 7 **11 April**	Heteroskedasticity, Wooldridge Ch 8
Mid-semester break: Friday 14 – Saturday 22 April inclusive	
Week 8 **25 April**	*(Tuesday 25 April is Anzac Day public holiday)* **NO LECTURE OR TUESDAY TUTORIALS DUE TO PUBLIC HOLIDAY**
Week 9 **2 May**	Specification Issues, Wooldridge Ch 9
Week 10 **9 May**	Time Series Data: Basic Regression, Wooldridge Ch 10
Week 11 **16 May**	Time Series Data: Further Issues, Wooldridge Ch 11
Week 12 **23 May**	Simple Panel Data Methods, Wooldridge Ch 13 **Course Project Due**
Week 13 **30 May**	**NO LECTURE, ONLY TUTORIALS**

7.2 Tutorial Schedule

Weekly tutorial questions (Tutorial Program) will be posted in the course website.