The University of Southern Queensland

Course specification

This version produced 24 Apr 2008.
The current and official versions of the course specifications are available on the web at <http://www.usq.edu.au/coursespecification/current>.
Please consult the web for updates that may occur during the year.

Description: Applied Econometrics

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<th>Mode</th>
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Academic group: FOBUS
Academic org: FOB002
Student contribution band: 2
ASCED code: 091903

STAFFING
Moderator: Dom Pensiero

REQUISITES
Pre-requisite: STA2300 and ECO1000

OTHER REQUISITES
Recommended Pre-requisite: MGT2101 Students are required to have access to a personal computer, e-mail capabilities and Internet access to USQConnect. Current details of computer requirements can be found at http://www.usq.edu.au/handbook/current/busgeninfo.html

SYNOPSIS
Econometric techniques are being used in an increasing variety of business and government applications because the need for empirically assessing economic relationships is fundamental to management. Knowledge of the qualitative relationships between economic variables is insufficient when the economist is called upon to support explanatory analysis of economic phenomena, and to make predictions for the values of economic variables. Familiarity with, and a practical mastery of, econometric techniques are essential requirements of the professional economist and business analyst. In this course, students will learn to apply economic reasoning in the formulation, estimation, interpretation and application of some fundamental econometric modelling techniques. The emphasis in this application will be on exploring empirically economic relationships. An awareness of the limitations of econometric techniques will be stressed.

OBJECTIVES
The course objectives define the student learning outcomes for a course. The assessment item/s that may be used to assess student achievement of an objective is/are shown in parentheses after each objective. On successful completion of this course, students should be able to:

1. understand the methodology of econometrics, its applications and limitations (Assignment 1, Assignment 2, Examination)
2. understand the assumptions underlying the Classic Linear Regression Model and to distinguish between the methods of Ordinary Least Squares and Maximum Likelihood Estimation in regression analysis (Assignment 1, Assignment 2, Examination)
3. apply appropriate software to carry out regression analysis, interpret the results, and undertake appropriate statistical inferencing and forecasting (Assignment 1, Assignment 2, Examination)
4. test for model structural stability and functional form, and to undertake log linear analysis and regression through the origin when appropriate (Assignment 1, Assignment 2, Examination)
5. identify and correct for problems of multicollinearity, heteroskedasticity, and autocorrelation, and to understand the reasons for incorporation of dummy variables for both explanatory variables and dependent variables (Assignment 1, Assignment 2, Examination)
6. explain the concept and consequences of specification errors in simultaneous equation modelling, set out the necessary order and rank condition for the identification of an equation in a system, and to recognise and apply the method of two stage least squares to appropriate problems (Assignment 1, Assignment 2, Examination)
7. examine the application and use of autoregressive and distributed lag models, and to use appropriate software to estimate such models (Assignment 1, Assignment 2, Examination)
8. become familiar with the concepts of stationarity and cointegration and to obtain diagnostic information from time series data and interpret this information so as to identify an appropriate ARIMA model of the time series (Assignment 1, Assignment 2, Examination).

**TOPICS**

<table>
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<th>Description</th>
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<tr>
<td>1. Methodology of econometrics, statistical revision</td>
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<tr>
<td>2. Simple linear regression analysis</td>
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<td>3. Multiple regression analysis</td>
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<tr>
<td>4. Econometric modelling</td>
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<td>5. Time series modelling</td>
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<td>6. Modelling with qualitative and limited dependent variables</td>
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**TEXT and MATERIALS required to be PURCHASED or ACCESSED**

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at http://bookshop.usq.edu.au click 'Semester', then enter your 'Course Code' (no spaces).

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.


STUDENT WORKLOAD REQUIREMENTS

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<th>ACTIVITY</th>
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ASSESSMENT DETAILS

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<th>Wtg(%)</th>
<th>Due date</th>
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<tbody>
<tr>
<td>ASSIGNMENT 1</td>
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<td>10.00</td>
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<tr>
<td>ASSIGNMENT 2</td>
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<td>28 May 2007</td>
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<td>2 HOUR EXAMINATION</td>
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<td></td>
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NOTES

1. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date after the timetable has been finalised.

IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:
   If you are an international student in Australia, you are advised to attend all classes at your campus. For all other students, there are no attendance requirements for this course. However, it is the students' responsibility to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.

2 Requirements for students to complete each assessment item satisfactorily:
   To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)

3 Penalties for late submission of required work:
Any assignment work received after the due date and which has no explanatory documentation attached will be penalised up to 5% per working day late up to two weeks; if an assignment is more than two weeks (10 working days) late without any supporting documentation or explanation, the grade of F (i.e. fail) will be recorded for that assignment.

4 Requirements for student to be awarded a passing grade in the course:
To be assured of receiving a passing grade a student must submit all of the assessment items and achieve at least 50% of the total weighted marks available for the course.

5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.

6 Examination information:
This is a restricted examination. Candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could give the student an unfair advantage in the examination); calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination).

7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held during the next examination period.

8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL http://www.usq.edu.au/corporateservices/calendar/part5.htm. Students should also read the Faculty of Business Guide to Policies and Procedures of the Faculty which can be found at the URL http://www.usq.edu.au/handbook/current/buspolproc.html.

ASSESSMENT NOTES

1 Assignments: (i) The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the examiner. (ii) Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the examiner. As a general rule an extension of time will be granted if appropriate documentary evidence is attached with the assessment when submitted, for example, medical certificate, letter from employer, etc. Students are requested to not apply for extensions in advance but to submit the assessment when available attaching a brief statement or letter together with any documentary evidence. Note that no extensions can be granted once model answers are available. This is generally 2-3 weeks after the due date. (iii) Students who do not have regular access to postal services or who are otherwise disadvantaged by these regulations may be given special consideration. They should contact the examiner of the course to negotiate such special arrangements. (iv) In the event that a due date for an assignment falls on a local public holiday in their area, such as a show holiday, the due date for the assignment will be the next day. Students are to note on the assignment cover the date of the public holiday for the examiner's convenience.

2 Course weightings: Course weightings of topics should not be interpreted as applying to the number of marks allocated to questions testing those topics in an examination paper.

3 Make-up work: (i) Students who have undertaken all of the required assessments in a course but who have failed to meet some of the specified objectives of a course within
the normally prescribed time may be awarded the temporary grade: IM (Incomplete - Make up). An IM grade will only be awarded when, in the opinion of the examiner, a student will be able to achieve the remaining objectives of the course after a period of non directed personal study.

4 Supplementary work: Supplementary examinations may be awarded to students who have passed the assignment (i.e. at least 20/40) and who have achieved a composite score of 50% or more in the course but who have failed the final examination by less than 5% of the examination mark (i.e. a mark of 27/60 or above is required in the final examination to be considered for a supplementary examination provided the student has passed the assignment and achieved 50% or more in the aggregated score).

5 Deferred work: Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded: IDS (Incomplete - Deferred Examination); IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).

OTHER REQUIREMENTS

1 Learning resources: Prescribed texts and materials (see above); recommended reference materials (see above); printed Introductory Book, Study Book(s), and Book(s) of Selected Readings; and course Website accessible via USQConnect.