Description: Applied Econometrics

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<th>Subject</th>
<th>Cat-Nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
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<td>2, 2003</td>
<td>ONC</td>
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Academic Group: FOBUS
Academic Org: FOB002
HECS Band: 2
ASCED Code: 091903

STAFFING
Examiner: Glenda Adkins
Moderator: Rod St Hill

PRE-REQUISITES
Pre-requisite: STA2300 and ECO1000

OTHER-REQUISITES
Recommended Pre-requisite: MGT 2101

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
On successful completion of this course students will be able to:

- understand the methodology of econometrics, its applications and limitations.
• 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.
• apply appropriate software to carry out regression analysis, interpret the results, and undertake appropriate statistical inferencing and forecasting.
• test for model structural stability and functional form, and to undertake log linear analysis and regression through the origin when appropriate.
• be able to identify and correct for problems of multicollinearity, micronumerosity, heteroskedasticity, and autocorrelation, and to understand the reasons for incorporation of dummy variables for both explanatory variables and dependent variables.
• 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.
• examine the application and use of autoregressive and distributed lag models, and to use appropriate software to estimate such models.
• 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.

TOPICS

<table>
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<tr>
<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>
<td>20.00</td>
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<td>3. Multiple Regression Analysis</td>
<td>30.00</td>
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<td>4. Econometric Modelling</td>
<td>20.00</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:

Books can be ordered by fax or telephone. For costs and further details use the 'Book Search' facility at http://bookshop.usq.edu.au by entering the author or title of the text.

ECO3001 study package available from the USQ Bookshop.


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

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Assessment</td>
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<tr>
<td>Directed Study</td>
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<td>Lectures</td>
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<td>Private Study</td>
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<td>Tutorial</td>
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ASSESSMENT DETAILS

<table>
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<tr>
<th>Description</th>
<th>Marks Out of</th>
<th>Wtg(%)</th>
<th>Required</th>
<th>Due Date</th>
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<tr>
<td>ASSIGNMENT 1</td>
<td>10.00</td>
<td>10.00</td>
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<tr>
<td>ASSIGNMENT 2</td>
<td>40.00</td>
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<td>2 HOUR EXAMINATION</td>
<td>50.00</td>
<td>50.00</td>
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NOTES:

. 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:
   It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and 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. If you are an International student in Australia it is a requirement of your student visa that you attend all classes at your campus.
2 Requirements for students to complete each assessment item satisfactorily:
   A student must obtain at least 50% for the assignments and examination in aggregate.

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 a passing grade a student must attempt all of the summative assessment items and achieve at least 50% in aggregate for the assignments and examination.

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

6 Examination information:
   The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.

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/SECARIAT/calendar/Part5/ or in the printed version of the current USQ Handbook. Students should also read The Guide to Policies and Procedures of the Faculty which can be found at the URL: http://www.usq.edu.au/handbook/2003/title663.html or in the printed version of the current USQ Handbook.

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 eg 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) 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).