Description: Applied Econometrics

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cat-nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
<th>Campus</th>
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<td>ECO</td>
<td>3001</td>
<td>31310</td>
<td>1, 2004</td>
<td>ONC</td>
<td>1.00</td>
<td>TW MBA</td>
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Academic group: FOBUS
Academic org: FOB002
Student contribution band: 2
ASCED code: 091903

STAFFING
Examiner: Glenda Adkins
Moderator: Rod St Hill

REQUISITES
Pre-requisite: STA2300 and ECO1000

OTHER-REQUISITES
Recommended Pre-requisite: MGT2101

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, 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>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Methodology of Econometrics, Statistical revision</td>
<td>10.00</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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<tr>
<td>4. Econometric Modelling</td>
<td>20.00</td>
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<tr>
<td>5. Time Series Modelling</td>
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<tr>
<td>6. Modelling with Qualitative and Limited Dependent Variables</td>
<td>10.00</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).

ECO3001 study package available from the USQ Bookshop.

Carter Hill, R, Griffiths, WE & Judge, GG 2001, Undergraduate econometrics, 2nd edn,

Reiman, MA & Carter Hill, R 2001, Using eviews for undergraduate econometrics, 2nd
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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<tr>
<td>Lectures</td>
<td>24.00</td>
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<tr>
<td>Private Study</td>
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</tr>
<tr>
<td>Tutorial</td>
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ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
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<tbody>
<tr>
<td>ASSIGNMENT 1</td>
<td>10.00</td>
<td>10.00</td>
<td>26 Mar 2004</td>
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<tr>
<td>ASSIGNMENT 2</td>
<td>40.00</td>
<td>40.00</td>
<td>24 May 2004</td>
</tr>
<tr>
<td>2 HOUR EXAMINATION</td>
<td>50.00</td>
<td>50.00</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:
   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 you are advised to attend all classes at your campus. Failure to attend may infringe the conditions of your student visa.

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:
   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

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).