ECON327  ADVANCED ECONOMETRICS     6 CP

Pre-requisites:   ECON221 or ECON231 or MARK239

Co-requisites:  N/A

For online learning resources visit the WebCT Vista site for this subject

SPRING 2007  Wollongong Campus

Subject Coordinator/Lecturer/Tutor

A/PROF ABBAS VALADKHANI  School of Economics
Room:  40.223  Ph: 42214022  email: abbas@uow.edu.au
Consultation:  Monday  Time:  12:30pm – 1:30pm
               Thursday  Time:  9:30am – 11:30am

Lecturer/Tutor

A/PROF JOAN RODGERS  School of Economics
Room:  40.108  Ph: 42214583  email: joan_rogers@uow.edu.au
Consultation:  Tuesday  Time:  14.30 – 16.30
               Thursday  Time:  14.30 – 16.30
SECTION A: GENERAL INFORMATION

CLASS MEETING TIMES

Mon 13:30-14:30 40.126 (lecture)
Mon 14:30-16:30 Computer lab 40.TBA (lecture and active learning)

REQUIRED TEXT(S)

Note that this book comes with a student version of EViews 3 on CD-ROM in a package.
Details of this textbook are available online from the University Bookshop at
http://unishop.uow.edu.au/textbooks

RECOMMENDED BACKGROUND AND FURTHER READING

Wesley.
Wesley.
(V) Vogelvang, B. (2005), Econometrics: Theory and Applications with EViews, New York:
Pearson.
South-Western College Publishing.

This is not an exhaustive list of references. Students should also use the library catalogue and
databases to locate additional resources.

In the rest of this document, texts are referred to using the initials of their authors, for
example, (G) for Gujarati.

ADDITIONAL MATERIALS

A scientific calculator and the EViews software package are required in this subject.

Please bring a memory stick to class so that you can transfer data between your own computer
and the computers in the lab.
BRIEF OUTLINE

This subject is designed to create proficiency in econometric theory and application of a number of advanced techniques that are frequently used to analyse economic, business and financial data. The emphasis will be on application but students will also be required to display an understanding of the assumptions, limitations, and proper uses of econometric techniques for various types of problems and data. Students will learn how to formulate, estimate and interpret the results of (a) nonlinear regression models; (b) qualitative-response regression models; (c) panel-data regression models; and (d) multi-equation (system) models. An application-oriented approach is taken to teach new time series techniques such as unit roots and co-integration tests. The subject also develops a critical approach to model building and develops essential skills in conducting ex ante forecasting techniques. Students will learn to implement all these techniques in EViews, which is a professional econometrics modelling software package in widespread use in both academic and business work.

STUDENT LEARNING OUTCOMES

On successful completion of this subject, the student should be able to:

1. Display, both in written and oral form, an understanding of the material included in the syllabus.
2. Recognise the appropriate econometric methodology to be used in solving particular problems.
3. Take a problem, build a model, estimate the model using appropriate data and econometric techniques, and interpret the results.
4. Write up results of an econometric analysis in a form acceptable to professional economists and give an oral presentation of results to the class.
5. Use EViews (econometric modelling and statistical software package) to estimate models, test hypotheses, make predictions, etc.

ATTENDANCE REQUIREMENTS

Students are expected to attend all class meetings, to arrive on time and to stay for the full duration of each three-hour class. A record of attendance will be taken. If you anticipate being absent from class, except in unforeseen and incapacitating circumstances, you should drop this subject. Mobile phones must be switched off during each three-hour class.

PARTICIPATION/CONTRIBUTION

Students are expected to prepare for all class meetings, to contribute to classroom discussion and deliver tutorial presentations when called upon. These activities will contribute to the student’s final mark for the subject (see Section B: Assessment below).

PERFORMANCE LEVEL

To be eligible to obtain a grade of PC or better in this subject, students must achieve an overall mark of at least 45%, and at least 40% on both the mid-session test and the final examination.
# LECTURE PROGRAM

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Topics Covered</th>
<th>Readings</th>
</tr>
</thead>
</table>
| 1   | 23 July    | Emergency Evacuation Procedures  
An Introduction to EViews  
Dynamic Econometric Models: Autoregressive and Distributed-Lag Models. | (G) Ch. 17 + WebCT site                            |
| 2   | 30 July    | Simultaneous-Equation Models                                                   | (G) Ch. 18+ WebCT site                            |
| 3   | 6 August   | The Identification Problem                                                     | (G) Ch. 19+ WebCT site                            |
| 4   | 13 August  | Simultaneous-Equation Methods                                                   | (G) Ch. 20+ WebCT site                            |
| 5   | 20 August  | Time Series Econometrics: Some Basic Concepts                                   | (G) Ch. 21 + WebCT site                           |
| 6   | 27 August  | Time Series Econometrics: Forecasting                                           | (G) Ch. 22+ WebCT site                            |
| 7   | 3 September| **Mid-session test**                                                           |                                                   |
| 8   | 10 September| Nonlinear Regression Models                                                    | (G) Ch.14 + WebCT                                 |
| 9   | 17 September| Linear Probability Model                                                       | (G) Ch 15 (15.1 – 15.3) + WebCT                   |

**24 September - 30 September: Mid-Session Recess (1 week)**

| 11  | 8 October  | Logit and Probit Models                                                        | (G) Ch 15 (15.4 – 15.10, App 15A) + WebCT site    |
| 12  | 15 October | Randomized and Natural Experiments                                             | Stock & Watson, Chapter 11. (electronic reading.) + WebCT site |
| 13  | 22 October | Panel Data                                                                     | (G) Ch.16 + WebCT site                            |

29 October - 2 November: Study Recess (1 week)

3 November - 16 November: Examinations (2 weeks)

**Note:** Monday, 1 October is Labour Day
<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Topics Covered</th>
<th>Assigned Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>30 July</td>
<td>Emergency Evacuation Procedures</td>
<td><strong>TP 1</strong>: (G) Ch. 17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>An Introduction to EViews</td>
<td>Questions: 17.6; 17.19; 17.26; 17.29</td>
</tr>
<tr>
<td>3</td>
<td>6 August</td>
<td>Simultaneous-Equation Models</td>
<td><strong>TP 2</strong>: (G) Ch. 18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 18.4; 18.5 to 18.9</td>
</tr>
<tr>
<td>4</td>
<td>13 August</td>
<td>The Identification Problem</td>
<td><strong>TP 3</strong>: (G) Ch. 19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 19.2; 19.7; 19.11, 19.12; 19.15; 19.16</td>
</tr>
<tr>
<td>5</td>
<td>20 August</td>
<td>Simultaneous-Equation Methods</td>
<td><strong>TP 4</strong>: (G) Ch. 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 20.3; 20.5; 20.6; 20.8 to 20.10</td>
</tr>
<tr>
<td>6</td>
<td>27 August</td>
<td>Time Series Econometrics</td>
<td><strong>TP 5</strong>: (G) Chs. 21 &amp; 22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 21.17 to 21.19; 21.23; and 22.11-22.14; 22.22 22.23</td>
</tr>
<tr>
<td>7</td>
<td>3 September</td>
<td>No tutorial-Mid-session test</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>10 September</td>
<td>Nonlinear Regression Models</td>
<td><strong>TP 6</strong>: (G) Ch.14 + WebCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 14.1; 14.2; 14.3; 14.5; 14.7</td>
</tr>
<tr>
<td>9</td>
<td>17 September</td>
<td>Linear Probability Model</td>
<td><strong>TP 7</strong>: (G) Ch.15 (15.1-15.3) + WebCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 15.3; 15.4; 15.15</td>
</tr>
<tr>
<td>11</td>
<td>8 October</td>
<td>Logit and Probit Models</td>
<td><strong>TP 8</strong>: (G) Ch.15 (15.4-15.10) + WebCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 15.7; 15.17 and use the data in Table 15.21 to estimate logit and probit models. Compare the results.</td>
</tr>
<tr>
<td>12</td>
<td>15 October</td>
<td>Randomized and Natural Experiments</td>
<td><strong>TP 9</strong>: Stock &amp; Watson, Ch. 11 + WebCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 11.1; 11.2; 11.3</td>
</tr>
<tr>
<td>13</td>
<td>22 October</td>
<td>Panel Data</td>
<td><strong>TP 10</strong>: (G) Ch. 16 + WebCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Questions: 16.10; 16.13; 16.14 + WebCT</td>
</tr>
</tbody>
</table>

* TP=Tutorial Presentation

**Note:** Monday, 1 October is Labour Day
SECTION B: ASSESSMENT

WEEKS 1 – 7

WRITTEN ASSESSMENT

<table>
<thead>
<tr>
<th>Assessment 1:</th>
<th>Tutorial Presentation (TP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic</strong></td>
<td>Each student will give one TP during Weeks 1-6. The purpose of the TP is twofold: (1) To give each individual student within a small team an opportunity to answer a number of predetermined questions based on the lecture material covered in Weeks 1-6 of the Lecture Program. There are five TPs to choose from (see the Tutorial Program). (2) To give the rest of the class a summary and clear analysis of the major issues/concepts relating to a lecture delivered in the previous week.</td>
</tr>
<tr>
<td><strong>Marking criteria</strong></td>
<td>This will be made by your Tutor taking into account: (1) Content of the Presentation (50%) (2) Method of Delivery and Team Work (25%) (3) Quality of the Ten-Page Summary (25%) Students within their own team can use EViews; Powerpoint slides, the whiteboard and overhead transparencies for their TP. Try to interest other students in the Topic, and explain your answers clearly. <strong>Do not</strong> read from your notes during your presentation! If you constantly read from your notes, you will get a zero mark for the assessment. Each group should prepare a maximum 10-page summary which should be submitted to the tutor at the end of the presentation.</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>In each tutorial there will be one TP which will be made by a small group of students. The presentation should not exceed 45 minutes, leaving ten minutes for Qs &amp; As. The 45-minute presentation should be divided among the students in the group, so that all students contribute to the same degree. Group members should collaboratively participate in answering most of the pre-determined questions and help other members if necessary.</td>
</tr>
<tr>
<td><strong>Weighting</strong></td>
<td>10%</td>
</tr>
<tr>
<td><strong>Due date</strong></td>
<td>Students will be given the opportunity to select their TP in week 1. The presentation dates and the corresponding questions for each TP have been stated in the Tutorial Program outlined above. Should you fail to give this presentation on the designated date, you will receive a zero mark for this piece of assessment.</td>
</tr>
</tbody>
</table>
**Assessment 2: Mid-session Test**

<table>
<thead>
<tr>
<th>Weighting</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>3 September 2007 (Week 7)</td>
</tr>
<tr>
<td>Time allowed</td>
<td>110 minutes</td>
</tr>
</tbody>
</table>

The mid-session test will be based on all material covered and referenced in Weeks 1-6 (inclusive). The test will be comprised of problems and short answer questions. It will be held in the computer lab. Questions of the type assigned for tutorial presentation are a good guide to what will be included in the test.

**Marking Criteria**
- Use of clear and concise English to demonstrate understanding of concepts, techniques and problems posed and to communicate correct solutions.
- Presentation of complete solutions showing detail of how the final result was derived as well as the final result itself.
- Arithmetic accuracy, correct application of algebra, calculus, etc..

**WEEKS 8 - 13**

**WRITTEN ASSESSMENT**

<table>
<thead>
<tr>
<th>Assessment 3: Preparation and Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
</tr>
</tbody>
</table>

**Written summaries of essential reading**

Students must prepare a written summary of the essential reading for Weeks 8 through 13 (inclusive). Both sides of one A4-size sheet of paper may be used each week. Students must photocopy their summary and bring both the original and the photocopy to class in the week that the material is to be discussed. The lecturer will collect the original at the beginning of class and take it into account when assigning marks for weekly preparation. Students retain the photocopy.

**Written answers to tutorial exercises and other assigned material**

Students must prepare written answers to the tutorial exercises and other assigned material for each of Weeks 8 through 13. Students must photocopy their answers and bring both the original and the photocopy to class. The lecturer will collect the original at the beginning of the tutorial and return it the next week. Answers will be taken into account in assigning marks for participation.

**Classroom discussion**

Participation implies being actively involved in small-group discussion, in presenting answers to tutorial exercises and other assigned material to the whole class, and displaying general classroom collegiality. This activity will be taken into account when assigning marks for participation.
Assessment 4: Final Examination

<table>
<thead>
<tr>
<th>Weighting</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>The final examination date will be confirmed during the course of the subject and published on SOLS 3 to 4 weeks before the examination period.</td>
</tr>
<tr>
<td>Time allowed</td>
<td>2 hours 15 minutes</td>
</tr>
<tr>
<td>Structure of paper</td>
<td>All materials covered in weeks 8-13 will be examinable. This will consist of a number of short-answer and essay type questions. A detailed guide to the examination structure and content will be provided towards the end of the semester.</td>
</tr>
</tbody>
</table>

NOTE: The examination format cannot be changed from that stated above without the written consent of all students enrolled in this subject.

SCALING

The Economics Department reserves the right to scale marks if this is deemed necessary.

SUBMISSION, RETENTION AND COLLECTION OF WRITTEN ASSESSMENT

Weeks 1-7

You should ensure that your TP summary include a cover sheet displaying all the names of the group members and student numbers. Also, ensure that all pages are securely fastened together and that a copy of your submission is retained in case the submitted copy is lost. The TP summary should be submitted to your tutor at the end of the presentation. TP summary will NOT be marked without a valid cover sheet. Marked work will be returned in the tutorials one week after your TP. Work submitted after the presentation date will get a zero mark.

Weeks 8-13

Students must use the standard sheet provided by the lecturer to write their summaries of essential reading. The standard sheet in Microsoft word format may be downloaded from the WebCT Vista site for ECON327. The details at the top of the sheet (Week No., student name, identification number, etc.) must be completed.

Written answers to tutorial exercises and other assigned material must include a completed cover sheet. All pages, including the cover sheet, must be securely fastened together. This material will be returned to students in the tutorial in the week following its submission. Work submitted after the presentation date will get a zero mark. Students should keep a photocopy of all material submitted in case of unforeseen catastrophes.
The Code of Practice (Teaching and Assessment) states:

5.3.1 Each academic unit must have written procedures, included or referred to in the subject outline for each subject, for the submission and return of written assessment tasks that provide safeguards against claims of non-receipt and non-return.

Such procedures must be clearly communicated to students and must include:

a. possible method(s) of submission (e.g. hard copy, email, online);
b. format for submission and, where relevant, appropriate software;
c. receipting and recording submission;
d. downloading, where relevant;
e. possible method(s) of return; and
f. collection by students.

Assessment tasks which are relevant to the final examination for the subject will be marked and available for collection prior to the study week before the final examination.

A Faculty of Commerce assignment cover sheet should be attached to each piece of written assessment.

This cover sheet can be obtained from the website:

**PENALTIES FOR LATE SUBMISSION OF ASSESSMENT**

Assessments 1 and 3 are for effective participation in particular types of classroom activity, necessary conditions for which are (a) class attendance at the time that the activity takes place and (b) adequate preparation of assigned material prior to attending the class. Therefore, students who do not attend or who attend without having prepared will get a zero mark for these activities. Any student who believes he or she has a genuine and non-trivial reason for not attending or preparing should contact the lecturer before the class in which the activity occurs.

**PLAGIARISM**

Plagiarism means using the ideas of someone else without giving them proper credit. For example, that someone else may be an author, critic, journalist, artist, composer, lecturer, tutor or another student. Unintentional plagiarism can result if you don’t understand and use the acceptable scholarly methods of acknowledgement. Whether plagiarism is deliberate or unintentional, the University may impose penalties, which can be very severe. When it is desirable, or necessary, to use other people’s material, take care to include appropriate references and attribution. **Plagiarism will not be tolerated and has led to expulsion from the University.**

Students should visit the following University website and become familiar with the University’s policy on Plagiarism.

## SECTION C: RULES, CODES OF PRACTICE & POLICIES

### C1 UNIVERSITY POLICIES

Information on the following University Policies can be found at the websites below:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethical objection by students to the use of animal and animal products in coursework subjects</td>
<td><a href="http://www.uow.edu.au/about/policy/ethicalobjectionanimals.html">http://www.uow.edu.au/about/policy/ethicalobjectionanimals.html</a></td>
</tr>
</tbody>
</table>

* see brief explanation of policy below.

### C1.1 Non-discriminatory Language

The Faculty of Commerce supports the University's policy on the use of non-discriminatory language. It is the responsibility of students to ensure that they understand and abide by this policy. The policy is available at:

http://staff.uow.edu.au/eeo/nondiscrimlanguage.html
C1.2  Special Consideration Policy

The Faculty of Commerce recognises that it has a responsibility to ensure equity and consistency across its subjects for all students. Sometimes, in exceptional circumstances, students need to apply for special consideration in order to complete all assessable work.

The University applies strict criteria to the granting of special consideration. Before applying for special consideration students should carefully read the University’s policy. The policy can be found at:


C1.3 Student Academic Grievance Policy

The Faculty of Commerce aims to provide a fair, equitable and productive learning environment for all its students. The Student Academic Grievance Policy seeks to support the achievement of this goal by providing a transparent and consistent process for resolving student academic grievances.

Any student who has a grievance over a result should obtain a Faculty of Commerce Appeal of Assessment Form from the Schools or the Sub-Dean’s Unit. The student should firstly take the form to the marker/lecturer to discuss the matter and, if the student is still not satisfied, s/he should take the next step as outlined on the form.

Once the grievance has been considered by the Faculty, if the student still feels the situation has not been fully resolved s/he may consult the Dean of Students. However, the Dean of Students can have no input into the academic judgement of the lecturer and can only review the grievance to ensure proper procedure has been followed.

For more information, please consult the policy in full at


C2  FACULTY AND SCHOOL POLICIES

REFERENCING

WHY DO YOU NEED TO REFERENCE?

At University it is necessary to acknowledge the sources of information and ideas that you have incorporated in your assignments. Failure to do this thoroughly may result in accusations of plagiarism: this is the academic equivalent of stealing (because by not acknowledging someone else’s work, you are presenting it as your own). Plagiarism is taken very seriously by the University and may result in expulsion from the University.

Referencing is not only about acknowledging other people’s work: accurate referencing and lists of references are beneficial when researching a topic as they allow the reader to follow up information and read further into the area. In a sense, references provide readers with clues to help them explore different avenues of a topic. This aspect of referencing will become more valuable to you as you progress in your studies.

There is a correct procedure that must be followed when referencing and using footnotes. Not complying with these set techniques and format will most likely result in loss of marks.

When writing an essay it is easiest to reference as you go, making sure you are writing down all relevant information. This will save hours trying to find the source again in the library.

THE HARVARD SYSTEM OF REFERENCING

The Faculty of Commerce uses the Harvard system of referencing. This system makes use of short references within the body of the text. It is supplemented by a detailed list of references at
the end of the text, which provides all the information necessary to find the source material. In-text references include the author and year of publication, and where necessary the page number(s).

*It is the responsibility of students to ensure that they are familiar with the Harvard system of referencing and that they use it accurately in all written work submitted.*

Students should consult the following University Library website for a detailed explanation and examples of the Harvard system of referencing.


**CITATION OF ELECTRONIC SOURCES**

It is necessary for students to reference all sources used in their written work, including file transfer protocol sites, worldwide web sites, telnet sites, synchronous communications (MOOs, MUDs, IRC, etc.) Gopher sites, and email, Listserv and Newsgroup citations.

*It is the responsibility of students to ensure that they are familiar with the accepted Faculty of Commerce practice for referencing electronic material and that they use it accurately in all written work submitted.*

Students should consult the following University Library website for a detailed explanation and examples of how to reference electronic material.


**C3 SUPPORT SERVICES AND FACILITIES**

{The following details of C3 are relevant to the Wollongong campus.}

Off-campus sites should include their relevant support service details and delete areas which are not relevant.

**LEARNING RESOURCE CENTRE**

Learning Development offers a range of free services to all enrolled students who wish to improve their academic or English language skills. There are a range of workshops available including: essay writing and editing; reading for assignments; grammar; presentation skills; pronunciation and exam preparation.

For information on language and academic skills workshops, or to make appointments for consultations, please visit the Learning Resource Centre (LRC), Building 19, Ground Floor, Room G102, or Phone 02 4221 3977. For further information visit the website:


**FACULTY LIBRARIANS**

Each faculty has a Faculty Librarian who is available to help with research related enquiries. Research Help Desk staff are also available in the Library to assist with research needs.

The Faculty Librarians for Commerce can be contacted as follows:

Email: lib_commerce@uow.edu.au

telephone: 42 213078
DISABILITY LIAISON OFFICER

The **Disability Liaison Officer** (DLO) can provide advice on how particular disabilities affect university study and information on resources available at the University for assisting students with disabilities. Students commencing courses are advised to contact the Disability Liaison Officer prior to the beginning of their first session of study.

For further information on services offered, consult the Disability Services website or contact the office.

- **telephone:** 42 213445
- **fax:** 42 215667

FACULTY DISABILITY ADVISERS

Faculty Disability Advisers are academic staff who provide assistance and support to students with disabilities within their Faculty and act as an intermediary between the student and the Faculty's academic and general staff. They provide support, educational advice and referral to appropriate staff on issues related to teaching and learning within the Faculty and the University. Students are advised to communicate specific information about the ways in which their disability affects learning to the Faculty Disability Adviser as soon as possible after enrolment.

The Faculty of Commerce Disability Adviser is Mr. Ron Perrin. Mr Perrin can be contacted as follows:

- **Office location:** Building 40, room 224
- **email address:** ron_perrin@uow.edu.au
- **telephone:** 42 214118

WOOLYUNGAH INDIGENOUS CENTRE

The Woolyungah Indigenous Centre provides academic and personal support for Aboriginal & Torres Strait Islander and other indigenous students. The Centre also runs an Indigenous Specific Orientation Program for students who gain entry to the University through the alternative admissions program.

For further information on services offered, consult the Woolyungah Indigenous Centre website or contact the office.

- **Centre location:** Building 30
- **telephone:** 42 213563
- **fax:** 42 214244