ECON222 Quantitative Methods II 6 credit points

**SPRING SESSION 2007 WOLLONGONG CAMPUS**

Web address for online material: WebCT (available through SOLS only to students who are enrolled)

**Subject Coordinator and lecturer**

<table>
<thead>
<tr>
<th>Dr. Chia-Hung (Dennis) Sun</th>
<th>School of Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room: 40.207</td>
<td>Ph: 4221 3659</td>
</tr>
<tr>
<td>Consultation times</td>
<td>Tuesday &amp; Thursday</td>
</tr>
<tr>
<td></td>
<td>Time: 15:30-17:30</td>
</tr>
</tbody>
</table>

**Tutor**

Office & Phone: TBA

email: Use WebCT_Vista mail

Consultation times: TBA

**Lecture times**

Lectures will be held on

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>16:30 to 18:30</td>
<td>Room 3, Building 20</td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td>17:30 to 18:30</td>
<td>Room 4, Building 20</td>
<td></td>
</tr>
</tbody>
</table>
# LECTURE PROGRAM

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics Covered</th>
<th>Chapter</th>
<th>Tutorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exponential and logarithmic functions</td>
<td>4</td>
<td>No tutorial</td>
</tr>
<tr>
<td></td>
<td>Mathematics of finance</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mathematics of finance</td>
<td>5</td>
<td>Tutorial 1</td>
</tr>
<tr>
<td></td>
<td>Matrix algebra</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Matrix algebra</td>
<td>6</td>
<td>Tutorial 2</td>
</tr>
<tr>
<td>4</td>
<td>Matrix algebra</td>
<td>6</td>
<td>Tutorial 3</td>
</tr>
<tr>
<td></td>
<td>Differentiation</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Differentiation</td>
<td>11</td>
<td>Tutorial 4</td>
</tr>
<tr>
<td>6</td>
<td>Differentiation</td>
<td>11</td>
<td>Tutorial 5</td>
</tr>
<tr>
<td></td>
<td>TEST 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Additional differentiation topics</td>
<td>12</td>
<td>Tutorial 6</td>
</tr>
<tr>
<td></td>
<td>Curve sketching</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Curve sketching</td>
<td>13</td>
<td>Tutorial 7</td>
</tr>
<tr>
<td></td>
<td>Applications of differentiation</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Applications of differentiation</td>
<td>TBA</td>
<td>Tutorial 8</td>
</tr>
<tr>
<td></td>
<td>Multivariate</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Multivariate</td>
<td>17</td>
<td>Tutorial 9</td>
</tr>
<tr>
<td>11</td>
<td>Multivariate</td>
<td>17</td>
<td>Tutorial 10</td>
</tr>
<tr>
<td></td>
<td>TEST 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Multivariate</td>
<td>17</td>
<td>Tutorial 11</td>
</tr>
<tr>
<td>13</td>
<td>Review</td>
<td></td>
<td>Tutorial 12</td>
</tr>
</tbody>
</table>

Notes:

- The weekly timing of topics (given in column 1 above) is approximate only.
- Lectures provide the best guide to the material that is examinable. Some examinable material that will be discussed in class is not in discussed in the textbook. In such cases some additional reading may be recommended, but usually the discussion in class will be the best available coverage of such material.
Prior to attempting ECON222, you should have a good understanding of the principles &
basic terminology of microeconomics at taught in the prerequisite subject. It is your
responsibility to ensure that introductory material (such as that covered in the prerequisite
subject: ECON111) is known and understood prior to attempting this subject.

To ensure coverage of examinable material, you should attend all classes, read all the
assigned reading in the textbook, and complete all assignment work. If you do not attend class
or if you decide not to do the assignment work, then you should not expect any additional
guidance on, or assistance with examinable material in this subject.

TUTORIAL TIMES

<table>
<thead>
<tr>
<th>Tutorials will be held on</th>
<th>Wednesday 18:30-19:30</th>
<th>40.124</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thursday 08:30-09:30</td>
<td>40.122</td>
</tr>
<tr>
<td></td>
<td>Thursday 18:30-19:30</td>
<td>19.1004</td>
</tr>
</tbody>
</table>

Depending on numbers, one or two tutorials may be cancelled.

Comment on tutorials and assignment work:

- Tutorial time will primarily be used to discuss the current assignment work.
- Each week (from weeks 1 through 12) assignment questions will be set and will be
  available for one week on the ECON222 WebCT.
- Assignment questions will be included in the in-session test and in the final examination.
- Difficulty in completing the assignment work is an indication that you are not
  keeping up and it is an early indicator that you may fail the subject.
- Students seeking assistance with assignment work should attend tutorials. If students seek
  further assistance they may be asked to present their assignment book or folder to the
  instructor or tutor.
- Weekly assignment work and tutorial discussion are an important part of the learning
  process. It is strongly recommended that each student attend at least one tutorial per
  week.

BRIEF OUTLINE

The aim of the subject is to prepare students to undertake various subjects in Commerce
(particularly in Economics and Finance) that require an understanding of the mathematics of
finance, matrix algebra or differential calculus. A second aim is to use mathematics as a vehicle
to teach logical thinking and an analytical approach to problem solving.

STUDENT LEARNING OUTCOMES

On successful completion of this subject, students should be able to use mathematics to analyse
business and economic problems in the area of the mathematics of finance, matrix algebra, and
univariate and multivariate differential calculus.
ATTENDANCE REQUIREMENTS
In order to maximise learning outcomes, it is strongly recommended that students attend all lectures.

PERFORMANCE LEVEL
To be eligible to pass (PC) this subject, students must achieve an overall mark of at least 45%, and at least 40% in the Final Exam.

REQUIRED TEXT(S)
(Some assignment problems will be based on end-of-chapter questions, problems, and other material in the textbook.) This textbook is available online from the University Bookshop at http://unishop.uow.edu.au/textbooks/

OTHER MATTERS
Expectations & recommendations regarding attendance, participation, and behaviour.

- You are expected to attend and participate in all lecture classes and regularly read the class WebCT-Vista site (including announcements, discussions, and WebCT mail).
- It is strongly recommended that you attend at least one tutorial per week.
- It is recommended that you construct your own study notes using the class notes, the textbook and other relevant reading.
- You should read this document and seek clarification of any aspects that are not clear to you.
- You should behave at all times in a way that respects the rights of other students and does not disrupt the learning activity of any other student.
- You should be informed of all class announcements by attending lectures on time & reading the WebCT site.
- You should participate in all assessment tasks at their scheduled times.
- You should not disrupt any teaching activity. You should ensure that your mobile phone is switched off during all classes. You should be punctual at all classes. (If you enter a class late or if you must leave early, do so quietly and sit as close to an exit as possible so as to minimize disruption to others.)
- Your behaviour on the class WebCT site should be consistent with a high level of academic honesty and integrity.
- If you miss a class, or if you are late to a class, you should consult other students to get any notes and any announcements that you may have missed.
- It is strongly recommended that you get to know other students in the class so that you can help each other.
- You should ensure that your address and other contact details held by the university are correct.
- You should know how to exit the classroom in the event of an emergency.
Use of Web-based Resources.

- Students in ECON222 are expected to access the class WebCT-Vista site at least once per week to check for class announcements. To access the ECON222 WebCT site, you must be registered for ECON222. Some class resources (such as practice questions and self tests) will be available only on WebCT.

- WebCT-Vista will be used in ECON222 for important class announcements, to provide class notes, and other learning materials, and to facilitate communication about class matters.

- WebCT may be accessed from a computer that is connected to the Internet and has a WebCT-compatible Web browser installed. You will need to know the “Username” and “Password” of your University computer account. If you do not know how to access WebCT, you should seek appropriate advice before the end of the first week of the session.

- The WebCT-Vista “Discussion” board should be used for general academic matters such as questions about class material and class organization. Private WebCT mail to the instructor about non-personal matters of general interest will be posted (with senders name attached) to the discussion board.

- The WebCT-Vista “Private Mail” should be used for personal communication with the instructor and tutor on personal matters relating to ECON222. In general, WebCT “private mail” should NOT be used for academic questions and comments. Academic questions & comments should be posted to the “Discussion” board.

All email to the ECON222 subject coordinator, lecturer and tutor should be through WebCT. Always put you name + the topic in the subject line.

Do not use the regular campus email on matters relating to ECON222 except in an emergency & if you do you must put ECON222 + your name in the subject line.
**SECTION B: ASSESSMENT**

Final marks in this subject will be determined according to the following weights:

<table>
<thead>
<tr>
<th><strong>Test 1 (20%)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A 60 minute test covering material in weeks 1 to 5 to be held on Thursday of <strong>WEEK 6</strong> (August 30) at 17:30</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Test 2 (20%)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A 60 minute test covering material in weeks 6 to 10 to be held on Thursday of <strong>WEEK 11</strong> (October 11) at 17:30</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Final Examination (60%)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A 3 hour exam covering all material from week 1 to week 12 to be scheduled between 3 November and 16 November at a time &amp; place by ARD.</td>
<td></td>
</tr>
</tbody>
</table>

**Assignments, tutorial preparation & participation**

No marks are assigned directly for this work, but both the final exam & the midsession test will both contain questions based on assignment & tutorial work. Past experience indicates that final marks in this subject are strongly & positively correlated with the amount of effort put into assignment work & tutorial attendance.

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

**ADDITIONAL INFORMATION ABOUT ASSESSMENT:**

**SCALING**

Normally marks will not be scaled. Test, examination and / or aggregate marks may be scaled in exceptional and unforeseeable circumstances. For example scaling would be appropriate if something happens that causes the initial mark distribution to misrepresent the level of learning in the class. The basis of and reason for such scaling (should it occur) will be explained on WebCT after being approved by the discipline head of economics.

**Release of marks & retention of papers:**

Test marks will be released on WebCT. All test and exam papers will be retained by the subject coordination. Student may discuss their test and exam answers with the subject coordinator.

**Consequences of not taking a test:**

- **ECON222**
- Session 2, 2007
- Pg. 6/14
Students are expected to take the test and the final examination at the scheduled times. Failure to do so without adequate justification and reasonable notification will result in a zero mark for the test or examination. (See below).

The tests and the final examination may consist of short essay questions, short answer questions (involving brief explanations &/or diagrams), and multiple-choice questions. Information about the exact form the test and final examination, and marks allocated to each question will be provided on WebCT in the week prior to the relevant test, and in week 13 for the final exam.

Marks for assessment tasks will be awarded for:

- correct, concise and complete written answers and diagrams (marks will be lost for wrong, incomplete, vague and irrelevant statements, and wrong or poorly labelled diagrams).
- clarity of written answers and diagrams (marks will be lost for untidy, difficult to read and poorly presented work).
- originality and clear exposition of correct methodology when a problem is to be solved (marks will be lost for use of inappropriate methods and errors, especially errors in logic and explanations that contain internal inconsistencies).
- correct and knowledgeable use of the terminology, methodology and diagrams of microeconomics (incorrect use of terminology, methodology and diagrams will be penalized).
- correct answers in the case of multiple choice questions, problems, and similar work.

Note on the final exam:

The final exam will be comprehensive; that is, it will include questions on all material relevant to the subject that has been discussed in all classes, set reading in the textbook, assignments and all other class work (such as material posted to WebCT). Students who are unable to attend the final exam through no fault of their own, should apply (with full supporting documentation) for “special consideration” (through SOLS) at the earliest possible date (and no later than 7 days after the final examination). See “Applications for Special Consideration” below.

Note on the supplementary tests:

Any student who does not attend an ECON222 in-session test will score zero for the test, unless absence from the test is caused by unforeseen circumstances beyond the control of the student. When a valid special consideration application + supporting documentation has been submitted on time through SOLS and approved, special consideration will normally take the form of a supplementary “make-up” test (which may include some oral questions and answers). (See “Applications for Special Consideration” below).
In addition to a formal application for special consideration, students should discuss, at the earliest possible consultation time, their situation with the subject coordinator, in person. In the case of a minor illness or problem, the student may be required to take a make-up test at the earliest possible time. In other cases it is likely that a “make-up” test will be scheduled on Friday afternoon in the last week of the session. The make-up test will have different questions from the initial in-session tests (and may include some oral questions & answers).

**Applications for Special Consideration.**

If you are unable to attend a test or the final examination and wish to apply for special consideration, you are advised to carefully consult the University’s Policy on Special Consideration at http://www.uow.edu.au/handbook/courserules/specialconsideration.html to ensure that you know eligibility criteria, the process to be followed in lodging an application, and the criteria that subject coordinators may use in deciding whether to grant special consideration. You must comply with the Policy. Applications for special consideration must be lodged through SOLS and supporting documentation must be submitted no later than seven (7) days (including weekend days) after the test or exam occurred.

If special consideration is granted for a test, it will normally take the form of a supplementary test that will be held either at the earliest possible date (in the case of minor problems) or a test in the last week of the session (see above). The timing and form of any supplementary test will be at the discretion of the subject co-ordinator.

If special consideration is granted for the final examination it will take the form of a supplementary exam to be held at a time to be determined and announced by the Academic Registrar’s Office. If you apply for special consideration, you are required to be available to take the supplementary make-up test or exam at its scheduled time.

If you apply for, or intend to apply for “special consideration” in relation to a test or the final examination, you are advised **not** take the test or examination at the scheduled time, unless the subject coordinator has given prior approval for you to do so. In fairness to all students, each student may take a test or exam **once only**, either at the scheduled time or at the time of the supplementary test or exam. If you do not comply with this requirement special consideration will normally be denied.

**Workload:**

Students taking ECON222 are expected to spend at least 12 hours per week studying ECON222 material. This study should include attending class, reading the textbook summarizing your class notes and the textbook, completing all assignment work by writing out and correcting your answers. Unless you commit this time to serious study for this subject you cannot expect to do well. Serious
study does NOT include making coffee, chatting with friends, sleeping in the library, sharpening your pencils, playing electronic games, and similar activities :-) 

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. [http://www.uow.edu.au/handbook/courserules/plagiarism.html](http://www.uow.edu.au/handbook/courserules/plagiarism.html)

Reviewing Assessment Marks and Grades

Any student who believes that the mark or grade awarded does not reflect their performance in the subject has the right to approach the lecturer(s) concerned (and then, if necessary the Head of the Unit and the Dean) and have the grading explained. A formal procedure for having a mark or grade reviewed has been established by the University and is available to students in the form of a handout from the Student Enquiries Office.
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:


Add any School specific procedures or information here {or delete statement}.

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.


OCCUPATIONAL HEALTH AND SAFETY WHERE RELEVANT, INCLUDING SAFETY IN LABORATORIES AND ON FIELD TRIPS

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.

web address: http://www.uow.edu.au/student/services/ds/
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
web address: http://www.uow.edu.au/aec/
telephone: 42 213563
fax: 42 214244