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Read this entire course outline carefully!

Any items, rules, requirements in this course outline may be subject to changes. When this happens I will announce it during the lecture. Announcements in the lecture supersede any information contained in this course outline.

1.1 Course Description

This course presents and develops techniques necessary for the quantitative analysis of economic and business problems that are beyond the scope of the simple linear regression model covered in EMET2007 or STAT2008. Topics include: endogeneity, natural experiments, binary dependent variables, time series regressions and panel data estimation. This is a hand-on course with a focus on applications in economics as well as business. A standard statistical software will be used during computer sessions, no special programming skills are required.

1.1.1 Learning Outcome

Upon successful completion of the requirements for this course, students will

• understand the challenges of empirical modelling in economics and business
• understand the shortcomings of the standard linear regression model
• be able to apply important extensions to the linear regression model
• be able to express new econometric methods mathematically
• be able to think clearly about the relationship between data, model and estimation in econometrics
• use statistical software to study actual data sets

1.1.2 Topics Covered

I intend to teach the following set of topics.

• Brief review of OLS estimation (2 weeks)
• Endogeneity: when OLS fails (1 week)
• Instrumental variables estimation (2 weeks)
• Experiments and quasi-experiments (2 weeks)
• Binary dependent variables (2 weeks)
• Panel data and time series models (4 weeks)

If you are interested in any other topic not given here, feel free to let me know as I am happy to adapt the course and incorporate your ideas and preferences. Note that the indicated number of weeks given within parentheses are just estimates and may differ as we go along.

1.1.3 Prerequisites

To enrol in this course you must have completed
• ECON1101 and
• EMET2007 or STAT2008.

1.1.4 Communication

Important: The official website for this course is

I will frequently make announcements on the homepage of the Course Website (under “Announcements”). The official forum for announcements of any kind are the lectures. If necessary, I will contact students electronically using their official ANU student e-mail address. If you want to contact me send an e-mail to
juergen.meinecke@anu.edu.au

E-mail addresses are only to be used when you need to contact staff about administrative or academic matters. They are NOT to be used for instructional purposes.

1.1.5 Textbook

The textbook for the course is Introduction to Econometrics (third edition, 2012) by Stock and Watson. Chiefly library has several copies of the textbook. I strongly recommend that you buy a copy of the book as I base the lecture and practice sessions on it.


1.1.6 Software

The econometric software for this course is “Stata”. Here’s a quick wiki summary of what Stata is: <http://en.wikipedia.org/wiki/Stata>. From my own experience, Stata is an exhaustive, well-documented, powerful and user-friendly statistical software.

I posted some introduction and guides on the course homepage. We will get to know Stata during the tutorial in a “learning-by-doing manner”.

Chapter 1. Course Outline
1.1.7 Staff

Administrative

For any administrative inquiries or problems (e.g., tutorial enrollment, exam scheduling, supplementary exams, etc.) you should contact Terry Embling (School of Economics Course Administrator) or Finola Wijnberg (School of Economics School Administrator).

<table>
<thead>
<tr>
<th>Name</th>
<th>Terry Embling</th>
<th>Finola Wijnberg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job title</td>
<td>Course administrator</td>
<td>School administrator</td>
</tr>
<tr>
<td>Office</td>
<td>HW Arndt Building 25a</td>
<td>HW Arndt Building 25a</td>
</tr>
<tr>
<td>Location</td>
<td>Room 1013</td>
<td>Room 1014</td>
</tr>
<tr>
<td>Hours</td>
<td>9:00-16:00</td>
<td>9:00-16:00</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:terry.embling@anu.edu.au">terry.embling@anu.edu.au</a></td>
<td><a href="mailto:finola.wijnberg@anu.edu.au">finola.wijnberg@anu.edu.au</a></td>
</tr>
</tbody>
</table>

Academic

If you have any academic inquiries or problems regarding the course, please don’t hesitate to contact me:

<table>
<thead>
<tr>
<th>Name</th>
<th>Juergen Meinecke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>HW Arndt Building 25a</td>
</tr>
<tr>
<td>Location</td>
<td>Room 1022</td>
</tr>
<tr>
<td>Hours</td>
<td>Tue 13:00-16:00</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:juergen.meinecke@anu.edu.au">juergen.meinecke@anu.edu.au</a></td>
</tr>
</tbody>
</table>

1.1.8 Lectures and Tutorials

There will be four hours of contact time per week: a two hour lecture and a two hour practice session. You are expected to attend all of these. If you have persistent time conflicts with any of these class sessions, you should not be taking the course. Although content will be made available digitally (for example through audio recordings) you should not treat virtual attendance as a perfect substitute for physical attendance.

The class meets in the following venues at the following times:

<table>
<thead>
<tr>
<th>Day</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Lecture</td>
<td>Problem Solving</td>
<td>Computing Session</td>
</tr>
<tr>
<td>Time</td>
<td>10-12</td>
<td>10-11</td>
<td>11-12</td>
</tr>
<tr>
<td>Location</td>
<td>CBE Bld LT4</td>
<td>COP GO25</td>
<td>COP GO25</td>
</tr>
</tbody>
</table>

As you can see, the two hour practice sessions happen on Thursdays and can be subdivided into a one hour problem solving session and a one hour computing session. We will not always treat these two sub-sessions as strictly separate and instead regard the two as one big practice session that combines both theoretical exercises with computing exercises.

1.1.9 Digital Lecture Delivery

Audio recordings of the Tuesday lecture will be made available on Wattle.

The Thursday sessions (tute and computing) will not be made available on Wattle (they are group learning sessions and as such do not lend themselves to audio recordings).
1.1.10 Workload

University study requires at least as much time and effort as a full-time job. You are expected to attend all lectures and tutorials (4 hours per week). You should expect to put in at least 6 hours per week of your own study time for this course in addition to the 4 hours of lectures and tutorials.

1.2 Course Assessment

The following table summarizes the assessable items for the course.

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>Due date</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>Friday, week 5</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>Week 7</td>
<td>25%</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>Friday, week 13</td>
<td>10%</td>
</tr>
<tr>
<td>Final exam</td>
<td>TBA</td>
<td>45%</td>
</tr>
<tr>
<td>Practice session participation</td>
<td>Throughout</td>
<td>10%</td>
</tr>
</tbody>
</table>

Note, all assessment items are compulsory. If you miss any one item without approval by the School or College, you will fail the entire course!

1.2.1 Assignments

Working through exercises is an effective method of learning econometrics, as it is with most mathematical subjects. That means that the assignments are more than simply part of the assessment for the course. Students will be required to submit two written assignments during the semester.

The assignments will require computer work as well as analytical work. These assignments should be your own work. You may discuss assignments with classmates, but you should do all your own computing and writing of the assignments. It is an offense against the University’s regulations to copy from other students’ assignments.

Assignments should be submitted by dropping them into a specially labeled assignment box at the Research School of Economics. (Contact Terry Embling for details.) The front page of the submitted assignments must show your name, student number and the course name (EMET2008). Assignments missing any of this information will receive a mark of zero.

Assignments must be submitted by 12pm on the due date. If you have a university approved excuse for not handing in an assignment, then the value of the final exam will be increased by 10 percentage points to compensate for the missed work.

Further details about assignment submission will be given during lectures.

1.2.2 Midterm Examination

The midterm examination will be held during practice session time on Thursday of week 7. The exam covers all material from weeks 1 through 6 of the course. The exam will be marked out of 100. It is your responsibility to make yourself available for the midterm examination.

No make-up midterm examination will be offered. Should you miss the midterm exam for a valid reason (see Special Examinations below) then your grade will be based solely on your final exam.
1.2.3 Final Examination

Examinable material covers the whole semester, including material already covered in the midterm exam. The exam will be marked out of 100.

The final exam will be held in the exam period at the end of the semester. Details will be posted on the ANU exam timetable site.

1.2.4 Practice Session Participation

Your participation is an essential part in the overall learning experience (both for you as well as your classmates!) in the course. I will evaluate you on your participation during the Thursday practice sessions. Feel free to participate and contribute to the sessions. Do not be afraid to give wrong answers; as long as you are constructively engaged, there is no such thing as a wrong answer.

Every Thursday after practice sessions I will take note of students who participated in class and at the end of the semester I will aggregate these numbers to an overall participation mark. Roughly, I will give 10 marks to regular participators, 5 marks to occasional participators and zero marks to students who rarely or never participate. Feel free to seek feedback from me during the semester on your participation performance.

1.2.5 Scaling of Grades

Final scores for the course will be determined by scaling the raw score totals to fit a sensible distribution of grades. Scaling can increase or decrease a mark but does not change the order of marks relative to the other students in the course. If it is decided that scaling is appropriate, then the final mark awarded in a course may differ from the aggregation of the raw marks of each assessment component.

1.3 Rules and Policies

It is your responsibility to familiarize yourself with the rules and regulations and the policies and procedures that are relevant to your studies at the ANU.

ANU has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University’s academic standards, and implement them. You can find the University’s education policies and an explanatory glossary at: ANU Policies.

Students are expected to have read the Student Academic Integrity Policy before the commencement of their course.

Other key policies include:

• Student Assessment (Coursework)

• Student Surveys and Evaluations

The University also offers a number of support services for students. Information on these is available online from ANU Studentlife.