Econometrics
220:322
Prof. Paczkowski

Fall, 2007
August 31, 2007

My office hours are:
Wednesday 2:00 PM - 4:00 PM
Friday 11:00 AM - 12:00 PM
and by appointment

Office Location:
Room 108, New Jersey Hall - CAC
732-932-7077

Otherwise, the best place to find me is before class in the classroom. I can also be reached by email at

paczkows@economics.rutgers.edu

Please feel free to call me with any questions or see me before or after class. Do not wait until the end of the semester!

A final way to reach me is via the Economics Department’s secretary in New Jersey Hall. Just leave a message for my mail box although this is the most ineffective way.
1 Course Objectives

Econometrics is the application of a specific method in the general field of economic science in an effort to achieve numerical results and to verify economic theorems. It consists in the application of mathematical economic theory and statistical procedures to economic data in order to establish numerical results in the field of economics and to verify economic theorems.

G. Tintner, Econometrics, 1952

This quote by Tintner, one of the pioneers of econometrics, summarizes the thrust of this course: to use both mathematical and statistical tools to analyze data to verify economic theorems. Economic theories, like those for any science, offer little value to the advancement of the science or help in policy formulation if they contradict reality. The theories must be tested with data. This course is concerned with testing theories.

The general objectives for the course are:

1. to provide you with a more detailed introduction to statistical concepts than normally acquired in a basic statistics course;
2. to provide you with the basics of econometric analysis focusing on the least squares methodology for single explanatory and multiple explanatory variables;
3. to provide you with an understanding of data analysis applicable to economic problems;
4. to expose you to the use of a computer package for analyzing data;
5. to allow you to apply the techniques learned in the course to lab assignments.

Specific objectives are to instruct you in:

1. data issues for economics;
2. the principles of least squares analysis;
3. the verification of assumptions behind least squares analysis;
4. the correction of some major least squares assumptions violations.

Emphasis is placed on a combination of the mathematical development of econometric tools and their application to data. The applications are in lab sessions in which you will be instructed in using an econometrics computer package and asked to solve problems using that package. The problems consist of a combination of exercises to

1. analyze data both graphically and statistically;
2. estimate equations and test assumptions of the equations;
3. manipulate features of the computer package.
2 Prerequisites

The prerequisites are listed in the course description.

3 Math/Statistics Requirement

Econometrics is a subset of statistics which is a subset of mathematics. Consequently, there is no way this course can be taught without the use of math. The math, however, is at the algebra level with the use of some elementary calculus.

Since econometrics is a subset of statistics, you should already understand the basics of statistical methods and theory including:

1. elementary probability theory;
2. elementary distributions such as the normal and t distributions;
3. hypothesis testing and confidence intervals.

Ample review, however, is given so that you will not be disadvantaged if you do not have a good background in these topics. New topics usually not introduced in a one-semester statistics course are reviewed.

4 Calculators

Since numerical calculations will be done often in class, you will need a calculator with the usual functions. You can use a calculator for the exams, however, you will not get any credit (i.e., you will get a zero) for merely writing down an answer from the calculator. For any credit at all, you must show that you know how to do the problem, not that you know how to use a calculator. You will not be allowed to use a cellphone or pda that has a calculator. They do not have the functionality to do the required work.

5 Textbook

The textbook is:

Using Econometrics
5th Edition
A. H. Studenmund (Pearson Addison-Wesley)

There is no workbook.

Please be aware that there are notation differences between my lectures and the book. You are expected to identify these and make the necessary translations. This is your responsibility.

A tutorial with command instructions for using the software package, EViews, are available online. See An Introduction to Statistical Computing on my web site:
Handouts will be provided as necessary to supplement lectures but not to replace your responsibility to attend class and take notes.

6 Textbook Reading Assignments

Reading assignments will be announced in class. You are expected to read the assignments and be prepared for class discussions. Lectures cover material that are extra to the assignments and either supplement or reinforce the readings. You are responsible for both the readings and the lectures.

7 Exams and Lab Sessions

There will be three exams (two hourly exams and a final) and lab assignments.

The final is already scheduled by the University. Please refer to the following table for your section:

<table>
<thead>
<tr>
<th>Section</th>
<th>Date and Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>December 17, 8 - 11 PM</td>
</tr>
</tbody>
</table>

Above all, please check the University website for exam dates and times:

http://scheduling.rutgers.edu/fallfinals.htm

It is your responsibility to verify the date and time. The two hourly exams will be approximately the first week of October and the first week of November. These are typically announced one week before the exam.

The three exams are comprehensive and will be focused on grand themes and issues. They are meant to synthesize the material. Each exam explicitly covers only the material in the reading assignments and covered in class since the last exam. In this sense, exams are not cumulative. They are cumulative, however, in that you are expected to know and understand previously covered material and be able to handle new material. The material builds. In addition, each exam will consist of multiple choice and true/false questions.

There are no makeups for missed exams due to tardiness or being absent - no excuses. A make-up exam is allowed only after prior permission is granted to miss that exam (rarely given!!) or there is a note from the Dean’s Office and appropriate documentation (e.g., medical, court order). It is your responsibility to notify the Dean’s Office of a medical or personal problem (e.g., death in the family) resulting in a missed exam. Excuses are not accepted; only a note from the Dean’s Office will be accepted - maybe! A make-up exam is not necessarily the same as the regular exam. Obviously, a make-up is not given for the final.
There are approximately four lab sessions in which you will be asked to solve problems using an econometrics package. The lab sessions are designed to allow you to become familiar with an econometrics package while at the same time learn how to apply the techniques learned in the course to real data. You will be asked to enter data, estimate equations, graph data, and write a brief one paragraph interpretation of the results.

8 Grades

All assignments and exams and the labs have points. Grades are determined on a points-earned basis with the following importance weights:

<table>
<thead>
<tr>
<th>Exam 1</th>
<th>25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 2</td>
<td>25%</td>
</tr>
<tr>
<td>Final</td>
<td>25%</td>
</tr>
<tr>
<td>Labs</td>
<td>25%</td>
</tr>
</tbody>
</table>

A straight curve is used:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% to 100%</td>
<td>A</td>
</tr>
<tr>
<td>88% to less than 90%</td>
<td>B+</td>
</tr>
<tr>
<td>80% to less than 88%</td>
<td>B</td>
</tr>
<tr>
<td>78% to less than 80%</td>
<td>C+</td>
</tr>
<tr>
<td>70% to less than 78%</td>
<td>C</td>
</tr>
<tr>
<td>60% to less than 70%</td>
<td>D</td>
</tr>
<tr>
<td>Less than 60%</td>
<td>F</td>
</tr>
</tbody>
</table>

9 Appeals

Students occasionally feel that a grade is too low. In such a case, an appeal consisting of one (1) double spaced, typed page plus a copy of the exam or paper with my comments on it may be submitted at any time up to and including the last class, but not beyond.

The appeal should contain an argument as to why a particular grade should be changed. Not all appeals are accepted. An appeal that says, for instance, ”But I studied hard” or ”I worked all semester and just got a C - I deserve better” or ”You graded me unfairly” are not acceptable.

Appeals are reviewed only at the end of the semester and only when it is believed that a grade may be changed. Do not ask if I reviewed an appeal at any point in the semester - the answer is ”No”. Appeals are only reviewed at the end of the semester to determine borderline cases.

10 Late Submissions

Late papers will not be accepted; they receive an automatic zero. Papers placed in my mailbox, left on my desk, or shoved under my office door will not be accepted; they are automatic zeros. There are no exceptions unless you have a note from the Dean’s Office.
11 Final Course Grades

Final course grades will be available in the usual way.

12 Attendance Policy

Attendance is taken at the beginning of each class.

13 Frequently Asked Questions

See my web site

http://econweb.rutgers.edu/paczkows

These FAQs give answers to most class policy questions.