ECON 6113  
Cross Section and Time Series Econometrics  
Fall 2014

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Office Hours: T, Th 1-2PM; 3:30-4:30PM and by appointment

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Class Room: Uptown Campus  
Class Meets: T 5:30 pm - 8:15 pm

Prerequisites: Consent of the department.

Course Objective: This class introduces the advanced study of the theory and application of statistics to economic problems. Topics include derivation of the least-squares estimator; methods with which to detect and correct for potential problems with the classical regression model; the problems of multicolinearity, heteroscedasticity, and autocorrelation; introduction to time-series estimation and non-linear estimation.

Lectures will be used to introduce the mechanics of econometric analysis and I will provide in-class examples of how to use SAS. Practical learning of econometrics is accomplished through several applied out-of-class exercises.

In order to complete the applied homework, use of a statistical software package which can perform matrix and/or regression operations is required. SAS will be used and is available in the UNCC computer labs. I use Stata in my personal research and will support this package. GRETL is a free econometrics package which I will also support. There are a number of alternative econometrics/statistical packages that can be used, e.g., Limdep, TSP, Rats, R, Microsoft Excel, NCSS, and SPSS. However, I will not support these alternatives.

Text: The text used is Basic Econometrics, 5th edition, by Damodar N. Gujarati and Dawn Porter. A previous edition of the book should be sufficient for the class. I strongly recommend purchasing a used copy of the text.

Alternative textbooks include William Greene's Econometric Analysis, or Jeffrey Wooldridge's Economic Analysis of Cross Section and Panel Data. Two undergraduate texts that provide good explanations of many topics covered in this class are Pindyck and Rubenfeld's Econometric Models and Economic Forecasts and Wooldridge's Introductory Econometrics.

Course Web Page: All course materials are posted at moodle2.uncc.edu.
Grading: Grading will proceed in the following manner:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Total Value</th>
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<tr>
<td>6 Out-of-class assignments</td>
<td>150 points</td>
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<tr>
<td>1 Term Paper or 5 Seminar Reports</td>
<td>100 points</td>
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<tr>
<td>1 Midterm Exam</td>
<td>100 points</td>
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<tr>
<td>1 Cumulative Final Exam</td>
<td>150 points</td>
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<td>500 points</td>
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Letter grades will be awarded as follows (after standard rounding):

- A: 500-438
- B: 437-388
- C: 387-338
- U: 337-0

Attendance: There is no attendance policy in this class. You are free to attend or not attend class, this is your decision. However, attendance is a major factor in how well you will perform in the class. No points are artificially added or subtracted based on attendance. I appreciate you arriving on time and not leaving class early. If you miss class, you should NOT ask me about what you missed. It is your responsibility to get this information from one of your classmates.

Academic Honesty: Please note that academic misconduct (cheating) will NOT be tolerated. In addition, students have the responsibility to know and observe the requirements of The UNC Charlotte Code of Student Academic Integrity. This code forbids cheating, fabrication or falsification of information, multiple submissions of academic work, plagiarism, abuse of academic materials, and complicity in academic dishonesty. Academic evaluations in this course include a judgment that the students work is free from academic dishonesty of any type; and grades in this course therefore should be and will be adversely affected by academic dishonesty. Students who violate the code can be expelled from UNC Charlotte. The normal penalty for a first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases, the course grade is reduced to F. Copies of the code can be obtained from the Dean of Students Office. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty to the course instructor.

If in doubt when contemplating an action, ask me first!!

Make-up Projects: Make-up exams are generally not offered. Out-of-class assignments turned in late can earn 60% of the original point value.

Cell Phones: All beepers, pagers and cell phones must either be turned off prior to class starting or placed in silent mode. The proliferation of cell phones and other communication devices does not mitigate the negative externalities imposed on others when they activate during class.

Laptops: The use of laptops and desktop computers in this class IS restricted to applications that are not distracting to other students.
Course Outline (Subject to Change)

1. Introductory Comments (Chapter 1)
2. Statistics Review (Appendix A)
3. Simple Regression Model (Chapters 2 and 3)
4. Classical Regression Model (Chapters 7 and 8, Appendix B and Appendix C)
5. Hypothesis Testing (Chapters 5 and 8)
6. Functional Forms and Dummy Variables (Chapters 6 and 9)
7. Possible Problems in Regression (Chapters 10 and 13)
8. Generalized Least Squares (Handouts)
9. Heteroscedasticity (Chapter 11)
10. Autocorrelation (Chapter 12)
11. Limited Dependent Variables (Chapter 15)
12. Time Series Analysis (Chapters 21 and 22)

Important class dates:

- Classes begin: August 18
- First class: August 19
- Labor Day Holiday: September 1
- Fall Break: October 6-7 (No Class)
- Thanksgiving Break: November 26 - November 28
- Classes end: December 3
- Last Class: Tuesday, December 2
- Midterm Exam: Tuesday, October 14
- Final Exam: Tuesday, December 9 (5:30 PM)
- Term papers due: December 9

Seminar Report Guidelines

Students have the option to substitute attendance to four of the Department of Economics or Department of Finance Research Seminar series during the semester. The seminars are generally held on Friday afternoons in the Friday Building. Students who choose this option are required to complete a separate Seminar Report for each seminar attended, available at the class moodle site. The seminar report must be turned in the FIRST class meeting AFTER the seminar. Students who cannot attend these seminars can substitute a term paper for this portion of the course.

Term Paper Guidelines

Students have the option of writing a short term paper involving econometric analysis. The paper is an opportunity to apply the econometric tools learned in class to a real-world issue chosen by the student. I recommend that you choose a topic in which you are interested but also with a narrow focus. A narrow focus increases the probability that the project will both be completed by semester's end and be of sufficient quality. If you have trouble choosing a paper topic, I can offer suggestions.
I recommend you begin thinking about this project as soon as possible and to avoid putting off writing the paper until the last few days of class. A good strategy is to talk to me about your project early in the semester, to keep in contact with me concerning your data and estimations, and to have me review a rough draft before the final draft is submitted.

The final version of the term paper is due at the beginning of the final exam period. There are a few guidelines that you must follow:

- Papers should be at least 10 double-spaced, single-sided pages printed no greater than 12 font;

- Papers should be generally structured in the following manner:
  - Introduction of the economic/econometric problem
  - Brief review of previous literature dealing with your problem
  - Introduction of your econometric model and data including data source(s)
  - Review and interpretation of your estimation results
  - Concluding remarks
  - Reference list
  - Econometric Results in tabular form
  - Figures

- You must provide an electronic form of your data, programs, program output and paper. If I do not receive all required files, you will receive a zero on the term paper.

- Term papers are graded as follows
  - 20 points – appropriate specification of research question
  - 20 points – appropriate data and description
  - 20 points – appropriate methodology and description
  - 20 points – appropriate interpretation and discussion of results
  - 20 points – overall paper structure (including grammar)

Plagiarism: I will not hesitate to initiate academic dishonesty proceedings against anyone who plagiarizes.