BPHD 8130-001: Econometrics II
Spring 2014
Friday 207
Monday and Wednesday 11:00AM-12:15PM

Instructor: Dr. Jennifer Troyer
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Email: jtroyer@uncc.edu
Web Site: There is a Moodle page for this course, accessible through 49er Express. Materials will be posted to the website as the semester progresses.

Office Hours: Monday and Wednesday from 12:15PM-1:45PM in Friday 211B or by appointment

Text: The lectures will be based material from three texts and several articles. Readings for each class period are noted on the syllabus below, and information about additional articles will be given as the semester progresses.

   For Stata programs corresponding to examples in Wooldridge (1st edition) see:
   [http://www.ats.ucla.edu/stat/stata/examples/eacsprd/default.htm](http://www.ats.ucla.edu/stat/stata/examples/eacsprd/default.htm)
   For Stata data corresponding to examples in Wooldridge (1st edition) see:

   For Stata programs and data corresponding to examples in Stock and Watson see:


Software: I will support Stata for use in econometric estimation in this course, but you are welcome to use other software for estimation. Stata is available in the public student computer labs in the Friday building. You may purchase Stata at a reduced rate through the Direct-ship GradPlan for UNC-Chapel Hill. Follow this link for more information:
In addition, the following text may be very helpful as you learn Stata: Cameron, A. Colin and Pravin K Trivedi, (2009).
[Microeconometrics Using Stata](http://www.amazon.com/Microeconometrics-Using-Stata-Colin-Cameron/dp/1597180483)

Course Description and Objectives: Prerequisite: BPHD 8120. Advanced course in cross section and panel data methods. The focus is on underlying assumptions regarding the population, specification, estimation, and testing of microeconomic models. Students will become acquainted with a variety of extensions of conventional linear models for cross-sectional and panel data, including panel data models, instrumental variables models, simultaneous equations models, qualitative response models, and hazard models.
**Grading:** Your course grade will be determined by your performance on two in-class exams, a series of problem sets, and an empirical paper. These components, discussed below, will have the following weight in the calculation of your final grade:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Midterm Exam</td>
<td>35%</td>
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<tr>
<td>Final Exam</td>
<td>35%</td>
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<tr>
<td>Problem Sets</td>
<td>10%</td>
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<tr>
<td>Empirical Paper</td>
<td>20%</td>
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**Exams:** Makeup tests are administered only for extreme situations such as illness, death in the family, etc.

**Problem Sets:** Problem sets will be distributed with at least one week notice of the due date. You may work together on the problem sets. However, any programming statements for the problems involving estimation must be unique to each individual. In other words, do no turn in code with the same naming of variables and comment statements as someone else in the class. These problem sets may not be made up. *Your grade will be discounted by 10 percent of the maximum grade for each day that it is late, with the first deduction taken when the assignment is not handed in by the end of class on the due date. Assignments not handed in by the class in which the problem set is returned will receive a grade of zero.*

**Empirical Paper:** The objective of the empirical paper is for the student to conceptualize, conduct, and communicate research using one of the techniques covered in this course. Following are the parameters for the paper:

1. The topic of the empirical paper may be of your choosing, but the paper must be solely written for this course. You should do a literature search to ensure that no one has conducted the exact empirical study that you are planning to do. In addition, I strongly suggest that you choose a topic that is consistent with your field of study.
2. The paper must use techniques developed in this course and must use cross section or panel data (not time series data). You are encouraged to use a technique besides OLS for your paper.
3. You will be graded on your ability to present your ideas and findings in a written manner and on the appropriate application of the empirical methods used.
4. Prior to April 2, you should meet with me to discuss your paper idea. Please email me if you would like set up a time to discuss your idea outside of regular office hours. This is a required meeting.
5. On April 2, you must provide to me a written summary of your topic and source of data. If you would like to provide more detail regarding the paper, I will give you feedback.
6. Students must participate in the peer review of papers by submitting a draft of your paper to Moodle by April 21. Each student will be assigned two papers to review electronically and peer evaluations will be due on April 28. I will not use your peer’s evaluation of your paper in assessing your paper’s final grade. However, part of your final grade will depend on your participation in the peer evaluation process.
7. The final paper should be limited to no more than eight pages double-spaced pages, using a 12 point font, of text plus an additional two pages for tables. I will not read more than eight pages of text. While eight pages may sound short, I will not require a theoretical
section or literature review, both of which are relatively lengthy and fundamental sections of most published academic papers. I will also not require a conclusion section in which you would generally discuss extensions for future work. I suggest the following structure:

a. Introduction (1 page): This is the section in which you clearly define the question that your paper will address and why we should care about this topic.

b. Empirical Model (2 pages): This section provides a formal presentation of the statistical model, including an equation or equations written in basic notation, a discussion of the properties of the variables used in estimation, and a statement about the error structure. You should also clearly indicate key hypotheses and your approach to testing them. Please write the key structure of the model in generic terms (Y, X, Z, etc.) using very simple notation (for example, $P_{it}$ to indicate the performance of firm $i$ year $t$).

c. Data (2 pages): You should describe the data source and variables used in the analysis. You should also note where your data may not be ideal but can be accommodated given specific econometric techniques. Be sure to fully disclose how you arrived at the sample used for estimation.

d. Results (3 pages): All tables (tables may be single spaced) of results should be self explanatory, not requiring the reader to look up acronyms or abbreviated variable names. I suggest that you peruse some academic journals with empirical papers, such as Review of Economics and Statistics, Journal of Finance, or Journal of Public Economics, to get a sense of the appropriate format for tables. Note that the tables do not just look like tables of output from Stata. In the discussion of empirical results, it is common to discuss model fit, the extent to which signs and magnitudes match hypotheses, and any remaining specification issues.

8. You should provide an electronic version of the final paper by uploading it to Moodle by May 8.

9. There will be a penalty for late submissions of the draft, final paper, and peer reviews.

**Grading Scale:** Letter grades will be based on the following scale (in percentage terms):

- **A** 90 and above
- **B** 80-89.99
- **C** 70-79.99
- **U** Below 70

**Communication:** Communication with those outside of class while class is in progress is not acceptable. (In other words, turn off all communication devices prior to the start of class.) Students are expected to check their UNC Charlotte e-mail ([username@uncc.edu](mailto:username@uncc.edu)) accounts weekly for correspondence regarding the course.

**Statement on Diversity:** The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.
Attendance: Classroom attendance is strongly recommended. I expect you to be in class on time and stay for the duration. If you do not plan to attend the entire lecture, please see me in advance or refrain from coming to class.

Academic Integrity: 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 submission of academic work, plagiarism, abuse of academic materials, and complicity in academic dishonesty. Academic evaluations in this course include a judgment that the student’s 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 U. 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. In addition, the following rule regarding conduct applies:

Some test and homework questions from previous semesters may be used in this class. Reviewing materials from previous classes taught by Dr. Troyer is considered academic misconduct.

Proposed Course Outline: While there are no guarantees on how well I will be able to follow this outline, it should give you some idea of the material that I intend to cover and of the intended rate of progress. Keeping up with deviations from the outline is your responsibility.

1/8, 1/13 Introduction, Conditional Expectations, and Related Material (Wooldridge 1, 2)

1/15 Basic Asymptotic Theory (Wooldridge 3; Greene Appendix D; Stock and Watson 2.6, 17.2, 17.3)

1/20 MLK Day (No class)

1/22, 1/27, 1/29, 2/3 Single Equation Linear Model and OLS Estimation Review (Wooldridge 4; Greene 2, 3, 4, 5)

2/5, 2/10, 2/12, 2/17, 2/19, 2/24 Instrumental Variables (Wooldridge 5, 6; Greene 12; Stock and Watson 12, 13 (13.7))

2/26 Mid Term Exam

3/3, 3/5 Spring Break (No class)

3/10, 3/12, 3/17, 3/19, 3/24 Systems of Equations and Simultaneous Equations Models (Wooldridge 7, 8, 9; Greene 13; Stock and Watson 12)

3/26, 3/31, 4/2 Panel Data (Wooldridge 7, 10; Greene 9; Stock and Watson 10)
4/2  Empirical Project Topic and Data Information Due

4/7, 4/9, 4/14  Estimation by Maximum Likelihood, Discrete Response Models (Wooldridge 13, 15; Greene 15, 16, 23; Stock and Watson 11, 18.7)

4/16, 4/21, 4/23  Estimating Average Treatment Effects and Sample Selection and Attrition (Wooldridge 19, 21; Greene 24)

4/21  Draft of Paper Due for Peer Review

4/28  Duration Analysis (Wooldridge 22; Greene 19) and Peer Reviews Due

5/5  Final Exam 11:00 AM - 1:30 PM

5/8  Final Paper Due by midnight (12:00AM)