ECONOMICS 6112-U90: Graduate Econometrics  
Spring 2018  
Tuesday 6:30-9:15 PM, Room: Friday 383

Instructor: Dr. Lisa Schulkind  
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Office: Friday 227B  
Office Hours: Tuesday 4:30-6:00; Thursday 1:00-2:30

COURSE DESCRIPTION AND OBJECTIVES
This course is designed to introduce students to the advanced study of econometric theory as well as its application to economic problems. Topics include the derivation of least squares estimators, maximum likelihood estimation, instrumental variables and the problems of multicollinearity, heteroskedasticity, and autocorrelation. In addition, emphasis will be placed on applying these concepts using economic data. The primary goal of the class is to provide the tools needed in order to read and contribute to the body of applied economic literature.

REQUIRED TEXTS  

Publisher: Stata Press, ISBN: 9781597180733

RECOMMENDED TEXTS

Stock and Watson, Introduction to Econometrics, any edition.  
Publisher: Addison-Wesley

SOFTWARE
This course will require the use of the statistical program Stata. You are welcome to use a different statistical program in its place, but I will only answer questions about Stata. It is available in the public computer labs in the Friday building and on Citrix. You might also want to purchase your own copy of Stata/IC, available at a reduced price from: http://www.stata.com/order/new/edu/gradplans/
**GRADING**

10% - Problem Sets  
15% - Replication Project  
75% - Exams

**Problem Sets:** I will assign a problem set for each topic that will consist mostly of questions from the text. They will be posted on Moodle, and are intended to provide opportunities to practice using the information learned in class and in the readings. You must hand in your own assignment, but you are encouraged to work through the problems with your classmates. They will be graded as ✓ (put significant effort into all questions, according to my subjective evaluation), ✓- (put significant effort into at least half of the questions) and 0 (significant effort not displayed or didn't hand in). **Due dates will be announced in class and posted on Moodle.** Late assignments can receive a maximum grade of ✓-. No exceptions. Answer keys will be posted and students are encouraged to attend office hours to ask questions.

**Replication Project:** You will be asked to replicate many of the main findings from a published, peer-reviewed paper. This project is designed to give you a chance to practice applying the theory from class using Stata. The project will be handed in in three stages, and more details about what is expected in each stage will be given in class and on Moodle. You may work in groups of 1-3 students, but may NOT consult with anyone other than your group members and myself. You may use Stata resources available on the web, but MAY NOT use anything you may find that is directly related to replicating the paper or contact the author(s) of the paper. Late assignments will lose a full letter grade each day that they are late, with an assignment counting as late at 6:31 pm on the due date.

**Exams:** There will be three exams given throughout the semester: two during the semester and one during finals week. Each exam will count for 25% of your final grade.

**COURSE OUTLINE**
This is meant as a rough guide. Exam dates will not change without advanced notice, but we might cover topics slightly slower or faster than expected. Any changes will be announced in class. Any additional course readings will be posted on Moodle.

Topic 1: Introduction to Course and Stata and Review of Calculus, Matrix Algebra and Basic Statistical Concepts
   Approximate Classes: 1/9, 1/16, 1/23
   GP: Introduction, Chapters 1 and Appendices A & B
   CT: Chapters 1 & 2
   SW: Chapters 1, 2 & 3

Topic 2: Two Variable Regression Analysis
   Approximate Classes: 1/30, 2/6 (before Midterm 1); 2/20 (after Midterm 1)
   GP: Chapters 2, 3, 4 (including appendix 4A) & 5
   CT: Chapter 3

**Midterm #1: Monday 2/13**

Topic 3: Multiple Regression Analysis: The Problem of Estimation/Inference
   Approximate Dates: 2/27
   GP: Chapters 7 & 8

Topic 4: Multiple Regression Analysis: Dummy Variables and Nonlinear Models
   Approximate Dates: 3/13
   GP: Chapters 6, 9 & 14

Topic 5: Relaxing the Assumptions of the Classical Model: Multicollinearity, Heteroskedasticity and Autocorrelation
   Approximate Dates: 3/20, 3/27
   GP: Chapters 10, 11 & 12

**Midterm #2: Monday 4/3**

Topic 6: Model Specification and Diagnostic Testing
   Approximate Dates: 4/10
   GP: Chapter 13

Topic 7: Panel Data Regression Models
Approximate Dates: 4/17
GP: Chapter 16
CT: Chapter 8

Topic 8: Instrumental Variable Models
Approximate Dates: 4/24, 5/1
GP: Chapters 18, 19 & 20
CT: Chapter 6
SW: Chapter 12

Final Exam: Monday 5/8 from 8:00-10:30pm

IMPORTANT DATES

Note: Due dates may be adjusted if we cover material faster or slower than expected.

Tuesday February 13 – Midterm #1 in class
Tuesday March 6 – No Class (Spring Recess)
Tuesday March 13 6:30 PM – Replication Part #1 Due on Canvas
Tuesday April 3 – Midterm #2 in class
Tuesday April 10 6:30 PM – Replication Part #2 Due on Canvas
Tuesday May 8 8:00 PM – Final Exam in class
Thursday May 10 6:30 PM – Replication Part #3 Due on Canvas

CLASS POLICIES
Academic Integrity: I will not tolerate intellectual dishonesty. All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Definitions and examples of plagiarism are set forth in the Code. The Code is available from the Dean of Students Office or online at http://legal.uncc.edu/policies/up-407.

Accommodation Policy: If you have a disability that qualifies you for academic accommodations, please provide a letter of accommodation from Disability Services in the beginning of the semester. For more information regarding accommodations, please contact the Office of Disability Services at 704-687-0040 or stop by their office in Fretwell 230.

Exam Policy: There will not be any regularly scheduled makeup exams. If you cannot be there on exam days, do not take this class. If you miss an exam for any reason, you must contact me prior to the examination time or as soon as you are reasonably able to do so and we will discuss the possibility of a makeup exam or alternative grade weighting. These options will be provided at my discretion, and only in the case of a documented serious illness or family emergency.

Re-grade Policy: If you would like your exam re-graded, you must submit a re-grade request, in writing, within one week of receiving your graded exam. Your request should point out the question(s) where you think you deserve additional credit, along with an explanation. Please note that your entire exam will be reviewed, and your final score may go up or down.
“No Screen”: While in class, I expect you to follow my “no screen” policy. I do not want to see any cell phones. Leave them in your backpack/purse/pocket (with the sound turned off) during class. Laptops/Tablets are **strongly** discouraged. They will not be very helpful for note taking, as much of the class will require writing equations, graphs, etc. If you absolutely must use one, please talk to me about it in person.

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.