

ECON 6112  
Graduate Econometrics  
Fall 2017

Instructor: Dr. Craig A. Depken II  
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Class Room: Center City Building 906  
Phone: 704.687.7484  
Office Hours: T, Th 1-3PM and by appointment  
Web Page: www.belkcollege.uncc.edu/cdepken  
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 Stata. 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. Stata 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 on Canvas.
**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:** Students are expected to attend every class and remain in class for the duration of the session. Failure to attend class or arriving late may impact your ability to achieve course objectives which could affect your course grade. An absence, excused or unexcused, does not relieve a student of any course requirement. Regular class attendance is a student’s obligation, as is a responsibility for all the work of class meetings, including tests and written tasks. Any unexcused absence or excessive tardiness may result in a loss of participation points.

Class Absence(s): The authority to excuse a student’s class absence(s) and to grant a student an academic accommodation (turn in a late assignment(s), provide extra time on an assignment, reschedule an exam(s) etc.) sits with the individual instructor. Students are encouraged to work directly with their instructors regarding their absence(s). Note: The Dean of Students Office can assist faculty members in the verification a student’s class absence(s) for documented situation related to medical, psychological, personal crisis, or military absences.

If you miss class, you should NOT ask me for a complete recap of what you missed. It is your responsibility to get this information from one of your classmates.

**Academic Honesty:** 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.

**To encourage orderly and productive classroom conduct:** I will conduct this class in an atmosphere of mutual respect. I encourage your active participation in class discussions. Each of us may have strongly differing opinions on the various topics of class discussions. The conflict of ideas is encouraged and welcome. The orderly questioning
of the ideas of others, including mine, is similarly welcome. However, I will exercise my responsibility to manage the discussions so that ideas and argument can proceed in an orderly fashion. You should expect that if your conduct during class discussions seriously disrupts the atmosphere of mutual respect I expect in this class, you will not be permitted to participate further.

**Policy on the instructor’s absence or tardiness:** If I am late in arriving to class, you must wait a full 20 minutes after the start of class before you may leave without being counted absent, or you must follow any written instructions I may give you about my anticipated tardiness.

**Non-discrimination in the classroom:** All students and the instructor are expected to engage with each other respectfully. Unwelcome conduct directed toward another person based upon that person’s actual or perceived race, actual or perceived gender, color, religion, age, national origin, ethnicity, disability, or veteran status, or for any other reason, may constitute a violation of University Policy 406, The Code of Student Responsibility. Any student suspected of engaging in such conduct will be referred to the Office of Student Conduct.

**Belk College 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 create diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

**Academic integrity violations, including plagiarism:** 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](#).

Faculty may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.

**Title IX reporting obligations re: incidents of sexual harassment, sexual assault, dating violence, domestic violence, or stalking:** UNC Charlotte is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or expects any of these incidents, know that you are not alone. UNC Charlotte has staff trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

Please be aware that many UNC Charlotte employees, including all faculty members, are considered Responsible Employees who are required to relay any information or reports of sexual misconduct they receive to the Title IX Coordinator. This means that if you tell me about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, I must report the information to the Title IX Coordinator. Although I have to report the situation, you will still have options about how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need.

If you wish to speak to someone confidentially, you can contact any of the following on-campus resources, who are not required to report the incident to the Title IX Coordinator: (1) University Counseling Center ([counselingcenter.uncc.edu](http://counselingcenter.uncc.edu), 7-0311); (2) Student Health Center ([studenthealth.uncc.edu](http://studenthealth.uncc.edu), 7-7400); or (3) Center for Wellness Promotion ([wellness.uncc.edu](http://wellness.uncc.edu), 7-7407). Additional information about your options is also available at [titleix.uncc.edu](http://titleix.uncc.edu) under the “Students” tab.

**Recording in the classroom:** Electronic video and/or audio recording is not permitted during class unless the student obtains permission from the instructor. If permission is granted, any distribution of the recording is prohibited. Students with specific electronic recording accommodations authorized by the Office of Disability Services do not require instructor permission; however, the instructor must be notified of any such accommodation prior to recording. Any distribution of such recordings is prohibited.
Course Outline (Subject to Change)

1. Introductory Comments (Chapter 1)
2. Statistics Review (Appendix A)
3. Simple Regression Model (Chapters 2 and 3)
4. Matrix Algebra Review
5. Classical Regression Model (Chapters 7 and 8, Appendix B and Appendix C)
6. Hypothesis Testing (Chapters 5 and 8)
7. Functional Forms and Dummy Variables (Chapters 6 and 9)
8. Possible Problems in Regression (Chapters 10 and 13)
9. Generalized Least Squares (Handouts)
10. Problems with Standard Errors (Chapters 11 and 12)
11. Robust Standard Errors (Chapters 11 and 12)
12. Introduction to Time Series Analysis (Chapters 21 and 22)
13. Bad Data and What to Do (Handouts)

Important class dates:

- Classes begin: August 21
- First class: August 22
- Labor Day Holiday: September 4
- Fall Break: October 9-10 (No Class)
- Thanksgiving Break: November 22 - November 24
- Classes end: December 6
- Last Class: Tuesday, December 5
- Midterm Exam: Tuesday, October 17
- Final Exam: Tuesday, December 11 (5:30 PM)
- Term papers due: December 8

Seminar Report Guidelines

Students have the option to substitute attendance to five of the Department of Economics or Department of Finance Research Seminar series during the semester in place of a term paper. The seminars are generally held on Friday in the Friday Building on main campus. Students who choose this option are required to complete a separate Seminar Report for each seminar attended, available at the class Canvas 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.