BPHD 8120: ECONOMETRICS I
Syllabus for Fall 2019
9:05 a.m. – 11:50 a.m. M
Friday 207

Instructor
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Office Hours
1:30 p.m. – 2:15 p.m. M
9:30 a.m. – 10:15 a.m. W
4:00 p.m. – 5:30 p.m. MW
If the hours established are not convenient, feel free to make an appointment with me for another
time or to stop by at another time when I am in the office.

Course Objectives
The objectives of this course are for you to master basic econometric concepts and apply these
concepts to research questions in Economics and Finance.

Textbooks and Other Resources
There are three textbooks that are required for this course:


There are other introductory or specialized econometrics textbooks that you may find useful:


**Software**

I will support STATA for the econometric analyses that you will be doing in this course. You are free to use other software, but I may not be able to help you if you have any trouble completing assignments with other software. STATA is available on all Belk College computers. You can purchase STATA at a reduced rate through the STATA website ([http://www.stata.com/order/new/edu/gradplans/student-pricing/](http://www.stata.com/order/new/edu/gradplans/student-pricing/)). The STATA/IC version is
sufficient for the problem sets that you will be assigned in this course and in BPHD 8130 (Econometrics II). If you expect to work with large datasets in your research, then you may want to consider the STATA/SE version. The websites http://data.princeton.edu/stata/, http://www.ats.ucla.edu/stat/stata/, and https://www.ssc.wisc.edu/sscc/pubs/sfr-intro.htm have a number of examples and other resources that you may find helpful as you work with STATA.

Means of Student Evaluation
Grades will be determined by your performance on 5 problem sets (10% each), a mid-term examination (20%), and a final examination (30%). Letter grades for the course will be based on the following scale: A, 90%-100%; B, 80%-89.99%; C, 70%-79.99%; U, below 70%.

NOTE WELL: Grades will be based solely on your performance on the problem sets, the mid-term examination, and the final examination. Individual extra credit assignments will NOT be made.

Problem Sets
Problem sets must be typed and must be submitted by email on the assigned due date. A problem set may be submitted after the due date, but there will be a penalty of one letter grade for each day that the submission is late. Once a problem set has been graded and returned, or once the solutions to a problem set have been distributed, no late submission will be accepted, and a grade of zero will be assigned. Problem sets are due on September 16, September 30, October 28, November 18, and December 2.

Mid-Term and Final Examinations
The mid-term examination will be given in class on October 14, and the final examination will be given in the 8:00 a.m. – 10:30 a.m. time slot on December 9.

Academic Integrity
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. Please be aware that faculty may ask students to produce identification at examinations and that faculty may require students to demonstrate that assignments completed outside of class are their own work.

Disability Accommodations
UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please provide a letter of accommodation from the Office of Disability Services early in the semester. For more information about accommodations, you may contact the Office of Disability Services at 704-687-0040 or visit the Office of Disability Services itself in Fretwell 230.

Revision of Syllabus during Semester
The standards and requirements set forth in this syllabus may be modified at any time by the course instructor. Notice of such changes will be by announcement in class and by email.
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 affect your ability to achieve course objectives, which could affect your course grade. An absence—whether 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 done during class meetings. If you do have to miss a class, you should NOT ask me to go over with you the lecture material that you missed. It is your responsibility to get this information from one of your classmates.

Instructor Absence or Tardiness
If I am late in arriving to class, you must wait a full 30 minutes after the start of class before you may leave without being counted absent, or you must follow any written instructions that I give you about my expected tardiness.

Computer Use in the Classroom
Students are permitted to use computers during class only for taking notes and for doing other class-related work. Those using computers during class for work that is not related to this class must leave the classroom for the remainder of the class period.

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, but the instructor must be notified of any such accommodation prior to recording. Any distribution of such recordings is prohibited.

Belk College of Business Diversity Statement
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.

Outline of Topics and Reading Assignments
I assume that you have a working knowledge of calculus, matrix algebra, and statistics. The material that you need for this course is covered in Math Refreshers A, B, and C of Wooldridge (2020), Advanced Treatment D of Wooldridge (2020), Chapters 2 and 3 of Stock and Watson (2019), and Appendices A and B of Verbeek (2017). If this is your first course in econometrics, see Chapter 1 of Verbeek (2017), Chapter 1 of Wooldridge (2020), and Chapter 1 of Stock and Watson (2019) for introductions to the subject.

I. Linear Regression with One Regressor
   Wooldridge (2020), Chapter 2, pp. 20-36 & pp. 40-51
   Stock and Watson (2019), Chapter 4, pp. 102-114
II. Linear Regression with One Regressor: Additional Topics
   Wooldridge (2020), Chapter 2, pp. 36-40 & pp. 51-56
III. Linear Regression with Multiple Regressors: Introduction  
Stock and Watson (2019), Chapter 6, pp. 175-183

IV. Linear Regression with Multiple Regressors: Matrix Formulation  
Verbeek (2017), Chapter 2  
Wooldridge (2020), Chapter 3, pp. 89-92  
Wooldridge (2020), Chapter 5  
Stock and Watson (2019), Chapter 4, pp. 114-122  
Stock and Watson (2019), Chapter 6, pp. 183-192

V. Linear Regression with Multiple Regressors: Additional Topics  
Verbeek (2017), Chapter 3  
Wooldridge (2020), Chapter 6  
Stock and Watson (2019), Chapter 6, pp. 169-174

VI. Regression Analysis with Qualitative Information  
Wooldridge (2020), Chapter 7  
Stock and Watson (2019), Chapter 11, pp. 351-355

VII. Heteroskedasticity  
Verbeek (2017), Chapter 4, Sections 4.1 – 4.5  
Wooldridge (2020), Chapter 8  
Stock and Watson (2019), Chapter 5 & 7

VIII. Autocorrelation  
Verbeek (2017), Chapter 4, Sections 4.6 – 4.11  
Wooldridge (2020), Chapter 11  
Wooldridge (2020), Chapter 12, pp. 395-415

IX. Introduction to Forecasting: Autoregressive and Autoregressive Distributed Lag Models  
Verbeek (2017), Chapter 8, Sections 8.1 – 8.2 & 8.6 – 8.10  
Stock and Watson (2019), Chapter 15, pp. 513-540

X. Introduction to Forecasting: Trends and Breaks  
Verbeek (2017), Chapter 8, Sections 8.3 – 8.5  
Stock and Watson (2019), Chapter 15, pp. 540-554, & Chapter 17, pp. 616-620  
Wooldridge (2020), Chapter 10, pp. 351-360  
Wooldridge (2020), Chapter 18, pp. 610-616 & pp. 622-628

XI. Estimating Dynamic Causal Effects  
Verbeek (2017), Chapter 9, Section 9.1  
Stock and Watson (2019), Chapter 16  
Wooldridge (2020), Chapter 10, pp. 336-338