BPHD 8130
Econometrics II
Spring 2019
Thursday 10:00am – 12:45am
Room: Friday 207

Instructor	Kelly Vosters
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Office:	219C, Friday building
Office Hours:	Thursdays 12:45-2:15pm (main campus) and 4:00-5:30pm (center city); and

by appointment

Textbooks

For this course, I do not require one particular Econometrics textbook, though my lectures will most closely follow Wooldridge (2010) and I have listed the corresponding readings from this text in the Course Outline below. (If you choose a different text, you are responsible for finding the corresponding readings in that book.) You should obtain a copy of at least one of the following graduate level texts (in order of recommendation):

*Wooldridge, Jeffrey. (2010). *Econometric Analysis of Cross Section and Panel Data, 2nd edition*, MIT Press. (Earlier editions are fine.)

Cameron, A.C., and Trivedi, P.K. (2005). *Microeconometrics: Methods and Applications*, Cambridge University Press.

Greene, William. (2012). *Econometric Analysis, 7th Edition*, Prentice Hall. (Earlier editions are fine.)

In general, I find that it is very helpful to see alternative presentations of econometric methods, and therefore also list other texts that may be useful supplementary resources for the course and throughout your career. In particular, the texts above present material at a fairly high (and detailed) level, while those below provide simpler presentations and/or more examples to further develop intuition.

Verbeek, Marno. (2012). *A Guide to Modern Econometrics, 4th edition*. New York, NY: John Wiley and Sons, Inc. (Earlier editions are fine.)

Wooldridge, Jeffrey M. (2016). *Introductory Econometrics: A Modern Approach, 6th Edition*. Mason, OH: South-Western Cengage Learning. (Earlier editions are fine.)

Angrist, J., and Pischke, J. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton U. Press.

Cameron, A.C., and Trivedi, P.K. (2010). *Microeconometrics Using Stata*, Stata Press.

Course website
I will post some course related materials to the course Canvas page, including the syllabus, problem sets, additional readings, and perhaps some lecture notes. However, not all information covered in class will be posted (see attendance policy below).

Course Description and Objectives
Prerequisite: BPHD 8120. This is an advanced course in cross section and panel data methods. The focus is on underlying assumptions regarding the population, specification, estimation, and testing of microeconometric models. Students will become acquainted with a variety of extensions of conventional linear models for cross-sectional and panel data, including panel data methods, instrumental variables methods, simultaneous equations, and qualitative response models.

Software
We will use STATA for this course, which is available on all Belk College computers. If you wish to obtain STATA for your own computer, you can get a discounted student edition:
http://www.stata.com/order/new/edu/gradplans/student-pricing/
(Note: STATA/IC will be sufficient for this course, but you may wish get to the SE version, depending on your anticipated future research needs.)

We may meet in the computer lab once or twice during the semester to learn some of the basics of STATA, but you may also find the following websites helpful, as they provide many examples and other resources:
        http://data.princeton.edu/stata/
        http://www.ats.ucla.edu/stat/stata/
        https://www.ssc.wisc.edu/sscc/pubs/sfr-intro.htm

Attendance
Attendance is strongly encouraged but will not count directly towards the course grade. Students are responsible for all information and materials presented in class. If you must miss a class, you will be responsible for getting notes and any handouts from a classmate.

Grading
Course grades will be based on your performance on two in-class exams, problem sets, and a research paper proposal, with the corresponding weights as shown below. There will NOT be opportunities for extra credit.

Weights for Final Grade Calculation		Scale for Assigning Letter Grades	
Midterm exam	35%	90% - 100%	A
Final exam	35%	80% - 89%	B
Problem Sets	10%	70% - 79%	C
Paper Proposal	20%	Below 70%	U

Re-grading: If you would like your exam re-graded, you must submit a re-grade request in writing within 1 week from when the graded exams are passed back in class (if you miss this class, your deadline is not extended). Your request must clearly note *where* and *why* you think you deserve additional points. Please note that your entire exam will be re-graded, so your final score may go up or down.

In-Class Presentations and Participation:
Students are expected to participate actively in class and complete readings before the appropriate class. For certain classes, we will focus the discussion on one or two papers, and I may ask students to present material (i.e., lead the class) in a discussion of these.

Problem Sets
I will assign a few problem sets during the semester. You may work together on the problem sets but programming statements (including variable names) and write-ups of your answers must be unique to each individual. Students will be given at least one week to work on them. No late problem sets will be accepted.

Exams
The exam dates are given below. Missed exams will be given a grade of zero. The only exceptions are decided at the discretion of the instructor and will require sufficient advance notice along with adequate written documentation.

Midterm exam:	**Thursday, February 28 (in class)**
Final exam:	**Thursday, May 9 from 8:00am – 10:30am**

Course Outline (subject to change)
The course outline is intended to give you an idea of the material we will cover, but this may change as the semester goes on. Keeping up with deviations from the outline is your responsibility.

Topic	Reading (Wooldridge, 2010)
Introduction, conditional expectations, and related material	Ch. 1, 2
Basic Asymptotic Theory	Ch. 3
Single Equation Linear Model and OLS Estimation Review	Ch. 4
Instrumental Variables	Ch. 5, 6
Systems of Equations and Simultaneous Equations Models	Ch. 7, 8, 9
Panel Data Methods	Ch. 7, 10
Maximum Likelihood, Binary Response Models	Ch. 13, 15
Average Treatment Effects, Sample Selection, Attrition	Ch. 19, 21
Duration Analysis (if time)	Ch. 22

Economics and Finance Seminar Series
Attending these workshops is strongly recommended. Nothing will help you develop as an empirical researcher as much as participating in (or even observing) a discussion of current research. The schedule is available under the Workshops link on the Economics Department website (https://belkcollegeofbusiness.uncc.edu/economicsseminar/) as well as the Finance Department website (https://belkcollegeofbusiness.uncc.edu/ichiang1/seminars/).

Paper proposal
Students are expected to write a high-quality research proposal that will hopefully lead to dissertation research and/or a publishable paper. This will involve finding a research question, conducting a literature review, identifying the contribution of your question to the literature, identifying data and specifying an econometric approach that will allow you to answer the question using this data.

Students are required to arrange to meet with me (during office hours or otherwise) when ready to discuss a topic (prior to March 28). Brief (1-page) outlines of proposals are due on <u>March 28</u> via Canvas. You must submit the final paper proposal paper via Canvas no later than <u>May 2</u>. No late papers will be accepted.

Requirements for the paper proposal:
1. The <u>topic</u> 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.
2. You must use <u>techniques</u> covered 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 <u>graded</u> on your ability to clearly present your question, identify your contribution to the literature, and discuss your empirical methods (including strengths/weaknesses).
4. The <u>final paper</u> should be limited to no more than eight pages double-spaced pages, using a 12 point font, of text plus up to two additional two pages for tables if necessary. I will not read more than eight pages of text.
5. <u>Organization</u> of your paper (using the following headings for each section):
    a. *Introduction*: Clearly define the question that your paper will address and why we should care about this topic.
    b. *Literature*: This section should very <u>briefly</u> describe the relevant literature and very clearly state what your contribution to the literature is.
    c. *Empirical Approach*: This section provides a formal presentation of the methods you will use, 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 state key hypotheses and your approach to testing them. Please write the model in generic terms (Y, X, Z, etc.) using very simple notation.
    d. *Data*: You should describe the data source and variables you will need for your analysis. You should also note if/how your data may not be ideal but can be accommodated given specific econometric techniques.

Course Policies

Email communication: Email is the best way to reach me outside of office hours or class time. I will try to respond to your email in a timely manner (within 24 hours), but an immediate response is not guaranteed. Please use appropriate email etiquette in any communication (e.g., include salutation, signature (name), and no abbreviations). For guidance on email etiquette, see https://owl.english.purdue.edu/owl/resource/636/1/

Punctuality: I expect you to be on time for class, to complete assignments in a timely manner, and to take exams when scheduled. I will end on time but please do not start packing up until the class is completely done. If you know that you need to leave early, please inform me and sit as close to the door as possible to minimize disruptions.

Learning environment: Please be respectful to your classmates and turn off the ringer on your cell phone and refrain from texting or any other non-coursework related use of your phones, tables, or laptops during class.

Life happens: If you become seriously ill, experience the death of a loved one or have a life altering experience (e.g., divorce) that is negatively influencing your participation in our class, please contact me as soon as possible so we can discuss your options. If emergencies arise that require an absence from class, be sure to get the notes and other information that was covered in class from a student you trust. See more on student support services below.

Do your own work! While I have no problem with you working with your classmates to understand the material, please do not turn in answers that are identical (or nearly identical) to anyone else's. See more information on academic (dis)honesty below.

Other Important Reminders

The above is subject to change. The course information outlined in this syllabus may be modified at any time, depending on how the course progresses; any such changes will be clearly communicated by announcements in class and via email.

Academic Honesty. 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.

Accommodations for Disabilities. UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please send me your accommodation letter as early as possible. You are encouraged to meet with me to discuss the accommodations outlined in your letter. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 (Fretwell 230).

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.

Student Support Services: UNC Charlotte has staff members 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. These helpful resources include: (1) University Counseling Center (counselingcenter.uncc.edu, 7-0311); (2) Student Health Center (studenthealth.uncc.edu, 7-7400); or (3) Center for Wellness Promotion (wellness.uncc.edu, 7-7407).

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. 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 above mentioned on-campus resources, who are not required to report the incident to the Title IX Coordinator. Additional information about your options is also available at titleix.uncc.edu under the "Students" tab.