ECON 743: Applied Microeconometric Methods (Class Number 80369)

Fall 2019

Course Information

Class Meets: Tuesdays and Thursdays from 4:30pm-5:45pm in AB 210. We will also meet during our final class meeting time on Thursday, 12/12, from 4:50pm-6:50pm in the same room for presentations of term papers.

Instructor Information:

Instructor: Frank Fossen.
Office: Ansari Business Building 318B.
Phone: 775-682-9131.
Email: ffossen@unr.edu.
Website

Office Hours: I will hold office hours Tuesdays and Thursdays from 9:15am-10:15am. You do not need to make an appointment to stop by, and office hours are a great opportunity for you to clarify any material you did not fully grasp in class. This also helps me to learn what material needs more clarification in general.

Course Description:

Further instruction on statistical techniques and research tools used in empirical microeconomic analysis. Topics include instrumental variables, non-linear models, dynamic panel models, programming for statistical analysis software and technical writing in markup languages.

Course Pre/Co-requisites:

Prerequisite(s): Econ 741.

Required texts, course materials:

Course materials and announcements will be provided on WebCampus.
Recommended textbooks:

- Angrist, J.D. and J.-S. Pischke (2009): Mostly Harmless Econometrics–An Empiricist's Companion, Princeton University Press.
- Greene, W.H. (2017): Econometric Analysis, 8th edition, Pearson.
- Cameron, C.A. and P.K. Trivedi (2005): Microeconometrics–Methods and Applications, Cambridge University Press.
- Cameron, C.A. and P.K. Trivedi (2010): Microeconometrics Using Stata: Revised Ed., Stata Press.

Recommended to review and refresh introductory applied econometrics:

- Wooldridge, J.M. (2019): Introductory Econometrics–A Modern Approach, 7th edition, South-Western College Pub.

Student Learning Outcomes:

Upon completion of this course:

- Students will be able to apply advanced programming and to work with markup languages to analyze economic problems.
- Students will master working with Instrumental Variables and the Generalized Method of Moments and demonstrate their knowledge of such issues as local average treatment effects and partial identification.
- Students will be able to successfully use a number of maximum likelihood estimators, including discrete choice models.

Course Requirements:

Attendance and Classroom Atmosphere: This is an interactive course. Students are strongly encouraged to participate actively in class.

Grades: Your course grade will be based on a short original empirical research paper that you will write and present in various stages for this course, three homework assignments involving programming, a report on and presentation of a research paper by another author, and your participation in the class:

- Short Paper (40%)
  - Proposal (5%)
  - Outline (10%)
  - Presentation of Outline (4%)
  - Final Draft (15%)
  - Presentation of Final Draft (6%)
- Three Homework Assignments (39% in total, 13% each)
- Report on and Presentation of a Paper by another Author (11%)
  - Report (7%)
  - Presentation (4%)
- Participation (10%)

Short Paper: The idea of working on a short empirical paper (using applied microeconometrics) is to help you make significant progress on a research paper. There will be three steps in this process throughout the term. The paper that will be due at the end of the term will be a "note" format paper of up to 3000 words. You are required to use LaTeX for the paper, which will be covered in class.

(1) The first task will be to prepare a 500 words *proposal* of an idea for the paper. This proposal should clearly explain the research question, explain why the question is important, and how it will be answered. This does not need to be in LaTeX. We will discuss each of your proposals in class.

(2) The second task will be to prepare an *outline* (up to 1500 words) and 7 slides for presentation as a basis for discussion in class. Use 6 numbered sections: The introduction section is where you will present and sell the idea; the literature review section is where you will (concisely) place the contribution of the paper into the literature; the data section describes the data you are using (and accompanying issues); the methods section describes how you will arrive at your results; the results

section presents your results; the conclusion section concludes. Remember, this is to be a 1500 words draft, so you need each section to be very concise. I expect the results and conclusions sections to be incomplete at this stage. The introduction and literature review sections should be very far along, and it should be clear what you are going to do, even if you have not already done it, from the data and methods sections. This version of the paper will include a full title page, bibliography with at least two references, and at least one figure or table. You will also turn in your slides, which will include a title slide along with 6 slides that present each section. Both the written outline and the slides must be produced using LaTeX. You will walk through the slides during one class meeting and we will discuss each paper as a group.

(3) The third task is to complete the *final draft* (up to 3000 words), using the same structure as in the outline, and to present your full paper in class. Again, both your written paper and slides (these may be more than 7 slides now) must be produced using LaTeX.

Homework Assignments: There will be three individual homework assignments throughout the term that will involve programming and data analysis. You may work on and turn in your solutions together in groups of no more than two students.

Report on and Presentation of Paper: You will be assigned a paper written by another author to write a referee report on and then to present.

Participation: Your participation grade will be based on your class attendance and your contributions to class discussions. The grade will be given at the end of the term, but please ask me for intermediate feedback during my office hours.

Grading Criteria, Scale, and Standards:

I will use +/- letter grades. The list below describes the maximum overall average percentage in the class needed for each letter grade. I will not curve any individual items, but this scale may be adjusted at the end of the semester to make it more generous at my discretion.

A: 93% - 100%
A-: 90% - 92.9%
B+: 87% - 89.9%
B: 84% - 86.9%
B-: 80% - 83.9%
C+: 77% - 79.9%
C: 74% - 76.9%
C-: 70% - 73.9%
D+: 67% - 69.9%
D: 64% - 66.9%
D-: 60% - 63.9%
F: <60%

Late Work Policy:

Homework assignments are due by midnight on the assigned date. A 10% penalty will be imposed for each day that the homework is late before we discuss the homework in class. Homework turned in after the start of the class discussing the homework will not be accepted.

Course Calendar/Topics Outline:

Due dates of graded assignments and presentations:

- Written referee report and presentation: Approx. week 3
- Written proposal: Approx. week 5
- Homework 1: Approx. week 7
- Written outline and presentation: Approx. week 10
- Homework 2: Approx. week 12
- Homework 3: Approx. week 15
- Written final draft and presentation: Approx. week 16

Topics:

- Tools: Stata, LaTeX and Beamer (approx. weeks 1-2)
- Instrumental variables, e.g., local average treatment effects (approx. weeks 3-6)
- Generalized method of moments, e.g., dynamic panel estimators (approx. weeks 7-10)
- Maximum likelihood estimators, e.g., discrete choice analysis (approx. weeks 11-16)

Depending on the preferences of the course participants and the progress we make in class, some topics may be discussed more deeply, some topics may be added, and others may be dropped.

University Policies

Statement on Academic Dishonesty:

"Cheating, plagiarism or otherwise obtaining grades under false pretenses constitute academic dishonesty according to the code of this university. Academic dishonesty will not be tolerated and penalties can include filing a final grade of "F"; reducing the student's final course grade one or two full grade points; awarding a failing mark on the coursework in question; or requiring the student to retake or resubmit the coursework. For more details, see the University of Nevada, Reno General Catalog."

Statement of Disability Services:

"Any student with a disability needing academic adjustments or accommodations is requested to speak with the Disability Resource Center (Pennington Achievement Center Suite 230) as soon as possible to arrange for appropriate accommodations."
This course may leverage 3rd party web/multimedia content, if you experience any issues accessing this content, please notify your instructor.

Statement on Audio and Video Recording:

"Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded."

Statement on Diversity:

"The University of Nevada, Reno is committed to providing a safe learning and work environment for all. If you believe you have experienced discrimination, sexual harassment, sexual assault, domestic/dating violence, or stalking, whether on or off campus, or need information related to immigration concerns, please contact the University's Equal Opportunity & Title IX Office at 775-784-1547. Resources and interim measures are available to assist you. For more information, please visit the Equal Opportunity and Title IX page."

Statement for Academic Success Services:

"Your student fees cover usage of the Math Center (775) 784-4433, Tutoring Center (775) 784-6801, and University Writing Center (775) 784-6030. These centers support your classroom learning; it is your responsibility to take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student."