

ECO 772
Econometrics II
Spring 2017

Time: MW 4:00P-5:15P

Room: CBC C113

Learning Objectives: This is a follow-up to ECO 770 and is designed to extend the student's knowledge base in econometrics. By the end of the course students should be able to apply modeling and econometric skills to address empirical research questions. In particular, students should be able to demonstrate a thorough understanding of limited dependent variable methods, common data issues, instrumental variables, and panel data/time-series methods. In addition, students should be comfortable reading and evaluating applied econometrics papers, as well as performing statistical analyses using Stata.

Prerequisite: Graduate standing, ECO 740, and ECO 770.

Required Textbook: Wooldridge, Jeffrey M. 2015. *Introductory Econometrics*, 6th Edition.

Evaluation: Students will be evaluated through homework assignments (25%), two exams (25% each), and an in-class presentation/write-up (25%). The first exam will be a mid-term. The second exam will be a non-comprehensive exam during the final exam time. Homework assignments may be completed jointly, although each student must turn in homework to receive credit. **Late homework is not accepted, and make-up exams are only possible if approved by myself prior to the exam.**

In addition, during the final week of classes each student will present one applied paper from a list of possible papers. Presentations should be roughly 15-20 minutes. Some potential questions to address:

- What question is the author(s) seeking to answer?
- What econometric method is being used in the paper?
- What data are used?
- What conclusions does the author(s) draw? Do they make sense?

A 5-8 page write-up of the article addressing the same questions as above is also due at the time of the second exam. The write-up should focus particularly on the choice of econometric method given the problem being addressed, the assumptions required for consistent estimates, the interpretation of the results, and any shortcomings of the econometric method. An "excellent" write-up will do more than merely summarize the paper; rather, the write-up will offer some independent assessment of the paper's merits, as well as some suggestions for alternative ways in which the author(s) could have proceeded.

Lastly, lecture notes, problem sets, answer keys, and other relevant information will be posted on the course webpage via WebCampus. Please check it regularly. Finally, I do NOT allow students to do any additional work for extra credit.

Schedule: January 16th, Martin Luther King Jr. Day; February 20th, President's Day; April 10th – April 14th, Spring Break

Relevant University Policies

Academic Misconduct: Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or

any source, without proper citation of the sources. See the *Student Academic Misconduct Policy* (approved December 9, 2005) located at: <https://www.unlv.edu/studentconduct/student-conduct>.

Copyright: The University requires all members of the University Community to be familiar with and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC): The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Religious Holidays Policy: Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor **within** the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or **within** the first 7 calendar days of the course for summer and modular courses, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

Transparency in Learning and Teaching: The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information:

<https://www.unlv.edu/provost/teachingandlearning>

<https://www.unlv.edu/provost/transparency>

Incomplete Grades: The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. Graduate students receiving "I" grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the "I" grade.

Library Resources: Students may consult with a librarian on research needs. For this class, the subject librarian is https://www.library.unlv.edu/contact/librarians_by_subject. UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at <https://www.library.unlv.edu/>.

Tutoring and Coaching: The Academic Success Center (ASC) provides tutoring, academic success coaching and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, visit <http://www.unlv.edu/asc> or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.

UNLV Writing Center: One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>.

Rebelmail: By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. Emailing within WebCampus is acceptable.

Final Examinations: The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: <http://www.unlv.edu/registrar/calendars>.

Syllabus Change Policy: This syllabus is a guide for the course and is subject to change.

Course Outline:

1. Limited Dependent Variable Models (Chapter 17.1-17.4)

- a. Introduction to Maximum Likelihood Estimation
- b. Binary Models (Linear Probability, Logit/Probit)
- c. Censored Regression (Tobit)
- d. Count Models (Poisson)
- e. Qualitative Response Models (Multinomial Logit, Conditional Logit)
- f. Ordered Response Models (Ordered Logit/Probit)

READINGS:

- Talley, W.K., D. Jin, and H. Kite-Powell. (2005). "Determinants of Crew Injuries in Vessel Accidents." *Maritime Policy and Management*, 32, 263-278. (Poisson)
- Co, C.Y. and J.A. List. (2004). "Is Foreign Direct Investment Attracted to 'Knowledge Creators'?" *Applied Economics*, 36, 1143-1149. (Conditional Logit)
- Kalb, G. and J. Williams. (2003). "Delinquency and Gender." *Applied Economic Letters*, 10, 425-429. (Ordered Probit)

** EXAM I **

2. Data Issues (Chapter 17.4-17.5, 9.4, 15.1-15.6)

- a. Truncated Regression Model
- b. Endogeneity (Omitted Variables, Simultaneity, Measurement Error, Lagged Dependent Variable)
- c. Instrumental Variables
- d. Sample Selection Corrections (Incidental Truncation)

READINGS:

- Arabsheibani, G.R., J.M. Emami, and A. Marin. (2004). "The Impact of Computer Use on Earnings in the UK." *Scottish Journal of Political Economy*, 51, 82-94. (Selection)
- Solon, G. (1992). "Intergenerational Income Mobility in the United States." *American Economic Review*, 82, 393-308. (ME/IV)
- Ashenfelter, O. and A. Krueger. (1994). "Estimates of the Economic Return to Schooling from a New Sample of Twins." *American Economic Review*, 84, 1157-1173. (ME/IV)
- Murray, M.P. (2006). "Avoiding Invalid Instruments and Coping with Weak Instruments." *Journal of Economic Perspectives*, 20, 111-132. (IV)

3. Pooled Cross-Section/Panel Data Methods (Chapters 13, 14)

- a. Simple Panel Data Methods
 - i. Pooled OLS
 - ii. Difference-in-Differences

- b. Advanced Panel Data Methods
 - i. Fixed Effects
 - ii. Random Effects
 - iii. Specification Tests
 - iv. Dynamic Panel Data Models

READINGS:

- Card, D. and A.B. Krueger. (1994). "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review*, 84, 772-793. (DID)
- Garcia-Mila, T., T. McGuire, and R. Porter. (1996). "The Effects of Public Capital in State-Level Production Functions Reconsidered." *Review of Economics and Statistics*, 78, 177-180. (FE/RE)
- Keller, W. and A. Levinson. (2002). "Pollution Abatement Costs and Foreign Direct Investment Inflows to the U.S. States." *Review of Economics and Statistics*, 84, 691-703. (FE/RE/DPD)

**** EXAM II ****