ECON 441
Introduction to Econometrics
Fall 2017

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Time: TuTh 11:30A-12:45P
Room: BEH 120
Office Hours: TuTh 9:00A-10:00A, and by appointment

Description: This course focuses on techniques for estimating regression models, on problems commonly encountered in estimating such models, and on interpreting the estimates obtained from such models. The primary objective of the course is to expose you to the basics of the theory and practice of econometrics and to give you experience in estimating econometric models with actual data. We will be using Stata in this class.

Learning Outcomes: By the end of this semester:

1. Students will understand the importance of the assumptions underlying the Classical Linear Regression Model (CLRM).
2. Students will demonstrate an understanding of how OLS works and its finite and asymptotic properties.
3. Students will conduct proper inference after using OLS to test single and multiple linear and non-linear hypotheses.
4. Students will understand the consequences for OLS when the assumptions of the CLRM are violated.
5. Students will develop competency in Stata in order to apply the techniques learned.

Prerequisite: Admission to business major/junior standing, ECON 261, and ECON 302 or ECON 303


Note: You should be fine if you can get your hands on a 5th edition of the textbook. Other useful, but not required, textbooks include Introduction to Econometrics by Stock and Watson and Basic Econometrics by Damodar Gujarati.

Grades: Grades will be based on quizzes, problem sets, and exams (midterm and final).

- **Quizzes** will count for 20% of the course grade. There will be a total of five (5) “pop” quizzes (each 15 minutes or so) and I will drop your lowest score. There will be no makeup quizzes, so any missed quizzes automatically receive a score of zero. If you show up late to a quiz, then you simply have less time to do it. There will be no time extensions for showing up late. Note, I will award you 33% of the points for simply showing up and signing your name on the quiz. The quizzes serve two roles: 1.) Lets you know what types of problems you can expect to see on the exams, 2.) Provides you with immediate feedback.

- **Problem sets** will count for 20% of the course grade. There will be a total of five (5). Problem sets are to be submitted at the beginning of class the day they are due. Note, late assignments will be accepted only up to one day late, but will only be given partial credit. For example, if a problem set is due on a Tuesday class day, then the absolute latest you can turn it in is on Wednesday by 11:30A, at which point partial credit will be given. If you are going to be late to class the day it is due, then email it to me by 11:30A or it will be counted as late.

The problem sets will ask you to estimate various econometric models and then to discuss the results. The grade will depend on both the estimation aspect of the exercise, as well as the interpretation. You may also be asked to provide some intuition behind the obtained results.
We will be using Stata in this class. Stata is available on some computers on campus that can be found here: https://oit.unlv.edu/software/stata. If you want to purchase a personal copy, Stata does offer student pricing; see here: https://www.stata.com/order/new/edu/gradplans/student-pricing/. Note, Stata/IC is more than enough for this class.

- **Exams** will collectively count for 60% of the course grade. There will be a midterm exam which will make up 25% of the course grade and final exam will make up 35% of the course grade. Both exams are cumulative in that they will cover the lectures and material preceding the exam. I will NOT drop any of the two exams and NO makeup exams will be given unless a student asks for it in advance and for compelling reasons (i.e., serious illness, personal tragedy, etc.).

With respect to both exams and quizzes, after a quiz or exam you feel that you should get an answer (answers) correct that was (were) marked wrong, then you have ONE week to submit to me IN WRITING a convincing reason why you should get the points. After one week, all scores are final.

In determining final grades, I will use the following scale:

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<thead>
<tr>
<th>Grade</th>
<th>Minimum Score</th>
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<tbody>
<tr>
<td>A</td>
<td>&gt;= 93</td>
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<tr>
<td>A-</td>
<td>&gt;= 90</td>
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<tr>
<td>B+</td>
<td>&gt;= 88</td>
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<tr>
<td>B</td>
<td>&gt;= 83</td>
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<tr>
<td>B-</td>
<td>&gt;= 80</td>
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<tr>
<td>C+</td>
<td>&gt;= 78</td>
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<tr>
<td>C</td>
<td>&gt;= 70</td>
</tr>
<tr>
<td>D+</td>
<td>&gt;= 68</td>
</tr>
<tr>
<td>D</td>
<td>&gt;= 60</td>
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<tr>
<td>D-</td>
<td>&gt;= 56</td>
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<td>F</td>
<td>&lt; 56</td>
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</tbody>
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Lecture notes 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. All students are advised to consult with me throughout the semester to avoid end of the semester “surprises.”

**Conduct:** All that I ask is that you be respectful of me and your fellow classmates. All cell phones should be put on silent and put away. Basic, non-graphing calculators can be used, if required, during exams. Cell phones are not to be used as calculators. All other electronic devices should also be put away unless they are explicitly being used for class purposes. If you do not want to pay attention in class, then do not come to class.

**Important Dates:** September 4th, Labor Day; October 27th, Nevada Recess Day; November 3rd, Final day to drop classes; November 10th, Veterans Day Recess; November 23rd – 24th, Thanksgiving Recess; December 9th, Last day of instruction.

**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.
Tentative Topics:

- Introduction and Review
  - Chapter 1

- Simple Linear Regression
  - Chapter 2

- Multiple Linear Regression – Estimation
  - Chapter 3

- Multiple Linear Regression – Inference
  - Chapter 4

  ** Midterm Exam **

- Multiple Linear Regression – OLS Asymptotics
  - Chapter 5

- Multiple Linear Regression – Further Issues
  - Chapter 6

- Multiple Linear Regression – Qualitative Variables
  - Chapter 7

- Multiple Linear Regression – Heteroskedasticity
  - Chapter 8

- Multiple Linear Regression – Data Issues
  - Chapter 9

  ** Final Exam **

The reason you get a syllabus at the beginning of the semester is to avoid this conversation.