Introduction to Econometrics  
Econ 4870, Fall 2018  
T 6:30-9:20pm, WH 112  
Final Exam: Tuesday, Dec 11, 6:30-8:30pm

Professor Contact Information:  
Tammy Leonard  
Email: Tammy.Leonard@unt.edu  
Office: Wooten Hall 367 (walk through the ERG to find my office)  
Office Hours: Tuesday 2-4:30pm or by appointment

Course Description  
This course is an introduction to the principle statistical methods commonly used in empirical economic analysis. The course will introduce both the theoretical basis of these methods as well as the practical implementation of the methods using computer software (e.g. STATA).

Prerequisites:  
There are 2 prerequisites: 
- Students must have completed MATH 1190 (Business Calculus) or MATH 1710 (Calculus I).  
- Students must also have completed ECON 4630 (Research Methods) or MATH 3680 (Applied Stats) or DSCI 3710 (Business Stats)

Student Learning Objectives:  
1. Identify different types of economic data sets and the analytic tools that are appropriate for each.  
2. Understand the assumptions of the least squares regression model and be able to identify situations in which these assumptions are violated.  
3. Understand the basic econometric toolset for multivariate analysis  
4. Be able to apply the proper tools to a given research question and data set  
5. Interpret and communicate the results of econometric estimations  
6. Gain a working knowledge of STATA or comparable statistical software
Course Syllabus

Required Textbooks and Material

STATA software. Stata software is available at many university computer labs. You can check out what software is available at which labs at this link: computerlabs.unt.edu. You may install STATA for free on any university owned computer. You must purchase Stata to install it on your own machine. Student pricing is available from the following web-site: http://www.stata.com/courseegp. There are different “flavors” of Stata to choose from. The Stata/IC six month license is enough for this class and costs $45.

Recommended Materials
ISBN: 978-1118032084

UNT’s Learning Management System, Blackboard Learn will be used to post announcements and assignments. For more information, please go to: https://learn.unt.edu. You will need your EUID and password to log in to the course. If you do not know your EUID or have forgotten your password, please go to: http://ams.unt.edu. Blackboard is the primary means of communication among us during the semester. If your UNT e-mail address is not your primary e-mail account, you should forward your UNT e-mail to your primary account.
Course Syllabus

Grading Policy***
I offer 2 possible grading schemes; the one most favorable in your case will be applied.

**Option A:**
- Homework: 15%
- Final Project: 15%
- Exam 1: 15%
- Exam 2: 15%
- Exam 3: 15%
- Cumulative Final Exam: 25%

**Option B:**
- Homework: 15%
- Final Project: 15%
- Highest 2 exam grades or combined quiz grades: 15% each
- Cumulative Final Exam: 40%

Letter grades will be assigned according to the following scale. I reserve the right to alter this scale in your favor if deemed necessary.

- **A** ≥ 90
- **B** [80, 90)
- **C** [70, 80)
- **D** [60, 70)
- **F** < 60

Course Schedule (subject to change at instructor’s discretion)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
<th>Assignment</th>
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</thead>
<tbody>
<tr>
<td><strong>Week 1</strong></td>
<td>28-Aug</td>
<td>Introduction &amp; Simple Linear Regression</td>
<td>Handouts + Ch 2 (including A.2)</td>
<td><strong>Practice--Simple Regression</strong></td>
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<tr>
<td><strong>Week 2</strong></td>
<td>4-Sep</td>
<td>Goodness of Fit &amp; Rescaling Data</td>
<td>Ch 4.2-4.6</td>
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<tr>
<td><strong>Week 3</strong></td>
<td>11-Sep</td>
<td>Review &amp; Catch-up</td>
<td>Ch 4.2-4.6</td>
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<tr>
<td><strong>Week 4</strong></td>
<td>18-Sep</td>
<td>Exam 1</td>
<td>Ch 3.1-3.5</td>
<td><strong>Practice--Hypothesis Test WS #1</strong></td>
</tr>
<tr>
<td><strong>Week 5</strong></td>
<td>25-Sep</td>
<td>Interval Estiation &amp; Hypothesis testing</td>
<td>Ch 3.1-3.5</td>
<td><strong>Practice--Hypothesis Test WS #1</strong></td>
</tr>
<tr>
<td><strong>Week 6</strong></td>
<td>2-Oct</td>
<td>Stata Labs 1 &amp; 2</td>
<td>Ch 3.1-3.5</td>
<td><strong>Practice--Multiple Regression WS</strong></td>
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<tr>
<td><strong>Week 7</strong></td>
<td>9-Oct</td>
<td>Review &amp; Catch-up</td>
<td>Ch 3.1-3.5</td>
<td><strong>Practice--Multiple Regression WS</strong></td>
</tr>
<tr>
<td><strong>Week 8</strong></td>
<td>16-Oct</td>
<td>Exam 2</td>
<td>Ch 3.1-3.5</td>
<td><strong>Practice--Multiple Regression WS</strong></td>
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<tr>
<td><strong>Week 9</strong></td>
<td>23-Oct</td>
<td>Multiple Regression Model + Specification Considerations</td>
<td>Ch 5.1-5.7, 7.1-7.2</td>
<td><strong>Practice--Multiple Regression WS</strong></td>
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<tr>
<td><strong>Week 10</strong></td>
<td>30-Oct</td>
<td>Advanced Topics in Multiple Regression</td>
<td>Ch 4.1, 7.5, 8.1-8.3</td>
<td>Final Project Research Question + Data <strong>Practice--Multiple Regression WS</strong></td>
</tr>
<tr>
<td><strong>Week 11</strong></td>
<td>6-Nov</td>
<td>Stata Lab 3</td>
<td>Ch 4.1-8.3</td>
<td>Final Project Results Tables</td>
</tr>
<tr>
<td><strong>Week 12</strong></td>
<td>13-Nov</td>
<td>Team Meetings</td>
<td>Ch 4.1-8.3</td>
<td>Final Project Results Tables</td>
</tr>
<tr>
<td><strong>Week 13</strong></td>
<td>20-Nov</td>
<td>Review &amp; Catch-up</td>
<td>Ch 4.1-8.3</td>
<td>Final Project due at 11:59pm</td>
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<tr>
<td><strong>Week 14</strong></td>
<td>27-Nov</td>
<td>Exam 3</td>
<td>Ch 4.1-8.3</td>
<td>Final Project due at 11:59pm</td>
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<td><strong>Week 15</strong></td>
<td>4-Dec</td>
<td>Other Econometric Models</td>
<td>Ch 4.1-8.3</td>
<td>Final Project due at 11:59pm</td>
</tr>
<tr>
<td><strong>Week 16</strong></td>
<td>11-Dec</td>
<td>Final Exam</td>
<td>Ch 4.1-8.3</td>
<td>Final Project due at 11:59pm</td>
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**Practice assignments** should not be turned in and will not be graded.
Course Syllabus

Classroom Behavior
Students are expected to attend class and participate. Furthermore, students may not engage in any behavior that diminishes other students’ ability to attend, participate and learn during the class. This may include use of electronic devices in a way that does not contribute to class learning, loud disruptive behavior, or disrespectful behavior of any kind. Dr. Leonard reserves the right to ask disruptive students to leave the class and meet with the Dean of Students before being allowed back into the class.

Academic Dishonesty
Academic dishonesty of any kind will not be tolerated and will be dealt with according to University of North Texas’s policy on Academic Integrity: https://policy.unt.edu/policy/06-003

Class Attendance
Class attendance is essential to success in the course. In general, roll will not be taken; however, the instructor reserves the right to take roll in any or all classes. Some aspects of the course grade may require class attendance and in these cases student grades will be penalized for failure to attend class without a University Excused Absence; this includes exams. When they occur, University Excused Absences must be documented and presented to Dr. Leonard as soon as they are known. Any scheduled make-up exams or assignments are considered binding and no late work outside of the make-up schedule will be allowed. Absences of any sort are not considered an acceptable excuse for missing a deadline for submitting graded work; graded work may be submitted electronically in the case of an absence and must be received by the deadline. For further information regarding the UNT attendance policy, please see https://policy.unt.edu/policy/06-039.

Students with Disabilities
Any student who, because of a disability, may require special arrangements in order to meet the course requirements should register with the UNT Office of Disability Accommodation (http://disability.unt.edu/). Please present your written accommodation request on or before the 4th class day.

Title IX Statement
The University of North Texas is committed to the safety and well-being of all students. If you believe that you have been a victim of sexual misconduct, harassment or violence (including sexual assault, stalking, dating or domestic violence), whether on or off campus, you have options and resources available to assist you. Students can learn more including how to make confidential reports from one of UNT’s Title IX coordinators: https://edo.unt.edu/title-ix Reports made to faculty members must be forwarded by faculty to the campus Title IX Coordinator and are not considered confidential.