

## ECON 570H: Applied Econometrics

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| <b>Instructor:</b>    | Dr. Stephen Lich-Tyler  |
| <b>Email:</b>         | <a href="mailto:swlt@email.unc.edu">swlt@email.unc.edu</a>  |
| <b>Office hours:</b>  | Gardner 303, Mondays and Wednesdays 1:00-3:00   |
| <b>Meeting times:</b> | Mondays and Wednesdays, 3:30-4:45   |
| <b>Meeting place:</b> | Gardner Hall, Room 309  |
| <b>Materials:</b>     | Wooldridge: <u>Introductory Econometrics</u> , 5th edition (recommended)<br>Angrist and Pishke: <u>Mostly Harmless Econometrics</u> (recommended)<br>Intercooled Stata (required; version 12 or later recommended)<br>Lich-Tyler: "Study Guide for Econometrics" (required; on website) |
| <b>Prerequisites:</b> | Calculus, introductory statistics, linear algebra, and Stata  |

This course teaches advanced econometric techniques for empirical analysis. At the end, you will have the skills to analyze data in order to answer important economic questions for a government agency, consulting firm, or academic research. The emphasis of the course is practical, but many of the lectures will be theory and technique.

**Attendance:** I expect regular attendance. Regardless of whether you attend, I expect that you will submit assignments on time and that you know any announcements made in class.

**Announcements:** When I need to make announcements (about assignments, changes to the schedule, or such), I will write them on the board at the start of lecture, or I will email the class. The Sakai website contains handouts, assignments, datasets, old exams, and other materials.

**Rescheduled lectures:** The usual calendar is not conducive to doing an empirical project. We will not have lectures after April 11th; the last two weeks are for your research only. Instead, these lectures will be rescheduled earlier in the evening earlier in the semester. Each rescheduled lecture will be repeated twice. You will need to attend Jan. 27th or 28th, and Feb. 3rd or Feb. 4th, from 6-8pm (tentatively).

**Grading:** Your grade is based on homework assignments, two exams, quizzes, and a paper.

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| Quizzes (Wednesdays)              | 10% |
| Midterm exam (Mon., Feb. 24)      | 25% |
| Final exam (Fri., May 2, 4-6pm)   | 30% |
| Empirical project (Mon., Apr. 28) | 35% |

On the exams and paper, I assign the traditional ordinal grades (... , B+, B, B-,...) In calculating your weighted average, I convert these into numerical values (... ,  $88\frac{1}{3}$ , 85,  $81\frac{2}{3}$ ,...). For each missing, incomplete, or incorrect homework assignment, your overall score is docked up to 2 points. At the end, your overall score is translated back into a letter grade (B+ is  $86\frac{2}{3}$  to 90; B is  $83\frac{1}{3}$  to  $86\frac{2}{3}$ , B- is 80 to  $83\frac{1}{3}$ , and so forth).

**Exams:** The dates of the exams and quizzes are almost certain. The final exam is given in compliance with UNC final exam regulations and according to the UNC final exam calendar.

**Homework:** Homework assignments must be turned in at one of two times: either at the end of lecture on the due date or, with permission, at the end of the *next* class. I may begin online submission of homework assignments.

**Quizzes:** On approximately Sunday of every other week (Jan. 19th, Feb. 2nd and 16th, Mar. 17th and 30th, and Apr. 13th), there will be a short fixed-response quiz over the most recent material. One missed quiz is forgiven; if there is none, then the lowest quiz is dropped.

**Empirical project:** For the empirical project, you must use data to answer some economic question, using econometric techniques from this course. You must write a paper (approximately 8-12 pages) to explain the research question, data, estimation strategy,

and results. My expectations are that: you must use an econometric technique more sophisticated than OLS, and you must state and test a hypothesis clearly and directly.

**Extra credit:** If there are any opportunities for extra credit, they will always be announced publicly and made available to the entire class.

**Academic integrity:** In the professional world, the integrity of your data analysis is critical. Inappropriate analysis leads to erroneous policies, and it can destroy your career. These are my guidelines for appropriate and inappropriate behavior.

**Homework:** Students may collaborate on homework assignments. They may seek assistance from the instructor, classmates, or an in-person tutor. (Online tutoring services are not allowed.) However, each student must do the problems on his or her own, and each student must submit a unique assignment.

**Quizzes:** Students may use books, the study guide, and their own notes. They may not work together, and they may not receive assistance from other people.

**Exams:** Students may use basic calculator functions.

**Project:** Students are expected to do their analysis and writing entirely on their own, but otherwise, they may use most resources (people, reference materials, and technology). However, copying any information from another source without citation is plagiarism. "Copying" includes copying directly, extensive paraphrasing, or using a substantive idea. Even materials that are online, in the public domain, and open source must be properly documented.

**Archives:** Students may not acquire my documents from, or place my documents into, any online or physical archive, other than my course website on Sakai.

**Schedule:** Quiz and exam dates are almost certain. All other dates are subject to change. The calendar provided with this syllabus is only an approximation.

**Syllabus changes:** The instructor reserves the right to make changes to the syllabus, including due dates and test dates. Changes will be announced as early as possible.