Course: ECON 308-04 - Econometrics

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Office Hours: 1230-1400 or by appointment.

Prerequisites: ECON 101, 102 and 307*
   *__Note__: To meet the prerequisite students may use BUAD 231, MATH 106, MATH 351, or SOCL 353 in place of Econ 307.

Class Material:

- **Textbook**: Stock, James H. and Mark W. Watson. 2019. **Introduction to Econometrics**, 4th Addison-Wesley.

- **Lecture Slides**: The class material (lecture notes, homework, ...) will be placed on the course's blackboard site.

    - All lectures (video and notes), problem sets, exams - basically most of the material for this class will be handled through this means.
    - I teach using slides, mostly, which also serve the purpose of lecture-notes.

- **Computer Software**: Stata will be the main software for this class.

    - Assignments will require this program. Stata is available on the Public Access Computer (PAC) labs around campus. You may also access Stata from your computer by ssh into `stat.wm.edu` using your WMuserid and password.
    - Stata GradPlan offers discounts to WM students if you would like to purchase Stata. More information about Stata at WM can be found *__HERE__*
    - Finally, if you are not familiar with Stata, some good online resources include:
        * *__IDRE__* at UCLA offers detailed tutorial videos and webpages here (note that some commands on this website are outdated)
        * *__Carolina Population Center's__* version is quite well-organized.
        * *__Pfaff's__* - A Brief Introduction to Stata with 50 plus Basic Commands

- **Data:** The Data for the course's lectures and graded material will come from *__HERE__*

Course Objectives: This is a course in applied econometrics, emphasizing the implementation of modern econometric techniques to analyze concrete economic problems, using real data and recent econometric software. Though not a theoretical course, we will introduce some basic theory and concepts to motivate an appropriate use of the methods. After passing this class students should have learned to to:

- Build, estimate and interpret their own econometric models for concrete economic problems.

- Write professional reports/papers using econometric methods.

- Use recent professional software for econometric and statistical analysis.

- Collect, use and analyze real data sets.

Course Outline:

Course Grade Policy: Your grade in the course will be determined by your performance on the following assignments:

1. Problem Sets (5) . . . . 5% each

2. Exams (2) . . . . 20% each

3. Final Exam (1) 25%

4. Term Paper (1) 10%

Grades will be distributed as follows:

A	93 - 100%	C	73 - 76.99%
A-	90 - 92.99%	C-	70 - 72.99%
B+	87 - 89.99%	D+	67 - 69.99%
B	83 - 86.99%	D	63 - 66.99%
B-	80 - 82.99%	D-	60 - 62.99%
C+	77 - 79.99%	F	less than 60%

Tentative Course Schedule:

Tuesday	Thursday
1/25	1/27 Introduction & review of statistics
2/1 Introduction & review of statistics	2/3 Review of statistics
2/8 Review of statistics	2/10 Review of statistics & ordinary least squares
2/15 *Problem Set #1* Linear regression with one regressor	2/17 Linear regression with one regressor
2/22 Hypothesis tests – one regressor	2/24 Hypothesis tests – one regressor
3/1 *Problem Set #2* Linear regression with multiple regressors	3/3 *Exam #1 -S&W Chapters 1-5*
3/8 Hypothesis tests with multiple regressors	3/10 Hypothesis tests with multiple regressors
3/15 *Spring Break*	3/17 *Spring Break*
3/22 Nonlinear regression	3/24 *Problem Set #3* Nonlinear regression
3/29 Internal & external validity	3/31 Internal & external validity
4/5 *Problem Set #4* Panel data	4/7 Panel data
4/12 *Exam #2 - S&W Chapters 6-9*	4/14 Binary dependent variables
4/19 Binary dependent variables	4/21 Instrumental variable approach

Tuesday	Thursday
4/26 Instrumental variable approach	4/28 Experiments
5/3 Experiments	5/5 *Problem Set #5* Catch Up & or Review
5/10 *Final Exam (2pm-5pm) - S&W Chapters 1-13* *Term Paper due*	5/12