Spring 2013
Econometrics
01:220:322:06

Tuesdays and Thursdays, 4:30pm – 5:50pm, Hardenbergh Hall Room A7
Office Hours: Tuesdays 3:15pm - 4:15pm and Thursdays 6:15pm - 7:15pm, Office 425NJH (and by appointment)
Erin Fairweather, Ph.D.
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Cell: 201.657.3183
Final Exam: Wednesday May 15, 2013 @ 4:00pm - 7:00pm

Course Description

This is an undergraduate course in Econometrics. At its most basic level, Econometrics is the application of statistical tools and techniques to economic data. Econometric analysis is critical for understanding the body of academic economics literature and to practicing economics in both business and public policy environments.

Learning Goals

Students who successfully complete Econometrics should be comfortable with basic statistics and probability. They should be able to use a statistical/econometric computer package to estimate an econometric model, and be able to report the results of their work in a nontechnical and literate manner. In particular a student who successfully completes Econometrics will be able to estimate and interpret linear regression models and be able to distinguish between economic and statistical importance. They should be able to critique reported regression results in applied academic papers and interpret the results for someone who is not trained as an economist.

Course Prerequisites

Introduction to Microeconomics (220:102) Introduction to Macroeconomics (220:103) Calculus I (640:135) Introduction to Statistics (960:211 or 960:285)

Required Resources

The required reading for this course is from the following text:

> Stock & Watson (2011). **Introduction to Econometrics**. 3rd edition
> Addison-Wesley - ISBN 0-13-800900-7

It is expected that you will have read each chapter before it is presented in class. If you fail to read the material, you will not be prepared to ask thoughtful questions or get clarity around more difficult concepts.

In order to fully understand the material presented in this course, you will also need to complete a term project using statistical software. This course will conduct statistical analyses using **R programming language**. R is open-source software available for free download at http://www.r-project.org.

Tentative Grading
Term Project: 25%
Exam 1 (Stock & Watson Ch 1-5): 25%
Exam 2 (Stock & Watson Ch 6-10): 25%
Final Exam (Cumulative – about 75% from Stock & Watson Ch 11-14): 25%

Exams:
You must attend all exams at their scheduled times. NO make-up exams will be accommodated without a documented excuse that I find acceptable – and all make-ups must be completed within 7-10 days of the original exam date. All material covered in the required textbook or presented during lectures is fair game for the exam. Lecture participation and advanced reading are highly correlated with success in this course.

ONLY basic calculators will be allowed during exams. NO graphing calculators or other electronics that are capable of storing formulas will be acceptable.

Term Project:
A dataset will be provided to you, along with a list of analyses you must perform and issues you must consider. It is expected that you will use R to conduct your analyses; if you plan to use another language (e.g. STATA or SAS) please discuss with me in advance. You must submit all code, output, and requisite discussion of findings in the form of a Term Project on the last day of class (May 2, 2013). Late assignments will NOT be accepted.

Tentative Grade Distribution:
The following is a TENTATIVE distribution of grades for this course. This distribution provides the minimum scores needed to obtain these grades – however, I reserve the right to curve final course grades as I deem appropriate.

A:	92 -100
B+:	86 - 91
B:	80 - 85
C+:	74 - 79
C:	67 - 73
D:	60 - 66
F:	0 - 59

Absences
Students are expected to attend all classes. If you expect to miss one or two classes because of illness or a family emergency, please use the University absence reporting website https://sims.rutgers.edu/ssra/ to indicate the date and reason for your absence. An email is automatically sent to me.

Academic Integrity
Any student caught cheating on an exam will be dismissed immediately and receive a failing grade for the course. NO exceptions. Cheating during an exam includes, but is not limited to, consulting any textbooks or notes, using a prohibited calculator, talking to another student, a physical exchange with another student, or making a concerted effort to view another student's exam or to share your own. It is in your best interest to refrain from any movements or communications that might suggest you are cheating.

Tentative Schedule

1/22
Topic: Economic Questions and Data
Chapter 1
1/24
Topic: Review of Probability
Chapter 2

1/29
Topic: Review of Probability
Chapter 2
1/31
Topic: Review of Statistics
Chapter 3

2/5
Topic: Review of Statistics
Chapter 3
2/7
Topic: Introduction to Linear Regression
Chapter 4

2/12

Topic: Introduction to Linear Regression
Chapter 4

2/14

Topic: Linear Regression & Statistical Inference
Chapter 5

2/19

Topic: Linear Regression & Statistical Inference
Chapter 5

2/21

EXAM I: Chapters 1-5

2/26

Topic: Linear Regression with Multiple Regressors
Chapter 6

2/28

Topic: Linear Regression with Multiple Regressors
Chapter 6

3/5

Topic: Multiple Regression & Statistical Inference
Chapter 7

3/7

Topic: Multiple Regression & Statistical Inference
Chapter 7

3/12

Topic: Nonlinear Regression Functions
Chapter 8

3/14

Topic: Assessing Studies Based on Multiple Regression
Chapter 9

SPRING BREAK

3/26

Topic: Assessing Studies Based on Multiple Regression
Chapter 9

3/28

Topic: Regression with Panel Data
Chapter 10

4/2

Topic: Regression with Panel Data
Chapter 10

4/4

Topic: Regression with Panel Data
Chapter 10

4/9

EXAM II: Chapters 6-10

4/11

Topic: Binary Dependent Variable
Chapter 11

4/16

Topic: Binary Dependent Variable
Chapter 11

4/18

Topic: Instrumental Variables
Chapter 12

4/23

Topic: Instrumental Variables
Chapter 12

4/25

Topic: Experiments and Quasi-Experiments
Chapter 13

4/30

Topic: Time Series Regression & Forecasting
Chapter 14

5/2

Topic: Time Series Regression & Forecasting
Chapter 14