University of Virginia

Fall Semester 2018

**ECON 3720: Introduction to Econometrics**

Lecture

Tuesdays and Thursdays, 8 – 9:15 AM (Section 300)

Tuesdays and Thursdays, 9:30 – 10:45 AM (Section 400)

Monroe Hall 130

Instructor

Professor Leland E. Farmer

E-mail: lefarmer@virginia.edu

Office: Monroe Hall 240

Office Hours

Tuesdays 1 – 3 PM, and by appointment

Teaching Assistants

Amzad Hossain

E-mail: mh2vh@virginia.edu

Office Hours: Wednesdays 12 – 2 PM

Location: Monroe Hall Basement

Alex Watkins

E-mail: acw9zc@virginia.edu

Office Hours: Mondays 1:30 – 2:30 PM

Location: Monroe Hall Basement

Discussion Sections

Thursdays:

* 5 – 5:50 PM, New Cabell Hall 338 (Section 306)
* 6 – 6:50 PM, Monroe Hall 118 (Section 302)
* 7 – 7:50 PM, Wilson Hall 238 (Section 305)

Fridays:

* 9 – 9:50 AM, Wilson Hall 238 (Section 301)
* 10 – 10:50 AM, New Cabell Hall 458 (Section 303)
* 11 – 11:50 AM, Maury Hall 113 (Section 304)

Prerequisites

A very good understanding of basic statistics (such as Stat 2120 or 3120) and multivariate calculus (such as Math 1220 or 1320) will be assumed. You may not take intro statistics concurrently with Econ 3720. Economics 2010 and 2020 are also highly recommended.

Introduction

This course is an introduction to econometrics, which is the theory and practice of analyzing economic data. Topics include statistical theory, measurement, and applications. Theoretical discussions and problems will be connected to analysis of real data. At the end of the course successful students will be qualified to understand and conduct simple economic data analysis in the real world.

Grading

Homework: 10 %

Midterm 1: 25 %

Midterm 2: 25 %

Final Exam: 40 %

Required Materials

**Book**

*Introductory Econometrics: A Modern Approach, 5th edition*, by Jeffrey M. Wooldridge. Copies of the 5th edition will be available in the bookstore and online. Slightly earlier / the latest editions should also be fine, but given that problems will sometimes be assigned directly from the textbook, please ensure that your edition’s problem numbers line up with the 5th edition’s.

**Software**

*Stata/IC.* You can either purchase a one year or perpetual license via this link,

<http://www.stata.com/order/new/edu/gradplans/campus-gradplan/>

Another option is to access Stata using the hive,

<http://its.virginia.edu/hive/>

using a remote desktop client.

Course Policies

**Homework**

There will be 8 homework assignments. Each assignment must be handed in at the beginning of the lecture on the day that it is due (usually Tuesday). Homework handed in late, even one minute late, will not be graded. You may drop your lowest homework grade.

You are encouraged to work together on your homework assignments, and up to two students may hand in and receive credit together for a given assignment. If students collaborate, both students must understand and contribute to all the work handed in. Copying homework from other students, or failing to fully collaborate on joint assignments, will be regarded as an honor violation. Allowing another student to take partial or full credit for your work is also an honor violation.

Homework will be graded by the teaching assistant and a grader. Grades assigned by the TAs/grader are not subject to appeal unless an error was made by the grader (in other words, please don’t argue about how many points you think you should have received on a given problem). Your work is expected to be neat and legible, and typing your answers is encouraged. If the grader finds your work too sloppy and/or illegible, it will not be graded, or points will be taken off.

**Exams**

Exams will be a mix of multiple choice and short answer. The first two exams will take place during class and will last 75 minutes. All exams will be cumulative. Students will be permitted to bring one side of one page of notes for each new exam. That is, one side of one page for the first midterm, one full page (back and front) for the second midterm, and one page and one additional one side of one page for the final exam.

**Lectures**

Lecture notes/slides will be posted to *UVaCollab*, usually by the evening before the lecture is delivered. You are strongly encouraged to print out a copy of the slides before coming to class, so you can follow along and take notes on your copies of the slides.

Posted lecture notes/slides do not contain all the material which will be discussed in class, and failure to attend all lectures means that you are going to miss important material. Attendance at all lectures is required.

**Honor policy**

Every student in this course is trusted to fully comply with all of the provisions of the honor code. On every exam, please sign your name next to the honor pledge. On exams, it is expected that you will neither receive nor give aid, nor access any material other than a calculator and your cheat sheet.

All alleged honor violations brought to my attention will be forwarded to the Honor Committee. If, in my judgment, it is beyond a reasonable doubt that a student has committed an honor violation on an exam or assignment, that student will receive an immediate grade of zero for that exam or assignment, regardless of any subsequent action taken by the Honor Committee.

**Exam and other accommodations**

All students with special needs requiring accommodations should present the appropriate paperwork from the Student Disability Access Center (SDAC) to Professor Farmer. It is the student’s responsibility to present this paperwork in a timely fashion and follow up with the instructor about the accommodations being offered. Accommodations for test-taking (e.g., extended time) should be arranged with Professor Farmer at least a week before an exam.

Course Outline

The following is a tentative outline of the topics we will cover in this course and is subject to revision. Exam dates are fixed. Note that there will be NO CLASS on November 13th.

**Week 1, August 28 and 30:** What is Econometrics? (Chapter 1), Review of Probability and Statistics (Appendices B and C)

**Week 2, September 4 and 6:** Review of Probability and Statistics (Appendices B and C)

**Week 3, September 11 and 13** Review of Probability and Statistics (Appendices B and C), Simple Linear Regression (Chapter 2)

**Week 4, September 18 and 20:** Simple Linear Regression (Chapter 2)

**Week 5, September 25 and 27:** Simple Linear Regression (Chapter 2), Review

**Week 6 October 2 and 4:** Midterm 1 (Oct 2nd), Multiple Linear Regression (Chapter 3-7)

**No class on October 9 (Reading Day)**

**Week 7, October 11:** Multiple Linear Regression (Chapters 3-7)

**Week 8, October 16 and 18:** Multiple Linear Regression (Chapters 3-7)

**Week 9, October 23 and 25:** Multiple Linear Regression (Chapters 3-7)

**Week 10, October 30 and November 1:** Review, Midterm 2 (Nov 1st)

**Week 11, November 6 and 8:** Binary Dependent Variables and Measurement Error, Instrumental Variables and Two Stage Least Squares (Chapter 15)

**No class on November 13**

**Week 12, November 15:** Instrumental Variables and Two Stage Least Squares (Chapter 15)

**Week 13, November 20:** Instrumental Variables and Two Stage Least Squares (Chapter 15)

**No class on November 22 (Thanksgiving Recess)**

**Week 14: November 27 and 29:** Instrumental Variables and Two Stage Least Squares (Chapter 15), Time Series Econometrics (Chapters 10 and 11)

**Week 15, December 4 and 6:** Time Series Econometrics (Chapters 10 and 11), Review

**Final Exam:** Tuesday December 11th, 9 AM – 12 PM (8 AM section), Monday December 10th, 2 – 5 PM (9:30 AM section)