

# **Syllabus for ECON 4818 Introduction to Econometrics**

ECON 4818-001 MWF 11:00-11:50 HLMS 141

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## **Course Description:**

This course will introduce you to the theory and applications of econometric analysis.

The course has a strong applied emphasis. We will use Excel for data analysis. The course will provide you with the opportunity to improve your competence and acquire new skills in Excel.

This is a rigorous course and my expectations are high. I expect that you will attend lectures, participate in class discussions, read the relevant textbook chapters, work through the end-of-chapter problems, and complete the assigned homework.

Reading the textbook is essential for success in this class. After each class you should review your lecture notes and read the relevant sections in the textbook. This will prepare you for the next class, so that you can participate in class discussions and follow the presentation of the new material, which builds upon concepts from the previous class.

## **Prerequisites:**

ECON 3818 Introduction to Statistics with Computer Applications, or its equivalent. These prerequisites will be strictly enforced. If you are enrolled in this course without the required prerequisites, you will be administratively dropped, which can occur at any point during the semester.

## **Required Text:**

Introductory Econometrics : A Modern Approach, 5th edition, by Jeffrey Wooldridge. You can also use the older edition.

Again, reading the textbook is essential for success in this class.

## **Software:**

The data analysis in this class will require the use of Excel. We will also use the DataAnalysis Toolpak in Excel, an Excel Add-in.

Disclaimer for Mac users: The DataAnalysis Toolpak does not work with Excel for Macs. If you have a Mac, you are encouraged to use the PCs in the computer labs on campus to complete your Excel homework assignments. Alternatively, Mac users can purchase MegaStat for Mac. The cost is low – around \$15. When you purchase the download you may see a message that

you have only about 10 days to use the downloaded software but you will actually have it for the life of your computer. You can purchase MegaStat here:

[http://highered.mcgraw-hill.com/sites/0077425995/information\\_center\\_view0/](http://highered.mcgraw-hill.com/sites/0077425995/information_center_view0/)

We will have in-class Excel labs for which you will have to bring a laptop in order to complete the assigned Excel work. Some of the Excel labs will be targeted at improving your general Excel skills. In other labs you will practice doing statistical analysis in Excel. Your Excel work will not be graded.

In class I will regularly demonstrate regression analyses and statistical tests using Excel. I will post all Excel files that I have used in class on D2L. You are advised to take notes in class and redo the Excel analyses after class. Don't hesitate to see me in office hours if you need Excel help.

### **Grading:**

Your grades will be assigned based on the following break down:

Midterm 1	.....20%
Midterm 2	.....20%
Team homework	.....20%
Attendance	.....5%
Participation	.....5%
Final exam	.....30%

These are the only factors that will be used to determine your course grade. There will be no extra credit.

### **Exams:**

There will be two midterm exams and a cumulative final exam. The exams will cover material from lectures, the textbook, and homework.

Midterm 1: Friday, February 19th

Midterm 2: Friday, April 1st

Final exam: Monday May 2, 1:30 pm- 4:00 pm

### **Team homework assignments:**

I will post homework assignments on D2L. Your homework assignments will be done in teams of 3 or 4 students. You are free to form your own team. Each team will submit one copy of the completed assignments through D2L and bring a printout to class.

Free-riding is strongly discouraged. Please contact me ASAP if any issues arise within your team.

At the end of the semester, your contribution to the team work will be subject to confidential peer evaluation. Your individual homework score will be determined in the following way. 50% of your score will be based on the team homework score, and the remaining 50% will be the team homework score weighed by your average peer evaluation. For example, if a team homework score is 90 out of 100, you evaluate your contribution with 100% and your three team

mates evaluate your contribution with 100%, 100% and 80%. Then your overall homework score is  $50\%(90) + 50\%(90)(100\% + 100\% + 100\% + 80\%)/4 = 87.75$  out of 100.

**End-of-Chapter Practice Problems:**

I will post answers to the odd-number end-of-chapter problems in the textbook. You are expected to work through these problems to ensure mastery of the material. Try to do the problems without looking at the answers right away. I will not collect your work on these problems. These are good practice problems for the exams so you are advised to work on those problems.

**Attendance and in-class participation:**

I will take attendance. I will take attendance either at the beginning or at the end of class. It is your responsibility to be in class on time and to sign the attendance sheet. If you are late to class and attendance has already been taken, you can't sign the attendance sheet for that day. You are allowed to miss two classes. Each additional recorded absence will reduce your attendance score. If you miss more than 20% of classes (3 weeks or 9 classes) you will receive an F grade for this course. These absences include both valid (sickness, weather, emergencies) and invalid reasons for not being in class.

Your participation in class discussions is essential for enhancing your and your classmates' learning experience in this class. Your participation will not be graded as right or wrong, but rather I will evaluate the quality of your critical thinking, your willingness and ability to apply learned concepts and your use of learned terminology. Making mistakes is part of learning. So, don't be shy, speak out and get more out of this class! On random dates I will record your participation.

**Preparing for class:**

The material in this class builds upon material from previous lectures. Before you come to class I expect you to review and master the material from the previous class. This includes studying the lecture notes and the textbook. This is critical for your ability to engage in class discussions and to understand the new material that is presented in class. You learn best if you don't simply take notes in class but also understand the statistical analyses that I will present in class and why they are needed.

If you struggle with the material or even if you have minor questions about it, see me in office hours ASAP. Do not wait until the day before an exam!

**Communication:**

I am available to answer questions related to the course material and the homework. The best way to contact me is to see me in office hours. You can also email me with short and well defined questions. I will try to respond to your emails promptly during business hours. Please include ECON 4818 in the subject line.

**Name Tents:**

Please bring name tents to class as I will try to learn your names and will need the name tents for our daily in-class discussions.

**Classroom Behavior:**

Please turn off your laptop and your phone before the beginning of class. Please do not engage in any non course-related activities during class. This is distracting to me and your classmates.

**Tentative Course Outline**

1. The Simple Regression Model (Chapter 2)
2. Multiple Regression Analysis: Estimation (Chapter 3)
3. Multiple Regression Analysis: Inference (Chapter 4)
4. Multiple Regression Analysis: Further Issues (Chapter 6)
5. Heteroskedasticity (Chapter 8)
6. More on Specification and Data Problems (Chapter 9)
7. Multiple Regression Analysis with Qualitative Information: Binary Variables (Chapter 7)
8. Additional Multiple Regression Analysis Issues.

**Disabilities**

Students with disabilities who qualify for academic accommodations must provide a letter from Disability Services (DS) and discuss specific needs with the professor (in person or by e-mail), preferably during the first two weeks of class. For exam accommodations, provide your letter at least one week prior to the exam. DS determines accommodations based on documented disabilities. <http://disabilityservices.colorado.edu/>

**Religious Observance**

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. Please contact me at least one week prior to any potential course conflict. [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

**University Classroom Behavior Policy**

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at <http://www.colorado.edu/policies/classbehavior.html>

**Student Honor Code**

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council

(honor@colorado.edu; 303-735-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://honorcode.colorado.edu>