# Syllabus for ECON 4818 Introduction to Econometrics

ECON 4818-002 MWF 11:00-11:50AM ECON 117

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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, 6th 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.

<u>Disclaimer for Mac users:</u> The DataAnalysis Toolpak is available for Excel 2016. The DataAnalysis Toolpak does not work with older versions of Excel for Macs. If you have an older version of Excel for 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/

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	25%
Attendance	5%
Final exam	30%

These are the <u>only</u> 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 <u>cumulative</u> final exam. The exams will cover material from lectures, the textbook, and homework.

Midterm 1: Friday, October 6th Midterm 2: Friday, November 10th

Final exam: Tuesday December 19th, 4:30 p.m. – 7:00 p.m.

## **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. <u>Please contact me ASAP if any issues arise within your team.</u>

At the end of the semester, your contribution to the team work will be subject to <u>confidential</u> <u>peer evaluation</u>. 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. <u>I will not collect</u> 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 is a chance for you to think critically, apply learned concepts and use the learned terminology. Making mistakes is part of learning. So, don't be shy, speak out and get more out of this class!

## **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:

<u>Please turn off your laptop and your phone before the beginning of class.</u> 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: OLS Asymptotics (Chapter 5)
- 5. Multiple Regression Analysis: Further Issues (Chapter 6)
- 6. Multiple Regression Analysis with Qualitative Information: Binary Variables (Chapter 7)
- 7. Heteroskedasticity (Chapter 8)
- 8. More on Specification and Data Problems (Chapter 9)
- 9. Additional Multiple Regression Analysis Issues.

#### **Accommodation for Disabilities**

If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at <a href="mailto:dsinfo@colorado.edu">dsinfo@colorado.edu</a>. If you have a temporary medical condition or injury, see <a href="mailto:Temporary Injuries">Temporary Injuries</a> guidelines under the Quick Links at the <a href="mailto:Disability Services">Disability Services</a> website and discuss your needs with your professor.

#### **Religious Holidays**

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. See the <u>campus policy regarding religious</u> observances for full details.

#### **Classroom Behavior**

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. For more information, see the policies on classroom behavior and the student code.

# Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or

student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

#### **Student Honor Code**

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the <u>academic integrity policy</u> of the institution. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council(<u>honor@colorado.edu</u>; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at honorcode.colorado.edu.