

Economics 4818: Introduction to Econometrics

Spring 2020

TTh 2:00 – 3:15pm

Economics – Room 117

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Office Hours: T 10:00 – 11:00am, Th 3:15 – 5:00pm

Course Description

The goal of this course is to learn the basics of the theory and practice of analyzing relationships in economic (and other) data. This course serves as an introduction to multiple regression techniques with a focus on economic applications. It includes extensions to discrete response, panel data, and time series models, as well as concepts such as omitted variables, missing data, sample selection, randomized and quasi-experiments, and instrumental variables. The course also develops the ability to apply econometric and statistical methods using the computer package STATA.

Prerequisites

ECON 3818 – Introduction to Statistics with Computer Applications (or equivalent).

Course Materials

The required textbook is *Introduction to Econometrics* by James Stock and Mark Watson (SW). Course material will mostly be based upon the 3rd edition but other editions are similar and fine to study from. Lecture notes, STATA exercises and other material will be posted on CU's Canvas website which can be accessed at <https://canvas.colorado.edu/>. Homework and exam questions will be based upon both lectures given in class and required textbook readings. We will use *MyEconLab* for online homework assignments. There are also many other studying resources, as well as a STATA software tutorial, available to you through MyEconLab. MyEconLab is an online product associated with our course that is available for purchase bundled with the textbook or can be purchased directly from Pearson.com. Instructions for registration to our course ID will be provided on Canvas. Free temporary 14-day access to MyEconLab can be requested via [MyEconLab.com](https://www.myeconlab.com). If you are considering dropping this course, do not pay for MyEconLab until you are sure. If your payment is not received by the end of the temporary 14-day period, you will lose access to the site.

There will be two STATA homework assignments. Students are not required to purchase their own copies of STATA. It is available in campus computer labs. Students who wish to purchase STATA for the convenience of working on their own devices should purchase the software through the University Grad Plan to obtain a substantial discount. Note that you should purchase STATA/IC (currently priced at \$48 for a 6 month license) since Small STATA is insufficient for the homework assignments. You can find details at <https://www.stata.com/order/new/edu/gradplans/student-pricing/>

Grades

Midterm 1	February 20th (in class)	20%
Midterm 2	March 19th (in class)	20%
Final Exam (cumulative)	May 3rd (4:30-7:00pm)	35%
Homework	Weekly	15%
Take-Home STATA	Two total	10%

In computing your total homework grade, the lowest weekly homework (not STATA assignment!) will be dropped. If you wish to dispute a grade, this must be done *within one week* of receiving graded material.

Missed Exam Policy

If you miss an exam due to illness or a family emergency, AND if you notify me of this prior to the exam with a doctor's note, I will drop the exam from your final grade and re-weight the other exams accordingly. Any missed exams without prior notice will automatically receive a grade of zero.

Homework

Weekly homework will be based on the textbook and material given in class. Weekly homework will be assigned and completed in our course's MyEconLab site. The website will not let you complete these homeworks after the due date. We will also have two take-home STATA assignments that will be posted on our course's Canvas site. Please hand in these assignments at the beginning of class the day they are due. Late assignments will not be accepted. Please append your STATA "log" files to the STATA assignments when you turn them in.

E-Mail Policy

Please do not send questions about course material over e-mail. The concepts of the course are mathematical in nature and much easier to communicate in person and the course is too large for me to answer these types of questions over e-mail. I highly encourage you to use office hours for questions on course content, homework, etc.

No Classes

February 11 (Professor out of Town), March 24 and 26 (Spring Break)

Tentative Course Outline

The course readings (based upon the 3rd edition of SW) and outline are provided below. The material we will cover may be adjusted somewhat towards the end of the semester.

I. Introduction

Readings: Chapter 1

II. Review of Probability and Statistics

Readings: Chapters 2 and 3

III. Linear Regression with One Regressor

Readings: Chapters 4, 5 and 17.1-17.4

IV. Linear Regression with Multiple Regressors

Readings: Chapters 6, 7 and 18.1-18.5

V. Nonlinear Regression

Readings: Chapter 8

VI. Assessing Regression Studies

Readings: Chapter 9

VII. Panel Data

Readings: Chapter 10

VIII. Binary Dependent Variables

Readings: Chapter 11

IX. Instrumental Variables Regression

Readings: Chapter 12

X. Experiments and Quasi-Experiments

Readings: Chapter 13

XI. Forecasting

Readings: Chapter 14

University Policies

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website. ***Please submit your accommodation letter as soon as possible to ensure we have enough time to set up accommodations.***

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 race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. 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 of Conduct](#).

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (including sexual assault, exploitation, harassment, dating or domestic violence, and stalking), discrimination, and harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#).

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

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. Please let me know *within the first two weeks of the course* if you have any of these conflicts.

See the [campus policy regarding religious observances](#) for full details.