

ECONOMICS 4818
Introduction to Econometrics
Spring 2015

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Class website: <https://learn.colorado.edu/>
Office Hours: T 12:20 – 1:55pm & 3:15 – 4:35pm; R 12:20 – 1:55pm

Course Description:

This course provides an introduction to the theory and applications of modern econometrics. This course begins by reviewing and extending the statistical material covered in Econ 3818. Following this, students are guided through the principals of regression analysis starting with the simple regression model. We then turn to multiple regression analysis, examining issues in relation to estimation, inference and specification will be explored.

A more detailed outline of covered material is posted separately.

Policy on Cheating:

If you are found to have violated the honor code (see below), by both the honor code council and myself, you will automatically fail the course!

Text:

Introductory Econometrics: A Modern Approach, (4th or 5th edition) by Jeffery M. Wooldridge. The text in the 4th edition is nearly identical to the 5th edition, but some practice problems are missing in the old editions. The text is important, as I will follow it closely. Keep up with the readings. It is essential for success in this class.

Prerequisites:

Economics 3818, Introduction to Statistics with Computer Applications, or its equivalent. I assume that you did not only take the class, but also that you understand and remember the content. It is **very** important that you fulfill the prerequisite **before** you take this course, and **still** understand the materials in the prerequisite. If you have any uncertainty as to whether you are under or over qualified to take the course, please talk to me ASAP. The prerequisites must be strictly enforced.

A Note on Learning Systems and Assessments

This course is a little more traditional than many of the other classes I teach. Lecture is still the primary component, but group assignments and discussions are taking on a slightly larger role. One of the most important changes from prior semesters is that all exams will be cumulative, and we will spend at least a little time reviewing for each exam. A little more detail on these systems is given below:

Learning systems:

1. Lecturing: explaining difficult material not easily learned on your own with text, groups, etc.
2. Exams: exams should be learning tools as well as assessment tools! We will go over each exam in depth in class. Reviewing exams is one area where in-class discussion and explanation are most effective. Just reading answers on a key has been shown to be one of the worst ways to learn material. Therefore, exam reviews will be the one area of class where no notes, associated pictures or keys will be posted.
3. Group scholarship: we will work some practice problems in groups, which can help your understanding of the material whether you already understand it fairly well, or are struggling a bit. These cooperative learning exercises are extremely helpful in preparing you to solve more in-depth analytical problems.

Peer-learning of material is one of the most instructive learning systems because:

- a. *If you are going to inform others about what you know, you must first fully understand it yourselves. If you cannot explain a concept to others you may not fully understand it yourself.*
 - b. *Most “real-world” careers require some form of teamwork skills.*
 - c. *You can discern what it takes to teach others.*
 - d. *It will teach you how to respond to critical questions in front of others.*
4. Self-study: reading the text and solving the review questions.

Exams

There will be three cumulative exams and a cumulative final. Tests will consist of short-answer questions and some longer problems. The exams will all be cumulative, and the material does build on itself so it is important to understand all of the concepts as we go. **Exams will be given in class on the days listed. If you miss an exam with a valid excuse (e.g. a note from your doctor or Wardenburg), then the weight of your final will be increased. Undocumented illnesses do not count as valid excuses (as long as this is not in conflict with a University policy). Note that the exam dates below are not tentative – exams will be given in class on the days listed. NO EXAMS WILL BE DROPPED!!**

In-class Problems

It is important to understand how to apply concepts as we cover them, so you will have the opportunity to work on some problems in class (both individually and in groups).

In-class Group Projects

These cooperative learning exercises (detailed above) are extremely important. The group project dates are listed in the course outline. It is important not to miss these days without an excused absence.

Software:

We will utilize Microsoft Excel for the data analysis in this course. Excel is available in all campus computer labs, including the lab in the basement of the Economics building.

Exams and Grading

In-class group problems	10%
Exam I (Thursday 2/12)	22%
Exam II (Tuesday 3/17)	22%
Exam III (Thursday 4/16)	22%
Final Exam – Tuesday 5/5 at 4:30pm.	24%

There will be three exams and a cumulative final. No exams will be dropped. Exams are not cumulative (except the final), but the material does build on itself so it is important to understand all of the concepts as we go. No makeup exams will be given. If you miss an exam, you will receive a zero. Exceptions to this rule are specified in University policies (e.g. you are ill and can provide proof - a letter from the student health center). You may also **prearrange** an excused absence from me. In either case the cumulative final will be weighted more heavily to replace the missed exam.

Final Exam Conflicts:

If you have three or more final exams scheduled on the same day, you are entitled to arrange an alternative exam time for the **last** exam or exams scheduled on that day. To qualify for rescheduling final exam times, you must provide evidence that you have three or more exams on the same day, and arrangements must be made with your instructor no later than the end of the sixth week of the semester (Friday, February 20th, 2015).

Incompletes, Extra Credit, etc.

I adhere strictly to the University guidelines on Incompletes (“An I is given only when students, *beyond their control*, have been unable to complete course requirements. A substantial amount of work must have been *satisfactorily completed* before approval for such a grade is completed.”).

Bad grades, unsatisfactory performance, too many credit hours, work conflicts, etc. are not reasons for an incomplete.

I am adamant about giving each student an equal opportunity to perform well in the course, so there will be no extra credit opportunities that are not offered to the entire class. You should focus your efforts on learning the material and doing well on the exams.

Grading Scale:

Your Score	Grade
92% to 100%	A
90% to 91%	A-
88% to 89%	B+
82% to 87%	B
80% to 81%	B-
78% to 79%	C+
72% to 77%	C
70% to 71%	C-
68% to 69%	D+
62% to 67%	D
60% to 61%	D-

Tentative Course Outline (Text chapters are in parentheses):

1. Review of Mathematics and Statistics (Appendices A, B and C)
2. The Simple Regression Model (Ch. 2)
3. Multiple Regression Analysis: Estimation (Ch. 3)

Exam 1

4. Multiple Regression Analysis: Estimation (Ch. 3)
5. Multiple Regression Analysis: Inference (Ch. 4)
6. Multiple Regression Analysis: OLS Asymptotics (Ch. 5)
7. Multiple Regression Analysis: Further Issues (Ch. 6)

Exam 2

8. Multiple Regression Analysis: Further Issues (Ch. 6)
9. Multiple Regression Analysis with Qualitative Information: Binary Variables (Ch. 7)
10. Heteroskedasticity (Ch. 8)
11. Multiple Regression Analysis: Specification Issues (Ch.9)

Exam 3

A more detailed outline of covered material is posted separately.

Additional Notes:

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; 303-725-2273). 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). Additional information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode>

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 dsinfo@colorado.edu.

If you have a temporary medical condition or injury, see Temporary Injuries under Quick Links at [Disability Services website](#) and discuss your needs with your professor.

Religious holidays

A comprehensive calendar of the religious holidays most commonly observed by CU-Boulder students can be found at <http://www.interfaithcalendar.org/> Review this list and the class syllabus. After reviewing the syllabus, please see the instructor if you believe that you need an

accommodation for religious reasons. The instructor should be notified within the first two weeks of classes. Campus policy regarding religious observances states that faculty must make *reasonable* accommodation for them and in so doing, be careful not to inhibit or penalize those students who are exercising their rights to religious observance. For more information see http://www.colorado.edu/policies/fac_relig.html

Code of 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. See policies at

<http://www.colorado.edu/policies/classbehavior.html> and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code

Policy on Discrimination and Harassment

The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended 11/8/2001). CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, or veteran status. Individuals who believe they have been discriminated against should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Student Conduct (OSC) at 303-492-5550. Information about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>.