

ECON/AREC 335 Introduction to Econometrics

Fall 2014

Instructor: Dr. Anita Alves Pena

Office: C312 Clark Building

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Class Meetings: TR, B3 Engr, 9:30-10:45am (Section 1) or 11am-12:15pm (Section 2)

Course Website: login at <http://ramct.colostate.edu> or ramct.blackboard.com

Teaching Assistants:

- Timothy Churchill, Email: timothyc@rams.colostate.edu

- James Felmlee, Email: jfelmlee@rams.colostate.edu

Office Hours:

- Mondays and Wednesdays 2:30-3:30pm (James, tables outside Clark C307)

- Tuesdays and Thursdays from 12:30-1:30pm (Tim, tables outside Clark C307)

- Tuesdays, 1:30-3pm, and by appointment (Dr. Pena, Clark C312)

Office hours will start Week 2 of the course.

Textbook (required): James H. Stock and Mark W. Watson: Introduction to Econometrics, Custom Edition for ECON/AREC 335 (S&W). Note that an alternative text is the same authors: Introduction to Econometrics, Third Edition, 2011 (or any previous edition). The alternative includes the material from the custom edition (word for word though some chapter orderings are different) along with additional chapters on more advanced topics. Those of you who anticipate keeping your textbook after the semester for use as a reference manual for more advanced econometrics classes, graduate school, or jobs involving statistical analysis may elect to purchase the longer textbook instead of the custom edition. The custom edition should be available at the CSU bookstore. The full edition is available from online retailers.

Software (required): The use of statistical software is required. I recommend Gretl, which can be downloaded from <http://gretl.sourceforge.net> free of charge. (Note that both Windows and Mac versions are available by clicking on the links on the left-hand side of the main page.) However, if

you are already familiar with alternative commercial software (e.g., STATA, SAS, EViews), you are welcome to use it for problem sets as long as you circle or highlight your answers. Since datasets for homeworks will be provided in Gretl format, it will be up to you to convert files for use with different software. Furthermore, I may or may not be able to answer questions about alternative software depending on what it is.

Intended Learning Outcomes:

The course is designed to provide you with understanding and ability to apply the tools that economists use in empirical investigations. Econometrics applies statistical and mathematical methods to the analysis of data to test economic theories and estimate relationships. This course is difficult but will provide practical skills and therefore should be extremely valuable after completing the class successfully.

Contact Hours and Expectations for Work Outside of Instructional Time:

Students should expect to spend approximately six hours per week engaging in activities including reading the book, reviewing class notes, completing homework (including learning the software program), and studying for exams to be successful. The six hour expectation for homework and other work outside of instructional time is equivalent to the federal credit hour definition of two hours of outside work for each contact hour (here for a three credit course).

Prerequisites:

Prerequisites for this course are principles of microeconomics and of macroeconomics (ECON/AREC 202 and ECON 204) AND statistics (STAT 201, 204, or 301) AND calculus (MATH 141, 155, or 160), or the equivalent to these courses taken at a different university. The prerequisites for the course will be enforced. Econometrics REQUIRES mathematical and statistical methods.

Grading:

Grading will be based on 6 problem sets (that will alternate between requiring written or computer work), 2 midterms, an individual final project (that also will require computer work), and a cumulative final exam. Exams will require interpretation of computer output in addition to other topics. Final letter grading will include traditional plus and minus grades based on the following percentages as weights.

- Problem Sets (30%)

- Midterm Exams (30%)
- Individual Final Project (20%)
- Final Exam (20%)

Note that the final project is worth as much as the final exam and therefore should reflect a *significant* amount of independent work. The final project will cover what you have learned over the full course up until the project due date. I may ask for electronic submission in addition to a print copy. Also note that extra credit quizzes and/or other opportunities *may* present themselves in class. For each extra credit opportunity, I will indicate in class which of the above categories the particular points will be added to. A curve based on the final percentages of course points is possible, though not guaranteed and generally depends on how much other extra credit was offered. There has *not* been a curve in recent semesters, though anything is possible if some assignment or exam proves very difficult for the majority and there is minimal extra credit to outweigh it.

Accommodations:

Students requesting special accommodations should contact Resources for Disabled Students (RDS) at 970-491-6385. Special accommodations for exams will not be granted without pre-approval from RDS. If this applies to you, please make arrangements *early* in the semester.

Course Policies and Expectations for Etiquette and Student Behavior:

In general, you should attend the specific section for which you are enrolled. That said, since there are two sections which will be covering the same material, you can attend either one on any given regular class day if you have a conflict with your own section time on that date *provided there are enough desks*. If seating becomes an issue, priority for seats will be given to those who are registered for that particular section. For exams, however, you **MUST** attend the section for which you are enrolled.

Please note deadlines on the attached schedule now and our scheduled office hours as listed above. We are offering office hours multiple days a week, and therefore will not be offering separate appointments concerning class material (e.g., questions on specific homework problems) in the days/hours before assignments are due or exams are to be taken. Appointments regarding other matters (e.g., administrative, advising) can be requested via email to the instructor at any time.

Problem sets will be assigned approximately one week before they are due. No credit will be given for late problem sets. Problems sets are due at the beginning of class on the assigned dates. It is your responsibility to deliver or fax your problem sets to me early if you will not be in class. Problem sets will not be accepted via email. Working in study groups is highly encouraged, though you are expected to submit your own write-up which is not simply a transcription of another student's paper. Problem sets will be graded for accuracy. All pages of your problem set should be stapled, clipped, or otherwise attached together. I reserve the right to take off points for not following this direction. We will not have time in class to review problem sets. However, answers will be made available when a graded assignment is returned so that you may review and compare your work.

IMPORTANT: You must turn in your homework with the particular section for which you are enrolled, and you should write your section number or time on the top of all submissions (homework, project, etc.) to ensure that it is entered into the course gradebooks in a proper fashion.

CAUTION: You will NOT pass this class if you do not do the computer work for the problem sets and individual final project in addition to the written portions of homeworks and exams. Instructions for final projects will be distributed after the first midterm. Projects will be based on data analysis and interpretation pertaining to a question that interests you.

The two midterm and final exam formats will be modeled after problem sets. You are expected to submit your own work and to use no unauthorized assistance when taking exams. Academic dishonesty is not tolerated (and will be subject to university sanctions), and I will take precautions to prevent it. This may include random seating, exam proctoring, and photocopying of exams before returning them. *The course will adhere to the Academic Integrity Policy of the Colorado State University General Catalog and the Student Conduct Code, and you will be asked to sign the honor pledge on exams.* Make up exams (or other assignments) will be given only for scheduled university functions or strenuous circumstances such as serious illness. *Written documentation is required for all make up requests.* Documentation should be submitted prior to the exam date (or due date) unless absolutely impossible. Approval of make up work is at my discretion.

You are expected to be present in class and are responsible for material covered in lectures and in-class handouts whether or not that material is covered in the textbook or posted online. Furthermore, as noted above, extra credit opportunities may present themselves in class. Disruptive

behavior is not tolerated and is grounds for being asked to leave. This includes the use of cell phones and reading newspapers and other unrelated material in class. Offensive or threatening treatment of an individual is especially not tolerated. Disruptive students will be referred to the chair of the economics department and/or other university officials.

Schedule and Reading List:

(This schedule is subject to change and will be revised later in the semester if necessary.)

Week of August 26: Economic Questions and Data, S&W Chapter 1.

Week of September 2: Review of Probability, S&W Chapter 2.

THURSDAY, SEPTEMBER 4: PROBLEM SET 1a DUE

Week of September 9: Review of Statistics, S&W Chapter 3.

THURSDAY, SEPTEMBER 11: PROBLEM SET 1b DUE

Week of September 16: Linear Regression with One Regressor, S&W Chapter 4.

Week of September 23: Linear Regression with One Regressor, continued.

THURSDAY, SEPTEMBER 25: PROBLEM SET 2a DUE

Week of Sept. 30: Hypothesis Tests and Confidence Intervals (One Regressor), S&W Chapter 5.

THURSDAY, OCTOBER 2: PROBLEM SET 2b DUE

Week of October 7: Hypothesis Tests and Confidence Intervals (One Regressor), continued.

THURSDAY, OCTOBER 9: MIDTERM EXAM #1 IN CLASS

Week of October 14: Linear Regression with Multiple Regressors, S&W Chpt. 6.

Week of October 21: Hypothesis Tests and Conf. Intervals (Multiple Regressors), S&W Chpt. 7.

Week of October 28: Hypothesis Tests and Confidence Intervals (Multiple Regressors), continued

THURSDAY, OCTOBER 30: PROBLEM SET 3a DUE

Week of November 4: Nonlinear Regression Functions, S&W Chapter 8.

THURSDAY, NOVEMBER 6: PROBLEM SET 3b DUE

Week of November 11: Assessing Econometric Studies, S&W Chapter 10. (Note that this will appear as Chapter 9 in the full edition if you purchased that one instead.)

THURSDAY, NOVEMBER 13: MIDTERM EXAM #2 IN CLASS

Week of November 18: Assessing Econometric Studies, continued.

Week of November 25: FALL BREAK, NO CLASS

Week of December 2: Special Topic: Regression with a Binary Dependent Variable, S&W Chapter 9, and other final topics. (Note that this will appear later in the book in the full edition if you purchased that one instead.)

THURSDAY, DECEMBER 4: INDIVIDUAL FINAL PROJECT DUE

Week of December 9: Finish any uncovered material and final review.

The FINAL EXAM will take place in our regular classroom. Date and time follow the university exam schedule:

- MONDAY, DECEMBER 15 11:50am-1:50pm (Section 1)
- TUESDAY, DECEMBER 16 9:40-11:40am (Section 2)

IMPORTANT: You must take the exam with the particular section for which you are enrolled.