Econ 4371/7371

Introductory Econometrics

Spring 2020

Course MW 2:00-3:15PM Middlebush 13

Instructor J. Isaac (Zack) Miller <u>millerjisaac@missouri.edu</u>

Office Hours Wed 10:00AM-12:00PM Professional 221

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Office Hours Tue 1:00-3:00PM Professional 223

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Objectives: This course is designed to provide you with an understanding of

- The mechanics underlying basic econometric tools,
- Empirical application of these tools to economic models, and
- The interpretation of numerical results generated by these tools.

Prerequisites

- ECON 3251 or 4351 and STAT 2500, or equivalent.
- *This is a quantitative course.* You should have some knowledge of statistics, microeconomics, and macroeconomics prior to taking this course.
- Calculus is recommended but not required.

Course Expectations: You are responsible for attending class and completing all assigned work. If you need to miss a class, you should get the lecture notes from a classmate.

Required Text: Stock and Watson (2018). *Introduction to Econometrics*, 4th edition.

Topics Covered

- What is Econometrics? Economic Questions and Data (Chapter 1)
- Review of Probability and Statistics (Chapters 2-3)
- Linear Regression with a Single Regressor (Chapters 4-5)
- Multiple Regression (Chapter 6-8)
- Additional topics/chapters as time allows

Three 75-minute tests will be administered in class on

- Wednesday, February 26 @ 2:00PM,
- Wednesday, April 8 @ 2:00PM, and
- Wednesday, May 13 @ 12:30PM (scheduled by the registrar during finals week).

If you have an irreconcilable conflict with a test date, you may schedule an alternative time to take the test *before* that date. There will be *no make-up tests*.

In order to complete all of the problem sets, you will need to work with data and run regressions. There are many different software packages available to run regressions, but I will illustrate in class how to use Excel and especially the "Analysis ToolPak" Add-In to do so. Answers to problem sets must be *printed* and a *hard/paper copy* must be submitted. As a rule of thumb, print out enough output to show you did the work, but not the entire data set that you used. Email submissions will be accepted *only* for late assignments or in special cases. These must be submitted as a single PDF file with all pages formatted for printing on standard 8.5x11 printer paper with the student's name in the filename and on the first page of the PDF file.

Late Submissions

Problem sets are due *in class* at 2:00PM on the due date. Late submissions may be turned in to Dr. Miller's mailbox on the 1st floor of the Professional Building or by email, and will be discounted as follows:

Up to 48 hours late: -25/100 Up to 96 hours late: -50/100 After 96 hours: -75/100

A problem set due on a Monday will be marked down ...

... 25 points after 3:30PM Monday

... 50 points after 3:30PM Wednesday

At 3:30PM Friday, assignments not turned in will receive 25 points.

A problem set due on a Wednesday will be marked down ...

... 25 points after 3:30PM Wednesday

... 50 points after 3:30PM Friday

At 3:30PM Sunday, assignments not turned in will receive 25 points. Note that the minimum score is 25/100 points, even if no answers are submitted.

Acceptable Use of Sources for Problem Sets: IMPORTANT!!!

You may ...

- ... collaborate with your classmates, as long as you write your own solutions.
- ... get help from a tutor, the TA, or Dr. Miller.
- ... use the textbook or generic and passive sources of information, such as Wikipedia, MathWorld, or another textbook.

You may not ...

- ... use interactive sources other than those above, such as online forums.
- ... use answer keys regardless of the source.

A violation of this policy will result in a grade of **0/100** (**zero**), lower than 25/100 for not turning in the assignment at all. Violations will be reported to the Office of Student Rights and Responsibilities per University policy. *If in doubt, consult Dr. Miller*.

7000-Level Credit: Students registered for 7371 will be assigned short empirical project(s) in place of at least one of the problem sets. Each project will comprise the same percentage of your course grade as the assignment it replaces for the students registered for 4371. Otherwise, material and credit for 4371 and 7371 are the same.

Statement on Academic Integrity: Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

Statement on Disabilities: If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please *let me know as soon as possible*. If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please establish an accommodation plan with the <u>MU Disability Center</u>, S5 Memorial Union, 573-882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for persons with disabilities, click on "Disability Resources" on the MU homepage.

Statement on Intellectual Pluralism: The University community *welcomes intellectual diversity* and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the departmental chair or divisional director; the director of the Office of Students Rights and Responsibilities; the MU Equity Office, or equity@missouri.edu. All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.

Statement on Academic Inquiry, Course Discussion and Privacy: University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the *redistribution of audio or video recordings* of statements or comments from the course to individuals who are not students in the course *is prohibited* without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

Statement on Title IX: University of Missouri policies *prohibit discrimination* on the basis of race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, pregnancy, age, genetic information, disability and protected veteran status. Discrimination includes any form of unequal treatment such as denial of opportunities, harassment, and violence. Sex-based violence includes rape, sexual assault, unwanted touching, stalking, dating/interpersonal violence, and sexual exploitation. If you experience discrimination, you are encouraged (but not required) to report the incident to the MU Office for Civil Rights & Title IX. Learn more about your rights and options at civilrights.missouri.edu or call 573-882-3880. You also may make an anonymous report online. Students may also contact the Relationship & Sexual Violence Prevention (RSVP) Center, a confidential resource, for advocacy and other support related to rape or power-based personal violence at rsvp@missouri.edu or 573-882-6638, or go to rsvp.missouri.edu. Both the Office for Civil Rights & Title IX and the RSVP Center can provide assistance to students who need help with academics, housing, or other issues.

Statement on Attendance: Federal regulations for financial aid require the student financial aid office to document the attendance of students who have received federal financial aid if they do not successfully complete any courses during the term. As a result, the last day of attendance (or activity) for any student receiving an F, U, or FN in this course will be recorded in the grade roster and reported to the financial aid office. Based on the last day of attendance, students may be required to repay a portion of their financial aid award for the semester. A student's last day of attendance (or activity) is the last day on which a student participates in an academically-related activity at the University. These include: attendance in class, lab, or an instructor's office hours, the completion of an assignment or examination, an appointment with a professor or e-mail correspondence regarding course material. Please note that discussing a course withdrawal or notifying the instructor of an absence in class does not constitute participation for financial aid purposes. Moreover, any office hour visits or email correspondence must be related to the course material.

Attendance will be recorded using iClicker/REEF's geolocation feature. You must physically be in class with a smart phone, tablet or laptop to be counted as present. (iClicker remotes cannot be used.) I will provide instructions on how to use iClicker/REEF in class. Contacts for technical help: https://www.iclicker.com/students, support@iclicker.com, 1-866-209-5698. Support is available Mon-Thu 8AM-10PM and Fri 8AM-9PM.

No component of your grade will be based on attendance. Low attendance may be recorded in MUConnect Early Alert and non-attendance may be grounds for administrative withdrawal, per University policy.