ECO 5426: Econometric Analysis 1

Syllabus

Fall 2024

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Office Hours: Wednesday and Thursday, 2:00-3:00pm, in Matherly 331

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Office Hours: Tuesday 4:00-5:00pm, in Matherly 301A

Course Time and Location

Meeting Times: M, W | Period 3-4 (9:35am-11:30am)
Location: Matherly Hall 114

Course Description

This course provides an introduction to research design for analyzing data in economics. We will introduces econometric models, focusing on examining econometric issues in empirical microeconomics and public policy analysis. The emphasis is on identifying and estimating causal effects. It supplements topics covered in an introductory econometrics course with a focus on the practical application of econometric methods to empirical problems.

The course provides background on issues that arise when analyzing nonexperimental social science data and offers tools useful for applied research. By the end of the course, students should have a firm grasp of research designs that lead to convincing analysis and be comfortable working with datasets.

Note: If you have already taken ECO 4422 at UF, you may want to consider enrolling in a different course, as this one has significant overlap with ECO 4422.

Textbooks

Highly Recommended Textbooks

- *Introduction to Econometrics (4th edition)* by James H. Stock & Mark W. Watson, published by Pearson (SW).
- *Mastering 'Metrics: The Path from Cause to Effect* by Joshua D. Angrist and Jörn-Steffen Pischke, Princeton University Press (MM).

I will be mainly following the above textbooks in my lectures. It is fine that you use the previous version, just make sure you are reading the right chapter.

Optional Textbooks

If you want to dig deeper:

- *Mostly Harmless Econometrics: An Empiricist's Companion.* by Joshua D. Angrist and Jörn-Steffen Pischke, Princeton University Press.

An alternative for SW:

- *Introductory Econometrics: A Modern Approach.* by Jeffrey M. Wooldridge, published by Cengage Learning.

Course Website: Canvas

I will post my lecture slides on Canvas course site and other readings for selected topics. You will be REQUIRED to read the textbooks and additional papers in the required readings. You will submit all your assignments through Canvas. You will also be responsible for every announcement posted on Canvas. Please check the web page regularly.

Office Hours

In addition to the regular office hour every week, I will also be available to schedule individual office hours to discuss any individual concern or academic and professional questions outside of the course material. You can send me an email to schedule meetings.

The TA office hours are held to help you with your questions on problem sets. You can also email the TA for individual questions or concerns about the problem sets.

Software and Programming

This course will use R as the statistical software. Some of the problem sets will include empirical analysis by using R.

Download and Install R and RStudio from https://posit.co/download/rstudio-desktop/#download.

It is recommended that you install R and RStudio Desktop (both free and open source) on your personal computer. If for some reason that is not convenient for you, R and RStudio are installed on many computers around campus (e.g., Marston Science Library), as well as on UF apps: https://info.apps.ufl.edu/published-applications/.

Grading

The grade will count the assessments using the following proportions:

Exam 1	30%
Exma 2	30%
Assignments	40%
Total	100 %

Grades will be rounded to the nearest percentage point and you will obtain your letter grade accordingly. Your final letter grade will be determined as follows:

A	92.00 – 100
A-	90.00 – 91.99
B+	88.00 – 89.99
B	82.00 – 87.99
B-	80.00 – 81.99
C+	78.00 – 79.99
C-	70.00 – 71.99
D+	68.00 – 69.99
D	62.00 – 67.99
D-	60.00 – 61.99
E	0 – 59.99

The scale listed above is firm. Final course grades will not be rounded. Students should assume that 91.99 is followed by an infinite number of nines and is an A-. The rest of the cut-offs follow accordingly.

Make-up assignments, quizzes and exams will be arranged ONLY for absences that are explicitly covered by the UF Attendance Policy (https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/). Whenever possible, you should reach out at least five business days **in advance** to arrange a make-up exam or assignment. Of course, this will not always be possible. Unforeseen absences and emergencies occur and can be excused without such advance notice. In most cases, you will be asked to provide evidence or documentation of an absence that is explicitly excused by the UF Attendance Policy. Absences related to religious holidays and worship do not require this documentation.

Exam

There will be two noncumulative exams which will take place during the regular class meeting. The tentative dates for the exams are as follows:

Exam 1	October 9, Wednesday, 9:35am-11:30am, Matherly 114
Exam 2	December 4, Wednesday, 9:35am-11:30am, Matherly 114

These exams will be closed-book and closed-note. You may use a basic four-function or scientific calculator. Graphing calculators are not permitted.

Make-up exams must be arranged BEFORE the exam date/time and will only be offered for UF-related conflicts and religious holidays. Unexcused absences from exams results in a grade of 0.

Exam questions will be based on the materials discussed in class and will be simlilar with Assignments and Practice Exams.

Assignments

There will be SIX assignments in this course. All assignments are due BEFORE the class time period on the due date. You should submit your assignments via Canvas. The assignments should be typed and submitted work should be organized.

You may work in groups. You are, however, required to submit INDIVIDUAL problem sets for grading. Copying another student's work is not permissible. Submitting the same assignment with other student(s) results in grade of 0.

Both for the exams and assignments, you are required to SHOW all of your work and provide thorough explanations to receive full credits. For assignments including programming questions, you should submit your code and output. Attach all of your work.

Late assignments will not be accepted.

Course Policies

Class Modality

This is a fully in-person course. Lectures will not be streamed nor recorded.

Professionalism and Honor Code

Students are bound to not cheat or plagiarize, and are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: 'On my honor, I have neither given nor received unauthorized aid in doing this assignment.'"

You should familiarize yourself with the UF Student Honor Code (https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/). Cheating and plagiarism are not the only violations of this policy. Making false or misleading statements to procure an improper academic advantage, failing to properly cite quotations, and unauthorized collaboration or consultation of resources are also violations. Importantly, ignorance of a policy is not a valid reason for violating it.

Generative Artificial Intelligence

The Department of Economics faculty assume that all work that is submitted for grading is written by the student whose name it bears, and that it represents their ideas and work. Accordingly, students are not permitted to use generative AI when completing assignments, quizzes, exams, or other graded work unless their instructor has expressly granted that permission. Unauthorized use of generative AI may constitute cheating and/or plagiarism. Such violations of the UF Student Honor Code will be reported to the UF Dean of Students Office and will be subject to severe sanctions

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disabilities Resource Center (392-8565; https://disability.ufl.edu/), providing appropriate documentation. Once registered, students will receive an accommodation letter that can be presented to the instructor when requesting accommodations. Please register at the beginning of the course if seeking accommodations.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/.

UF Teaching Center

The UF Teaching Center offers guidance on study skills and tutoring services. You can find more information at: https://umatter.ufl.edu/office/teaching-center/.

Health Counseling and Emergencies

U Matter, We Care If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.
Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.
Sexual Assault Recovery Services (SARS) : Student Health Care Center, 392-1161.
University Police Department: at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Course Schedule

DATE	TOPICS	ASSIGNMENTS
Week 01 M August 26	Syllabus	
W August 28	Intro to Causality *SW* Chapter 1, *MM* Intro	
Week 02 M September 2	NO CLASS: LABOR DAY	
W September 4	Randomized Trials *SW* Chapter 13, *MM* Chapter 1	HW1 Available
Week 03 M September 9	Review of Simple Linear Regression *SW* Chapter 4&5	**HW1 Due**
W September 11	Omitted Variable Bias *SW* Chapter 6, *MM* Chapter 2	HW2 Available
Week 04 M September 16	Multiple Linear Regression *SW* Chapter 6&7	
W September 18	Multiple Linear Regression	**HW2 Due**
Week 05 M September 23	Multiple Linear Regression	
W September 25	Applications + R Session	HW3 Available
Week 06 M September 30	Nonlinear Regression *SW* Chapter 8	
W October 2	Nonlinear Regression	**HW3 Due**
Week 07 M October 7	Review	
Wednesday, October 9	**Exam 1**	
Week 08 M October 14	Assessing Studies *SW* Chapter 9	
W October 16	Instrument Variable *SW* Chapter 12, *MM* Chapter 3	
Week 09 M October 21	Instrument Variable	HW4 Available
W October 23	Applications + R Session	
Week 10 M October 28	Differences-in-Differences *SW* Chapter 13, *MM* Chapter 5	**HW4 Due**
W October 30	Differences-in-Differences	HW5 Available
Week 11 M November 4	Applications + R Session	

DATE	TOPICS	ASSIGNMENTS
W November 6	Regression Discontinuity Design *SW* Chapter 13, *MM* Chapter 4	 **HW5 Due**
Week 12 M November 11	 NO CLASS: VETERANS DAY	
W November 13	Regression Discontinuity Design	HW6 Available
Week 13 M November 18	 Applications + R Session	
W November 20	Binary Model *SW* Chapter 11	**HW6 Due**
Week 14	NO CLASS: THANKSGIVING BREAK	
Week 15 M December 2 **Wednesday,December 4**	 Review **Exam 2**	

The schedule is tentative and subject to change.