

ECO 5435: Economic Data Analysis

Syllabus

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Course Description & Objectives

This course offers a hands-on introduction to economic data analysis, focusing on the practical application of statistical and econometric tools using the Stata software. Students will learn how to manage, explore, and analyze data, bridging the gap between economic theory and empirical research. Through real-world, publicly available datasets—primarily from U.S. economic and demographic sources—students will develop the skills needed to investigate economic relationships, interpret results, and communicate findings effectively. The course emphasizes reproducible coding practices and culminates in an independent empirical research project. There are no prerequisites or corequisites for this course.

At the end of this course, you will be able to:

1. Work with different types of economic data—including cross-sectional, time-series, and panel data—by applying appropriate data management and analysis techniques using Stata.
2. Code confidently in Stata to clean, transform, explore, and analyze data; create visualizations; generate summary statistics; and apply statistical and econometric methods.
3. Run and interpret regression models to investigate economic relationships and assess empirical patterns in real-world data.
4. Design and carry out an empirical research project by formulating a question, preparing data, conducting analysis, and presenting results.

Exams, Assignments & Grading

Grades will be distributed as follows: *assignments* 40%, *online quizzes* 10%, *take-home midterm* 25% due on **Monday, October 27th, 2025**, and *final project* 25% (due on **Thursday December 11th, 2025**).

All of the assignments will require the use of Stata. You are encouraged to collaborate with other students on your assignments, but you should submit your own individual assignment for grading. Submissions after the due date will **not** be accepted.

The online quizzes will be based solely on the lecture notes (slides). Each quiz will be available for one whole week, which is more than enough time to complete it, hence no extensions or exemptions will be granted. For the quizzes, you are not allowed to collaborate with other students. Quizzes are auto-graded. If you would like additional feedback on the quizzes, you can email the instructor to set up a meeting or attend office hours.

The final project will consist of writing a short empirical research paper using the tools learned in class. You may work in groups of two or three for the final project. Additional information about the project will be provided after the midterm.

For assignments, midterm and final project, We will make every effort to provide grades and feedback within two weeks of the due date.

In this course, detailed rubrics are provided for all assignments and discussions in Canvas. Rubrics will be used to grade and provide feedback on your work. This feedback will include the identification of successful areas of your submission as well as areas for improvement. If you would like additional feedback on these written assignments, you can email your instructor (we will respond to your inquiries within 48 hours on weekdays) or attend office hours.

Letter grades will be determined as follows: [0-60) E; [60-70) D; [70-77) C; [77-80) B-; [80-85) B; [85-90) B+; [90-92) A-; [92-100] A. Note that 92.0 is A, while 91.99 is A-. Final course grades will not be rounded.

Student Responsibilities

Students are expected to take an active role in their learning and to be aware of the expectations outlined for this course. The following responsibilities are essential to ensure a productive and successful experience.

- Carefully read the syllabus for unique features of this course
- Continued enrollment in this course is equivalent to acceptance of all stated responsibilities, policies, and due dates. If there is anything that is unclear, talk to me immediately. Waiting until the end of the term often results in less favorable outcomes.
- Students are expected to watch lecture videos and complete assigned readings according to the schedule that is posted at the end of the syllabus and included in the Canvas course site.
- Students are expected to complete 11 assignments and 11 quizzes. These assignments and quizzes are related to the topics covered in the lecture videos and are intended to offer you practice.

Course Communications

All important course announcements concerning the class will be made via UF email. You are responsible for all information communicated through this channel. We assume that you are checking your UF email account at least once per day. Most of our one-on-one communication will occur via UF email (and Canvas). We will always respond to these emails within 48 hours, and typically much quicker. If you have not received a response within 48 hours, please assume that we have not seen your email and resend it.

Lecture Notes & Textbooks

The main materials for this course will be available on Canvas, thus no textbook is required. Nonetheless, the following textbooks are useful references for data analysis and Stata. Some of the lecture notes will be based on them.

- Békés, G., & Kézdi, G. (2021). Data Analysis for Business, Economics, and Policy. Cambridge University Press, 1st Edition. Online resources: <https://gabors-data-analysis.com/>
- Cameron, A. C., & Trivedi, P. K. (2013). Regression analysis of count data. Econometric Society Monograph No.53, Cambridge University Press, 2nd edition.
- Daniels, L. & Minot, N. (2019). An Introduction to Statistics and Data Analysis Using Stata. Sage, 1st Edition.

- Mehmetoglu, M., & Jakobsen, T. G. (2022). Applied Statistics Using Stata: A Guide for the Social Sciences. Sage, 2nd Edition. Online resources: <https://study.sagepub.com/mehmetogluandjakobsen2e>
- Stock, J. H., & Watson, M. W. (2019). Introduction to Econometrics. Pearson, 4th Edition.
- Weinberg, S. L., & Abramowitz, S. K. (2020). Statistics using Stata: An integrative approach. Cambridge University Press, 2nd Edition.

The textbooks by Daniels & Minot (2019), Mehmetoglu & Jakobsen (2022), and Weinberg & Abramowitz (2020) provide a comprehensive introduction to statistics and data analysis using Stata. Similarly, the book by Békés & Kézdi (2021) provides a thoroughly explanation of the underlying process of data analysis using Stata, R, and Python. Stock & Watson (2019) is an introductory econometrics textbook that reflects modern theory and practice. Cameron & Trivedi (2013) is a textbook that describes regression methods for count data, where the response variable is a non-negative integer.

In addition, Stata has an extensive array of online resources: www.stata.com/learn/ and www.stata.com/features/.

Another important online resource to learn how to use Stata (or other common statistical package) for the analysis of data is the UCLA Institute for Digital Research & Education: <https://stats.idre.ucla.edu/ucla/about/>

Minimum Technology Requirements

The University of Florida expects students entering an online program to acquire computer hardware and software appropriate to their degree program. Most computers are capable of meeting the following general requirements. A student's computer configuration should include:

- Webcam
- Microphone
- Broadband connection to the internet and related equipment (cable/DSL modem)
- Microsoft Office Suite installed (provided by the university)
- Individual colleges may have additional requirements or recommendations, which students should review before starting their program.

Materials/Supply Fees

There is no supply fee for this course.

Zoom

Zoom is an easy-to-use video conferencing service available to all UF students, faculty, and staff that allows for meetings of up to 100 participants. You can find resources and help using Zoom at the [University of Florida's Zoom](#) website.

Course Outline & Schedule

August 21–24

Course Orientation

August 25–31

Module 1: Cross-Sectional Data in Stata (Gross Domestic Product)

- Quiz #1 due September 1
- Assignment #1 due September 1

September 1–7

Module 2: Time-Series Data in Stata (Population)

- Quiz #2 due September 8
- Assignment #2 due September 8

September 8–14

Module 3: Panel Data in Stata (Labor Market)

- Quiz #3 due September 15
- Assignment #3 due September 15

September 15–21

Module 4: Federal Reserve Economic Data (Housing Market)

- Quiz #4 due September 22
- Assignment #4 due September 22

September 22–28

Module 5: Introduction to Statistical Inference

- Quiz #5 due September 29
- Assignment #5 due September 29

September 29 – October 5

Module 6: Bivariate Analysis (Consumption and Consumer Sentiment)

- Quiz #6 due October 6
- Assignment #6 due October 6

October 6–12

Module 7: Bivariate Analysis (Economic Growth)

- Quiz #7 due October 13
- Assignment #7 due October 13

October 13–19

Module 8: Linear Regression

- Quiz #8 due October 20

October 20–26

Midterm

- Due October 27

October 27 – November 2

Module 9: American Community Survey

- Quiz #9 due November 3
- Assignment #8 due November 3

November 3–9

Module 10: Binary Dependent Variables

- Quiz #10 due November 10
- Assignment #9 due November 10

November 10–16

Module 11: Count Regression

- Quiz #11 due November 16
- Assignment #10 due November 17

November 17–23

Module 12: Causality and Treatment Effects

- Quiz #12 due November 24
- Assignment #11 due December 1

December 1–10

Final Project

- Due December 11

Policies

Communication policy

It is important to recognize that the online classroom is a classroom, and certain behaviors are expected when you communicate with both your peers and your instructors. These guidelines for online behavior and interaction are known as netiquette.

Security. Remember that your password is the only thing protecting you from pranks or more serious harm.

- Don't share your password with anyone.
- Change your password if you think someone else might know it.
- Always log out when you are finished using the system.

General Guidelines. When communicating online:

- Treat the instructor with respect, even via email or in any other online communication.
- Always use your professors' proper title: Dr. or Prof., or if you are unsure use Mr. or Ms.
- Unless specifically invited, don't refer to a professor by their first name.
- Use clear and concise language.
- Remember that all college-level communication should have correct spelling and grammar.
- Avoid slang terms such as "wassup?" and texting abbreviations such as "u" instead of "you."
- Use standard fonts such as Times New Roman and use a size 12 or 14 point font.
- Avoid using the caps lock feature AS IT CAN BE INTERPRETED AS YELLING.
- Limit and possibly avoid the use of emoticons like :) .
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or be construed as being offensive.
- Be careful with personal information (both yours and others).
- Do not send confidential information via email.

Email. When you send an email to your instructor, teaching assistant, or classmates:

- Use a descriptive subject line.
- Be brief.
- Avoid attachments unless you are sure your recipients can open them.
- Avoid HTML in favor of plain text.
- Sign your message with your name and return email address.
- Think before you send the email to more than one person. Does everyone really need to see your message?
- Be sure you **REALLY** want everyone to receive your response when you click, "Reply All."
- Be sure that the message author intended for the information to be passed along before you click the "Forward" button.

Zoom. When attending a Zoom class or meeting:

- Do not share your Zoom classroom link or password with others.
- Even though you may be alone at home, your professor and classmates can see you! While attending class in your pajamas is tempting, remember that wearing clothing is not optional. Dress appropriately.
- Your professor and classmates can also see what is behind you, so be aware of your surroundings.
- Make sure the background is not distracting or something you would not want your classmates to see.
- When in doubt, use a virtual background. If you choose to use one, you should test the background out first to make sure your device can support it.
- Your background can express your personality, but be sure to avoid using backgrounds that may contain offensive images and language.
- Mute is your friend, especially when you are in a location that can be noisy. Don't leave your microphone open if you don't have to.
- If you want to speak, you can raise your hand (click the "raise hand" button at the center bottom of your screen) and wait to be called upon.

Make-Up Policy

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

Students Requiring Accommodations

Students with disabilities requesting accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

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. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. 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 <https://ufl.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

University Honesty Policy

UF students 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." The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Digital Millennium Copyright Act (DMCA) Notice

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Recording Policy

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.