

ECO 5435: Economic Data Analysis

Spring 2020: Monday/Wednesday 4:05 - 6:00 pm at CSE E231

Instructor: Prof. Hector H. Sandoval
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MAT 325
Office hours: Monday 1:45 - 3:45 pm (or by appointment)

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MAT 341
Office hours: Friday 9:00 am - 12:00 pm

Course Description

This course will provide students with a comprehensive overview of data management, exploring, and analysis. It is designed to serve as a bridge between economic theory, statistics/econometrics, and practical work. The emphasis throughout the class will be placed on providing hands-on experience with data analysis using Stata. The course will use actual individual- and aggregate-level data, with particular attention paid to the United States and Florida economies. The individual-level data (microdata) will come from ongoing surveys, including the American Community Survey (ACS), which provides information on demographics, housing, economics, and other topics; and the Panel Study of Income Dynamics (PSID), which gathers data on the family as a whole and on individuals residing within the family, emphasizing the dynamics and interactive aspects of family economics, demography, and health. The aggregate-level data will come from federal agencies, such as the Bureau of Economic Analysis (BEA), Bureau of Labor Statistics (BLS), and the Federal Reserve Economic Data (FRED), among others. At the end of the course, students will know how to use real-world data to perform statistics and econometric analyses.

Students should be comfortable with introductory statistical concepts covered in STA 2023 (or equivalent). Training with Stata will be provided in this course.

Exams, Assignments & Grading

Grades will be distributed as follows: assignments 55%, participation 10% , midterm 15% (**Tuesday February 24, 2020**), and final project 20% (due on **Wednesday April 29th, 2020**). For the assignments, you are encouraged to collaborate with other students, but you should submit your own individual problem sets for grading. Problem sets submitted after the deadline are **not** accepted. The final project will involve writing a small empirical research paper using the tools learned in class. You may work in groups of two or three for the final project.

Lecture Notes & Textbooks

The main materials for this course will be the lecture slides available on Canvas. The textbooks by

Acock, Mehmetoglu & Jakobsen, and Kohler & Kreuter provide a comprehensive introduction to data analysis using Stata. The book by Freedman is a good introduction to Statistics that covers fundamentals using real examples to illustrate the techniques. Stock & Watson is an introductory econometrics textbook that reflects modern theory and practice.

- Acock, A. C. (2018). *A Gentle Introduction to Stata*. Stata press, 6th Edition.
- Freedman, D., Pisani, R., & Purves, R. (2007). *Statistics*. W. W. Norton & Company, Inc., 4th Edition.
- Mehmetoglu, M., & Jakobsen, T. G. (2016). *Applied Statistics Using Stata: A Guide for the Social Sciences*. Sage. Online resources: study.sagepub.com/mehmetogluandjakobsen
- Kohler, U., & Kreuter, F. (2012). *Data Analysis Using Stata*. Stata press, 3rd Edition.
- Stata online resources: www.stata.com/learn/ and www.stata.com/features/
- Stock, J. H., & Watson, M. W. (2019). *Introduction to Econometrics*. Pearson 4th Edition.

Policies

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 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.

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

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.

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.

Course Outline & Schedule (subject to change)

MONDAY	WEDNESDAY
Jan 6th Lecture 1: Introduction to Stata (GDP)	8th
13th Lecture 2: Handling time-series (Population)	15th
20th Holiday - NO CLASS	22nd Lecture 3: Data management (Labor market) <i>Assignment #1 due</i>
27th Lecture 4: Sampling	29th <i>Assignment #2 due</i>
Feb 3rd Lecture 5: Inference	5th <i>Assignment #3 due</i>
10th Lecture 6: Bivariate analysis (Consumption & consumer confidence)	12th <i>Assignment #4 due</i>
17th Lecture 7: Economic growth	19th <i>Assignment #5 due</i>
24th Lecture 8: Bivariate regression <i>Midterm</i>	26th
Mar 2nd Spring break - NO CLASS	4th Spring break - NO CLASS
9th Lecture 9: Multiple regression	11th
16th Lecture 10: American Community Survey (ACS)	18th <i>Assignment #6 due</i>
23rd Lecture 11: Causality & RCT	25th <i>Assignment #7 due</i>
30th Lecture 12: Panel Study of Income Dynamics (PSID)	Apr 1st <i>Assignment #8 due</i>
6th Lecture 13: Federal Reserve Economic Data (Housing market)	8th NO CLASS
13th Lecture 14: Limited dependent variables (Home mortgage)	15th <i>Assignment #9 due</i>
20th Student presentations <i>Assignment #10 due</i>	22nd Student presentations (cont.)
27th	29th <i>Final project due</i>