

Applied Econometrics (ECON 403B)
UCLA Winter 2019

Syllabus

Instructor:	Dr. Patrick D. Convery
Office:	Bunche 8240
Office Hours:	Tue & Thur, 4:45PM - 5:45PM
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Time and Location

Monday and Wednesday 3:30PM-4:45PM, Kaplan Hall A65

Course Description

Building upon the foundation in Econ 403A, this course uses those methods and econometric tools to analyze data sets from real world applications in economics, business, and government. Topics include time series, cross-sectional data, and instrumental variables.

Textbooks

1. (Required) Analysis of Financial Time Series (3rd Edition) by Ruey S. Tsay. Wiley.
2. (Recommended) Econometric Analysis of Cross Section and Panel Data, Wooldridge.
3. (Recommended) Econometric Analysis (7th Edition) by William H. Greene. Pearson.
4. (Recommended) Modeling Financial Time Series with S-plus by E. Zivot and J. Wang, 2005, 2nd Ed., Springer: New York.

Prerequisites

Econ 403A

Computation of Course Grade

- 5% Bloomberg Market Concepts (BMC) Certification
- 45% Group Projects (Three projects, 15% each)
- 20% Case Study Report & Final Presentation
- 30% Final Exam (Cumulative)

Final Report and Presentation

This is completed and presented in your group. It is essentially a mini case study of a data set your team will select from a list provided by the professor. They are allocated on a first-come, first-served basis and any ties are decided by the professor.

- Every group will analyze and report on a different data set. To ensure that your project is feasible you will need to hand in a proposal by Friday of the 3rd week of classes. The group presentations (10 minutes + 5 minutes of Q&A) will be delivered to the class during the 10th week and Finals week of classes. The report itself is due to the professor via email by 11:59pm on Friday of Finals week.
- The objectives are to (1) produce a pragmatic report, oriented toward actionable insights using econometrically sound analytic techniques and (2) communicate those techniques and insights effectively while fielding questions from the teacher and your peers.
- The report / presentation content will consist of these elements
 - The Goal - problem statement
 - Econometric approach - how do you identify causality?
 - Description of the data, and pre-processing & analytic methods used
 - Economic Insights Derived
 - Summary and Future Work

Course Enforced Policies

- You need to bring a valid form of picture ID on scheduled days of exams. You will not be allowed to take the exam without one.
- The use of electronic devices such as cellphones, tablets, and devices that allow you to communicate with others, is strictly banned. You will be reported for cheating if caught using them during exams. Therefore, please turn off all your electronic devices during exams.
- Late project assignments will not be accepted under any circumstances.
- There are no extra credit assignments available.
- Scientific/graphing calculators are allowed and recommended during exams.
- All grades are final when filed by the instructor on the Final Grade Report.

Assignment Enforced Policies

- Homework and project answers must be provided in the order in which they are asked on the respective assignment. If they are not in order, you will be deducted 25% of the total points for the respective assignment.
- Homework and projects must be typed using LaTeX, and R-codes must be included via R Markdown.
- There are no make up projects or homework assignments. All projects/assignments are due by the end of the lecture on the scheduled due date. Late and/or emailed solutions for projects or homework assignments will not be accepted. No exceptions will be made on this.

- Both projects and homework solutions must be submitted with the respective R code. Therefore, incomplete project and/or homework solutions (e.g., missing the respective R code), will not receive any credit.
- You are advised to start working on the assignments as early as possible in order to have enough time to troubleshoot any R issue(s) you may encounter.
- Although I encourage you to work together on the homework assignments, you must submit your own solution for each one.

R Tutorials/Reference Materials

You can use either R or RStudio (both are free) the only difference between them is the platform on which you write/run your codes.

Please refer to the R Bootcamp resources posted on the course website.

Academic Dishonesty

Any cases of academic dishonesty will be reported to the Office of the Dean of Students. For more details please refer to the Office of the Dean of Students website at <http://www.studentgroups.ucla.edu/dos/>

Disabled Students and the Center for Accessible Education (CAE)

Any student with a preexisting illness or condition who requests special arrangements must (a) qualify under CAE rules for such special arrangements and (b) must take the exam with CAE. Any such arrangements with CAE must be made the first week of classes. The instructor must be informed of any such arrangement in the first week of classes. For additional information and the qualification conditions of the Center for Accessible Education, please visit their website at <http://www.cae.ucla.edu/>. All other students must take the exam at the scheduled time under the same time constraints. It is the responsibility of all students who request special arrangements with CAE to be familiar with all of their rules as well as the rules of this class.

Tentative Course Schedule

Week	Lecture Topics	Chapters
1 (Jan 7, 9)	Introduction & Modeling and Forecasting Trend	Lecture Notes & 1 ^a
2 (Jan 14, 16)	Modeling and Forecasting Seasonality	Lecture Notes & 1 ^a
3 (Jan 21, 23)	January 21 -No class (Martin Luther King, Jr. holiday)	
	Project 1 (Jan 23)	
	Modeling and Forecasting I (MA & AR)	2 ^a
4 (Jan 28, 30)	Modeling and Forecasting I (MA & AR) -continued	2 ^a
5 (Feb 4, 6)	Modeling and Forecasting II (ARMA & ARIMA)	2 ^a
6 (Feb 11, 13)	Regression with Time Series (VAR & VMA)	8 ^a
	Project 2 (Feb 11)	
7 (Feb 18, 20)	February 18 -No class (President's Day holiday)	
	Volatility Modeling and Special Topics	3 ^a , 11 ^a
	Cross-sectional & Panel Data	6 ^b , 7 ^b
8 (Feb 25, 27)	Instrumental Variables (IV) -Part I (Two-Stage Least Squares)	5 ^b
	Project 3 (Feb 27)	
9 (Mar 4, 6)	Instrumental Variables (IV) -Part II (System Estimation)	8 ^b
10 (Mar 11, 13)	Group Presentations	
	Case Study Report (March 13)	
11 (TBD)	Final Exam (March 22)	Cumulative

^aTsay

^bWooldridge