

Syllabus
BUAN/MECO 6312.501: Applied Econometrics and Time Series Analysis
Spring 2024
Jindal School of Management
The University of Texas at Dallas

Course Meeting Time

Wednesdays 7:00pm - 9:45pm, JSOM 12.218

Contact Information

Instructor: Alexander Chudik
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Office Hours: by appointment

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Office Hours: by appointment

Course Description

This course teaches students commonly used econometric techniques to analyze cross-sectional, time series and panel data sets. Emphasis is on the application and basic understanding of econometric techniques.

Prerequisites

Basic knowledge of algebra, probability and statistics, and some familiarity with computer-based data analysis: OPRE 6301 or SYSM 6303 or FIN 6306.

Textbook and Software

Required textbook: Hill, Griffiths and Lim., *Principles of Econometrics*, 5th edition, Wiley, 2018.

The course requires the use of a software package. I will use STATA and will post examples in STATA. However, if you prefer to use other software (for example Matlab, R, Python, E-views, etc.), I am fine with this too.

STATA is not available at the computer lab, but it is available on the server. I will arrange remote access to the server to all of you at the beginning of the semester, so that you will not have to purchase a license.

Lecture notes, assignment solutions, codes and any additional material will be posted on the [eLearning website](#) of this course.

Textbooks can be ordered online through the UT Dallas Bookstore <http://www.bkstr.com/texasatdallasstore/home> or other online vendors (e.g. amazon).

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student Access Ability accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Course Schedule

WEEK (Dates)	TOPIC/LECTURE/QUIZZES	READING	HOMEWORK ASSIGNMENTS	DUE DATE
Week 1 (Jan 17)	Lecture 1: Introduction and Probability Primer Remainder: Check if you have access to Stata Server	Chapter 1 Probability Primer		
Week 2 (Jan 24)	Lecture 2: Simple Linear Regression Model Remainder: Register for midterm and final exam early!	Chapter 2	Assignment 1	Feb 6
Week 3 (Jan 31)	Lecture 3: Confidence Intervals and Hypothesis Testing	Chapter 3		
Week 4 (Feb 7)	Lecture 4: Prediction, Goodness-of-Fit and Modelling Issues	Chapter 4	Assignment 2	Feb 20
Week 5 (Feb 14)	Lecture 5: Multiple Linear Regression Model	Chapter 5		
Week 6 (Feb 21)	Lecture 6 F tests, Omitted and Redundant Variables, Selection Criteria and Collinearity	Chapter 6	Assignment 3	Feb 27

WEEK (Dates)	TOPIC/LECTURE/QUIZZES	READING	HOMEWORK ASSIGNMENTS	DUE DATE
Week 7 (Feb 28)	Lecture 7 Indicator Variables QUIZ 1 REMAINDER: DID YOU REGISTER FOR EXAMS?	Chapter 7	Assignment 4	Mar 19
Week 8 (Mar 6)	Midterm Exam in the UTD Testing Center, March 5-7 (No class)			
Week 9 (Mar 13)	Spring Break (No class)			
Week 10 (Mar 20)	Lecture 8 Heteroskedasticity	Chapter 8	Assignment 5	Mar 26
Week 11 (Mar 27)	Lecture 9 Instrumental Variables	Chapter 10	Assignment 6	Apr 2
Week 12 (Apr 3)	Lecture 10 Time Series – part 1	Chapter 9	Assignment 7	Apr 9
Week 13 (Apr 10)	Lecture 11 Time Series – part 2, VAR models	Chapter 12 Chapter 13	Assignment 8	Apr 16
Week 14 (Apr 17)	Lecture 12 Panel Data	Chapter 15		
Week 15 (Apr 24)	Lecture 13 Review QUIZ 2			
Week 16 (May 1)	Final Exam in the UTD Testing Center, April 30-May 2 (No class)			

The course schedule is subject to change at the discretion of the Professor.

Grading

The final grade is computed based on two (cumulative) exams, two in-class quizzes, and 8 homework assignments. Both exams are taken at the [UTD Testing Center](#):

Exam 1 (120 minutes, 34 points) will take place on **March 5-7** (can be taken during the UTD test center opening hours).

Exam 2 (120 minutes, 34 points) will take place on **April 30-May 2** (can be taken during the UTD test center opening hours).

Exams are closed book. However, you are allowed to bring with you one sheet (8.5 x 11) of hand-written notes, double-sided (front and back). The notes will not be returned to you upon the completion of the exam. You can bring with you a testing-center approved scientific calculator, or you can request a TI-30XIIS calculator from the testing center. See <https://ets.utdallas.edu/testing-center/students/> for the testing center student guidelines. Please note the testing center registration deadlines: **All students must reserve a time slot no later than 48 hours prior to exam appointment time** at <https://ets.utdallas.edu/testing-center/students/>. **Please reserve a time slot early at the beginning of the term for both exams.** Walk-in appointments are not allowed. The exam dates are fixed. Please plan ahead to make sure you can attend.

Exams are mandatory. If you cannot take the exam on the scheduled dates, you must contact me as soon as possible and provide documentation of exigency. Student who misses exam must take the make-up exam at the time of instructor's choosing. If the student cannot make that time, he/she will receive a zero for the exam.

Quizzes are mandatory and take place during the class. First quiz will take place on March 6 and the second quiz will take place on April 24. Quizzes will be done in eLearning – please make sure to bring your laptop to class with you. If you cannot take the quiz on the scheduled dates, you must contact me as soon as possible and provide documentation of exigency. I reserve the right to assign a grade of zero for the reasons I deem less than exigent. Student who misses the quiz could, at the instructor's discretion, be permitted to be exempted from the quiz.

Homework assignments: You will have 8 homework assignments (3 points each). All empirical questions must be submitted together with their respective codes. You are encouraged to discuss your work with classmates. **However, each one of you must finally write his/her own homework, including his/her own code.** DO NOT use past, online or AI solutions (not even to “verify” your answers). A student who is caught cheating (including “verifying” answers with past solutions or using AI like ChatGPT) will not only receive 0 credit for the assignment, but in addition – will lose 2 points off his/her final grade for each such violation!

Homework assignments that are submitted late will receive at most 50% of the original points. If you have an emergency, contact me immediately and before the due date.

Final Grade Calculation: Exam 1: 34%, Exam 2: 34%, Quiz 1: 4%, Quiz 2: 4%, Homework: 24%.

Letter Grade Scale:

Score	Letter Grade
92 - 100	A
88 - 91.99	A-
84 - 87.99	B+
80 - 83.99	B
76 - 79.99	B-
72 - 75.99	C+
60 - 71.99	C
0 - 59.99	F

Extra Credit: I have a strict no extra credit policy. No additional work for extra credit is possible in this class.

Policies

Communication: E-mail is the best way to reach Prof. Chudik. Email is also recognized as an official mode of university correspondence. You are responsible for checking your email frequently to stay current with university-related communications, some of which may be time-critical.

Class participation is not graded, but regular class participation is expected. Please turn off your mobile phones and other electronic devices to avoid disturbing. Please arrive on time and leave after class ends.

UT Dallas Syllabus Policies and Procedures: The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

Comet Creed

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the professor.