Course Syllabus
BUAN/MECO 6312 – Applied Econometrics and Time Series Analysis
Spring 2025

Instructor: Jonathan Scott

Course Title: Applied Econometrics and Time Series Analysis

Course Number: BUAN/MECO 6312 (Section 001 & 003)

Modality: In-person

Time and Location:

Section 001: Mondays, 4:00 pm – 6:45 pm; JSOM 12.206

Section 003: Thursdays, 4:00 pm – 6:45 pm; JSOM 12.214

Office: JSOM 14.403
Office Hours: by appointment
Email: jscott@utdallas.edu

Teaching Assistant: Kim Haeun
Office Hours: by appointment
Email: haeun.kim2@utdallas.edu

Prerequisites

Students are expected to have a basic understanding of linear algebra and calculus.

OPRE 6301, SYSM 6303, or FIN 6306 recommended.

Course Description

This course provides students with a practical foundation in econometrics through its theory and applications. The course will focus on modern empirical tools used in economic analysis to make meaningful, data-driven decisions.

Student Learning Objectives/Outcomes

Students will develop a basic understanding of econometric tools used for data analysis. Intuition will be derived through data applications and real-world examples. Upon successful completion of this course, students will be able to:

1. Develop a thorough understanding of causal relationships in the context of econometric analysis,

2. Use regression analysis to derive parameter estimates from empirical data using statistical software,
3. Perform forecasts on economic data by implementing basic time series methods,
4. Answer economically relevant research questions using econometric models.

Required Textbooks and Materials

Textbook: "Introductory Econometrics: A Modern Approach" (7th Edition), by Jeffrey M. Wooldridge. ISBN: 978-1-337-55886-0.

Software: Stata recommended, but you may use other software, such as R, if you prefer. Stata is NOT available in the computer lab, but it is available on the server. I will arrange remote access to the server for you at the beginning of the semester.

Lecture notes: Posted on eLearning.

Optional Materials

“Mostly Harmless Econometrics: An Empiricist’s Companion,” by Joshua D. Angrist and Jörn-Steffen Pischke.

Grading

Assignments: There will be **3** homework assignments administered throughout the semester. These are **individual** assignments and will primarily consist of data exercises, in addition to short answer questions. Details for each assignment will be posted in eLearning. Stata is recommended for these assignments. Late submissions will be penalized 25% for **each** day following the due date.

Attendance and Participation: A portion of your grade in the class will be directly tied to your attendance and participation.

- Attendance will be checked randomly throughout the semester. Eligible excuses (e.g., medical/family emergencies) must be brought to my attention **prior** to class time and official **documentation** must be provided. A student with 3 or more unexcused absences will result in a loss of their attendance and participation points (5%).
- Students are expected to participate in class discussions and in group collaboration. On occasions, groups will meet in class for group project collaboration. A portion of your grade will be allocated towards participation in these group discussions.

Group Project: A primary component of this course will be based on a group research project. A group will consist of 3-6 students. All groups must be formed no later than **March 1**. Exact details of the project will be provided later. The deliverables for the project will include: a proposal, slides, presentation, and final report. Individual grades will be strictly based on an anonymous survey from your group partners; e.g., your grade = (overall project grade) X (peer evaluation).

Exams: There will be two exams administered throughout the semester. Exams will cover the material discussed in class, in addition to the required readings. Both exams will be closed book.

- Make-ups: make-up exams will be granted at the discretion of the instructor, only for **medical/family emergencies.** In either case, official documentation must be provided **24 hours** prior to the exam.

Extra Credit: No extra credit will be given in this class.

Grading Policy:
Your grade for the course will be based on 2 exams, 3 homework assignments, a group project, and your attendance and participation in class. The grade distribution is as follows:

Exam 1	25%
Exam 2	30%
Homework Assignments (5% each)	15%
Group Project	25%
Attendance and Participation	5%
Total	**100%**

Letter Grade Distribution:

Score	**Letter Grade**
93 and above	A
90 – 92.99	A-
87 – 89.99	B+
83 – 86.99	B
80 – 82.99	B-
77 – 79.99	C+
70 – 76.99	C
69.99 and below	F

Tentative Course Outline: all dates subject to change. Any changes will be announced in class.

Section 001: Mondays, 4:00 pm – 6:45 pm; JSOM 12.206

Week	Date	Content
1	Mon, Jan 20	**NO CLASS (MLK DAY)**
2	Mon, Jan 27	Introduction (Ch 1)
3	Mon, Feb 3	Simple Regression (Ch 2)
4	Mon, Feb 10	Multiple Regression Analysis: Estimation (Ch 3)
5	Mon, Feb 17	Multiple Regression Analysis: Inference (Ch 3)
6	Mon, Feb 24	Multiple Regression Analysis: Further Issues (Ch 6) Multiple Regression Analysis with Qualitative Information (Ch 7)
7	Mon, Mar 3	Regressions with Time Series Data (Ch 10) Further Issues in Using OLS with Time Series Data (Ch 11)
8	Mon, Mar 10	**EXAM 1**
9	Mon, Mar 17	**NO CLASS (SPRING BREAK)**
10	Mon, Mar 24	Pooling Cross Sections Across Time: Panel Data (Ch 13)
11	Mon, Mar 31	Advanced Panel Data Methods (Ch 14)
12	Mon, Apr 7	Advanced Panel Data Methods, cont'd (Ch 14)
13	Mon, Apr 14	Instrumental Variables (Ch 15)
14	Mon, Apr 21	Instrumental Variables, cont'd (Ch 15)
15	Mon, Apr 28	**EXAM 2**
16	Mon, May 5	**GROUP PRESENTATIONS (PROJECTS DUE)**

Section 003: Thursdays, 4:00 pm – 6:45 pm; JSOM 12.214

Week	Date	Content
1	Thu, Jan 23	Introduction (Ch 1)
2	Thu, Jan 30	Simple Regression (Ch 2)
3	Thu, Feb 6	Multiple Regression Analysis: Estimation (Ch 3)
4	Thu, Feb 13	Multiple Regression Analysis: Inference (Ch 3)
5	Thu, Feb 20	Multiple Regression Analysis: Further Issues (Ch 6) Multiple Regression Analysis with Qualitative Information (Ch 7)
6	Thu, Feb 27	Regressions with Time Series Data, cont'd (Ch 10)

		Further Issues in Using OLS with Time Series Data (Ch 11)
7	Thu, Mar 6	**EXAM 1**
8	Thu, Mar 13	Pooling Cross Sections Across Time: Panel Data (Ch 13)
9	Thu, Mar 20	**NO CLASS (SPRING BREAK)**
10	Thu, Mar 27	Pooling Cross Sections Across Time: Panel Data, cont'd (Ch 13)
11	Thu, Apr 3	Advanced Panel Data Methods (Ch 14)
12	Thu, Apr 10	Advanced Panel Data Methods, cont'd (Ch 14)
13	Thu, Apr 17	Instrumental Variables (Ch 15)
14	Thu, Apr 24	Instrumental Variables, cont'd (Ch 15)
15	Thu, May 1	**EXAM 2**
16	Thu, May 8	**GROUP PRESENTATIONS (PROJECTS DUE)**

Class Recordings

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

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

Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students.

Please see http://go.utdallas.edu/academic-support-resources.

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 review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

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