

ECON 3161 ECONOMETRIC ANALYSIS

Classroom: Clough 262

Professor: Dr. Shatakshee Dhongde

TA: Mr. Daniel Blanchard

Day/Time: TR 2.00 pm to 3.15 pm

Email: sdhongde6@gatech.eduEmail: dblanchard3@gatech.edu***Course Description:***

This course introduces students to cross-section regression models used in empirical economic analysis. The course emphasizes the applications of econometrics in different fields of research. We will adopt an active learning mode where students will review material at home and will spend more time on problem solving activities in class. Students will model simple applications using **STATA** statistical software on a variety of datasets. The course is quantitatively rigorous and requires knowledge of probability and statistics.

Goals and Learning Objectives:

The goal of the course is to introduce regression analysis and its applications in different fields in economics. Specifically, by the end of the course, students will be able to test assumptions, estimate cross-section models, interpret results, and conduct robustness tests. An important objective of the course is to help students independently undertake research using the econometric techniques taught in the course.

Course Material:

Required Book: Introductory Econometrics: A Modern Approach, by J. Wooldridge, Cengage

STATA access via IAC-Vlab: <https://mycloud.gatech.edu>.

The course material will be posted on Canvas.

Grading Structure:

Assignments	Dates for Fall 2026	Submission	Grade Weight
Attendance & Participation	Entire semester	In-class	5%
Homework	Dates announced on Canvas	Online	25%
Midterm Exam	October 15	In-class	20%
Research Project			25%
Topic Due	September 10	Online	
Draft Due	October 8	Online	
Presentations	Oct 27-Nov. 24	In-class	
Final Exam*	Dec. 10, 2026	2.40 pm to 4.30 pm	25%

* Dates are tentative and are subject to change during the semester; Note the time and date for the final exam; Dates for presentations for each group will be given later in the semester.

Grading Scale:

Your course grade will be assigned as a letter grade according to the following scale:

A: 90-100% B: 75-89% C: 60-74% D: 50-59% F: 0-49%

Course Content:

Chp. 1. The Nature of Econometrics and Economic Data

Chp. 2. The Simple Regression Model

Chp. 3. Multiple Regression Analysis: Estimation

Chp. 4. Multiple Regression Analysis: Inference

Chp. 6. Multiple Regression Analysis: Further Issues

Chp. 7. Multiple Regression Analysis with Qualitative Information: Binary (or Dummy) Variables

Chp. 8. Heteroskedasticity

Relevant parts of Appendix: A, B, and C

Course Calendar:

Week	Date	Chapters	Topics
1	25-27 August	Chapter 1	Introduction, Appendix A, B
2	01-03 September	Chapter 2	OLS estimator, Properties of Estimates
3	08-10 September	Chapter 2	Expected Values, STATA
4	15-17 September	Chapter 2	Variance, Errors
5	22-24 September	Chapter 3	General model, STATA
6	29 Spt.-01 Oct.	Chapter 3	Omitted Variable Bias
7	06-08 October	Break/Chapters 3	Fall break, Multi-collinearity,
8	13-15 October	Chapter 3/Midterm	Revision, Midterm Exam
9	20-22 October	Chapter 4	Introduction t-Test
10	27-29 October	Chapter 4	p-values, Confidence Interval, F-Test
11	03-05 November	Chapter 6	Data Scaling, Functional Form
12	10-12 November	Chapter 7	Dummy Variables, STATA
13	17-19 November	Chapter 7	Dummy Variables extensions
14	24-26 November	Break	Thanksgiving Break
15	01-03 December	Chapter 8	Heteroskedasticity, STATA
16	08 December	Revision	Final Instructional Day

Note that this is a tentative course calendar. It will be revised as needed during the semester.

Important Guidelines

- ***Attendance and Participation***

Students should maintain regular attendance in person. Students who are absent because of participation in approved Institute activities will be permitted to make up the work missed during their absences. Students may need to miss classes due to personal emergencies. The Office of Dean of Students can assist students with documented emergencies by contacting professors on behalf of the student.

<https://studentlife.gatech.edu/about/dean-students>

- ***Homework***

The homework due date will be announced both in class and on Canvas. Homework can be either typed or handwritten and scanned but must be submitted online via Canvas. Hard copy or emailed copy will not be accepted. To receive full credit, homework must be well written and complete. Any homework that is not legible or incomplete will receive partial or no credit. Homework must be turned in on/before the due date and time. Late homework will only receive partial credits (50% of grade) unless for an excused absence. Once homework solutions are posted on Canvas, late homework will not be accepted.

- ***Academic Integrity***

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Please see Student Faculty Expectations at <https://catalog.gatech.edu/rules/21/> and Georgia Tech's Academic Honor Code, at <http://www.catalog.gatech.edu/policies/honor-code/>. Any student suspected of cheating or plagiarizing the research project will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

- ***Accommodations for Individuals with Disabilities***

A student who needs special accommodations should contact the Office of Disability Services (ODS) at (404) 894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible.

- ***Digital Learning Days***

Students should familiarize themselves with Georgia Tech's Digital Learning Days Policy. This policy sets forth requirements, procedures, and responsibilities related to the scheduling of digital instruction and/or make-up classes due to the modification of campus operations, closing of campus, or the necessary closing of instructional spaces for any reason. <https://s1.policylibrary.gatech.edu/academic-affairs/digital-learning-days-modified-campus-operations>

- ***Recordings of Class Sessions and Required Permissions***

Classes may not be recorded by students without the express consent of the instructor unless it is pursuant to accommodation granted by the Office of Disability services. Class recordings, lectures, presentations, and other materials posted on Canvas are for the sole purpose of educating the students currently enrolled in the course. Students may not take photos of the instructor or the whiteboard on their smart phones. Students may not record or share materials or recordings, including screen capturing or automated bots, unless the instructor gives permission.