

# ECON 3161 Econometrics Analysis

Georgia Institute of Technology  
Fall 2026

## Course Information:

*Instructor:* Karen Yan ([xyan306@gatech.edu](mailto:xyan306@gatech.edu))

*Office:* Old CE Building Room 324

*Office hours:* 11:15am - 12:15 pm on MW

*Class time & location:* 9:30am – 10:45am on MW @ Van Leer E283

## Course Description:

The primary goal of this course is to introduce students to the econometric techniques that are frequently used in applied economics. We will focus on the classical linear regression model. Emphasis is placed on empirical applications. After this course students are expected to grasp the key concepts and be able to apply the methods discussed in class for empirical work.

## Reference:

*Introductory Econometrics: A Modern Approach*, by J. Wooldridge, 7th Edition (Cengage Learning)

\*\*\* A PDF file of the book has been posted on canvas.

## Course Materials:

All lecture notes, homework, and class announcements will be posted on canvas. Please check out canvas regularly for the latest class update.

## Exams:

There will be one midterm exam and one final exam. The final exam is non-cumulative.

\*\*\*Note: The midterm exam is an in-class exam (75mins) and the date is tentative. If there's any change regarding the midterm exam date, I will notify you at least two weeks in advance.

## Homework:

The homework assignments include both theoretical and empirical questions, and there will be 6--7 homeworks throughout the semester. Students will also be asked to use software to solve empirical problems. R/Stata is recommended. However, students can also use other statistical software.

The homework due dates will be announced both in class and on canvas. **Late homework will only receive partial credit (50% of the grade) unless for an excused reason. However, if homework solutions are given, late homework will not be accepted in any case.**

Homework can be either typed or handwritten, but **must be submitted through Canvas**. To receive full credit, homework must be well written and complete. **Any homework not legible or incomplete will receive partial or no credit.**

*\*\*\* If for an excused reason, a student is unable to turn in homework before homework solutions are given, then the student's final average homework grade will apply to the missing homework grade. This is applicable to at most 2 missing HWs.*

**Expectations:**

- (1) You're very welcome to ask me questions during or outside of class, and I encourage you to ask in person (e.g., after class or office hours) if you have long questions;
- (2) Emails sent on weekends or after 5:00pm on weekdays may not receive a response until the next weekday;
- (3) I am not able to help you check your answers before you submit your homework.

**Grading:**

Homework (30%)+Midterm Exam (35%)+Final Exam (35%)

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

A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: 0-59%

**Accommodations for Students with Disabilities:**

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/> as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also email me as soon as possible in order to set up a time to discuss your learning needs.

**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. For information on Georgia Tech's Academic Honor Code, please visit <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

**CARE Center, Counseling Center, Stamps Health Services, and the Student Center:**

These uncertain times can be difficult, and many students may need help in dealing with stress and mental health. The CARE Center and the Counseling Center and Stamps Health Services will offer both in-person and virtual appointments. For more information on these and other student services, contact the Vice President and Dean of Students or the Division of Student

Life.

**Tentative Topics:**

<b>Week</b>	<b>Topic</b>	<b>Reference</b>
1--2	Math Review	Chapter 1, Stats Appendix, Notes
3--4	Linear Model Intro & Estimation	Chapter 2
5	Estimation Results Reporting & Interpretation	Chapter 2
6	Property of OLS estimators	Chapter 2
7-8	Treatment Effect Intro	Chapter 2, Notes
9	<b>Midterm Exam</b>	
9	Multiple Regression Intro & Estimation	Chapter 3
10	Estimation Results Reporting	Chapter 3
10-11	Further Extensions: Irrelevant & Omitted Variable, multicollinearity	Chapter 3
11-12	Normality & t-test & F-test	Chapter 4
12--13	Dummy Variable	Chapter 7
13-14	Limited Dependent Variable	Chapter 17
15-16	Final exam review	

**\*\*\* The topics and class schedule are subject to changes.**