

ECON 281: Introduction to Applied Econometrics

Winter 2026

MWF 3:00 PM - 3:50 PM, Harris Hall 107

Dr. Jeffrey T. Lewis (ECON)

Kellogg Global Hub 3475, 847-491-8238

jeffrey.lewis@northwestern.edu

Office Hours: Monday 4:20-5:20, Tuesday 3:30-5:00, Thursday 3:30-5:00 (or by appointment)

Teaching Assistant

TA Franco Malpassi
TA Franco Malpassi
TA William Firmin
TA William Firmin
TA William Firmin
TA William Firmin

Section Times/Locations

21: Tu, 5:00-5:50, Technological Institute A110
22: Th, 5:00-5:50, Technological Institute LG52
23: Tu, 6:00-6:50, Technological Institute M128
24: Th, 6:00-6:50, Technological Institute M128
25: Tu, 6:00-6:50, Technological Institute M128
26: Th, 6:00-6:50, Technological Institute M128

TA William Firmin (WilliamFirmin2030@u.northwestern.edu)

TA Franco Malpassi (FrancoMalpassi2028@u.northwestern.edu)

TA office hours and locations will be posted on Canvas.

LEARNING OUTCOMES

In this class, students will: Increase their knowledge of both regression with one regressor and regression with multiple regressors. Familiarize themselves with Stata.

COURSE WEBSITE

This course has a website on Canvas. Everyone should automatically be enrolled in the Canvas website upon official enrollment in the class. I will post my lecture notes on the website by 5:00 pm the day before class. You should print out the handouts and bring them to class (or download the handouts to your tablet and take notes on your tablet). Problem sets, problem set solutions, and other materials will also be posted on the website. I will post announcements on the website stating what you should print out for class and when assignments are due.

TEXTBOOK AND CALCULATOR

The textbook for the course is *Introduction to Econometrics* by James H. Stock and Mark W. Watson. The textbook is optional. You can use the third edition, the third edition update, or the fourth edition. Some of the sections of the textbook will be posted on Canvas under Course Reserves. You will also need a calculator for this class. Bring your calculator to every class.

STATA

Some problem sets in this course will require you to use the statistical software, Stata. You need to have Stata on your computer. To purchase your own copy of the software for your computer, a six-month license for Stata/BE is available for \$48 (click on the 6-month option to the left). See <https://www.stata.com/order/new/edu/profplus/student-pricing/> to purchase. Make sure you purchase Stata during the first week of class. You will be emailed a link to download Stata after you make the purchase.

SECTIONS

Some weeks during section, the TAs will answer questions if you have questions on the computer problem sets. Other weeks, the TAs might work through section problems (which will be similar to the questions on the problem sets).

CANVAS PROBLEM SETS

Some of the problem sets will be Canvas problem sets. You will need to submit numerical answers or answer multiple choice questions on Canvas. Canvas will automatically grade the problem sets. If you miss the deadline for submitting your answers, you will not receive credit for that problem set. For questions about how to complete the Canvas problem sets, read the policy_canvas_psets handout on Canvas (under Policies folder).

OFFICE HOURS

During office hours, you can't check over all of your final answers on the Canvas problem sets. You can, however, ask us a question if you are stuck on something on the problem set. You can ask us anything about the course material or the section problems. You can ask us questions about the computer problem sets during office hours.

QUIZZES

We will give quizzes during lecture this term (not during section). The default is that the quizzes will be unannounced. The quizzes are closed-note quizzes (can't use any of your notes or devices). Bring your calculator to every class. Make sure you keep up with the course material.

EVALUATION

Grades are based on the following distribution:

Problem Sets and Quizzes together	10%
Exam #1	25%
Exam #2	25%
Final Exam (cumulative)	40%

None of your problem set scores will be dropped. We will drop your lowest quiz score. At the end of the term, we will do this calculation:

$$[(\text{your PS points} + \text{your quiz points}) / (\text{total PS points} + \text{total quiz points})] \times 100\%$$

This percentage score will constitute 10% of your final grade.

None of your exam scores will be dropped. You cannot use a formula sheet on any of the exams.

EXAM DATES

Exam #1 will be given in class on Wednesday, February 4.

Exam #2 will be given in class on Wednesday, March 4.

The Final Exam will be given on Friday, March 20, from 3:00-5:00 PM.

You must take the Final Exam in our classroom on the date and time specified above.

EXCUSED ABSENCES

If you miss an exam (or quiz) for an excused reason, such as illness, a family emergency, or travel with a University sports team, then you need to fill out the excused absence form on Canvas, staple your documentation to the back of the excused absence form, and hand everything in to me during the next lecture after the exam. If you are feeling unwell, you should report in person to the Student Health Service or CAPS prior to the time of the exam. In the absence of documentation, an absence will be considered unexcused. If you miss an exam or quiz for an unexcused reason, you will receive a 0 on that assessment. Missing class for a job interview, a job-related activity, an internship interview, an internship-related activity, any activity related to another class, or a family event would not constitute an excused absence. See this NW link regarding documentation:

<https://www.northwestern.edu/healthservice-evanston/medical-services/academic-work-missed-for-medical-reasons/>

If you take an exam, or start to take an exam, can you receive an excused absence for that exam?

No. If you take an exam, or start to take an exam, you cannot receive an excused absence for that assessment. Your exam score will count, and it will be used to determine your final grade in the class. If you feel that you are too unwell to take the exam, do not take the exam. Instead, you should report in person to the Student Health Service or CAPS prior to the time of the exam.

MAKEUP POLICIES

Canvas Problem Sets

Since you do not have to be physically present in the classroom to submit your answers to the Canvas problem sets, there are no makeup Canvas problem sets. If you miss the deadline for submitting your answers, you will not receive credit for that problem set.

Computer Problem Sets

You must hand in a hard copy of each computer problem set in class. If you miss class on the due date for an excused reason, bring the excused absence form and your documentation to the next class. Your missing score will be replaced with your Final Exam score.

Quizzes

We are going to drop your lowest quiz score. If you only miss one quiz and you miss that quiz because of an excused reason, that score will just be dropped. If you only miss two quizzes and you miss both quizzes for excused reasons, your first missing score will be dropped and your second missing score will be replaced with your Final Exam score. If you only miss two quizzes, and you miss one quiz for an excused reason and one quiz for an unexcused reason, your score from your excused absence will be dropped and your score of 0 from your unexcused absence will be counted.

Exams

If you miss Exam #1 or Exam #2 for an excused reason, you will not take a makeup. All of the weight from the missed exam will be added to the Final Exam.

If you miss both Exam #1 and Exam #2 for excused reasons, then your final grade will be determined by whichever calculation is lower (method *a* or *b*):

- a) $100\% \times (\text{Problem Sets and Quizzes together})$
- b) $100\% \times \text{Final Exam}$

Incompletes

If you take the Final Exam, or start to take the Final Exam, then you cannot receive an excused absence for that assessment. Your exam score will be recorded. You wouldn't qualify for an Incomplete.

If you miss the Final Exam for an excused reason (such as an illness or family emergency), then you would need to email me and then petition for an Incomplete through the Dean's Office.

To qualify for an Incomplete if you do not take the Final Exam:

- 1) The Dean's Office would have to approve your Incomplete petition. See this NW link:

<https://weinberg.northwestern.edu/undergraduate/courses-registration-grades/grades/incompletes.html>

- 2) You would have to have taken both Exam #1 and Exam #2.

- 3) It has to be possible for you to receive a final course grade of at least 63% if you take the makeup Final Exam.

If you receive an Incomplete, then you would take the makeup Final Exam during finals week of the next term.

GRADING POLICIES

For questions on how to deal with rounding on problem sets and exams, read the policy_rounding handout on Canvas (under Policies folder). If a grading mistake was made on your exam, you need to give me your exam during the lecture following the lecture in which the exams were initially returned. Final grades will be decided on the following scale:

A	93.0-100		C+	77.0-79.99
A-	90.0-92.99		C	73.0-76.99
B+	87.0-89.99		C-	70.0-72.99
B	83.0-86.99		D	63-69.99
B-	80.0-82.99		F	Below 63

CLASSROOM POLICIES

- Do not have your phone out during class.
- Do not have your computer open during lecture. Shut down your computer before we start class. If, through ANU, you are permitted to use a computer and plan to use a computer (as opposed to a tablet), you would need to contact me. You would then need to sit in the front row.
- You can use your tablet to take notes in class. If you do so, have your tablet flat on the desk.
- Do not put your head down on the desk during class. If you are feeling unwell, you should report in person to the Student Health Service or CAPS.

NORTHWESTERN UNIVERSITY SYLLABUS STANDARDS

This course follows the Northwestern University Syllabus Standards. Students are responsible for familiarizing themselves with this information:

<https://www.registrar.northwestern.edu/registration-graduation/northwestern-university-syllabus-standards.html>

OPTIONAL DROP-IN PEER TUTORING

Drop-In Peer Tutoring – No Appointment Needed:

Students are welcome to stop by Drop-In Peer Tutoring to get support with a specific question or issue, or just talk through course materials with others. Tutoring is offered for this course and many introductory courses in Biology, Chemistry, Economics, Engineering, Math, Physics and Statistics. Tutoring takes place Sundays through Thursdays. Check specific times, courses, and locations on the Drop-In Peer Tutoring website. Feel free to contact Valerie at valerie.wolf@northwestern.edu with any questions. Provided through Academic Support & Learning Advancement.

TENTATIVE TOPICS COVERED

Review of Statistics/ Review of Random Variables

Chapter 4- Linear Regression with One Regressor

Chapter 5- Regression with a Single Regressor: Hypothesis Tests and Confidence Intervals

Chapter 6- Linear Regression with Multiple Regressors

Chapter 7- Hypothesis Tests and Confidence Intervals in Multiple Regression

Chapter 8- Nonlinear Regression Functions

Randomized Control Trial

Instrumental Variables (Introduction)

Differences-in-Differences

Application: Measuring Wage Discrimination

Regression Matching Strategy

Chapter 11- Regression with a Binary Dependent Variable

Regression Discontinuity