

ECON-2120: Introduction to Econometrics

Duc LE

Summer 2025, Main Second Session

1. Basic Information

E-mail: DVL11@georgetown.edu

Session: July 7 - August 8, 2025

Lectures:

- Date: Monday, Tuesday, Wednesday, Thursday
- Time: 3:15 PM - 5:10 PM
- Location: **St. Marys** 124

Recitations:

- Date: Wednesday
- Time: 7 PM - 9 PM
- Location: **Car Barn** 205

2. Course Description

This course comprehensively explores the cornerstone statistical and mathematical methods used in economics to analyze data. It focuses on the theoretical foundations of various statistical methods and estimators, as well as their practical applications to specific examples. Additionally, it evaluates different methods to determine their suitability under different settings.

The primary objectives of the course are two-fold: First, to prepare students for further empirical work in economics or other social sciences. Second, to teach students data analysis. By the end of this class, students will have gained a solid understanding of statistical analysis and can apply their knowledge to real-world scenarios.

3. Required Materials

The textbook for this class is **"Introduction to Econometrics"** by **James Stock and Mark Watson (SW)**, 4th edition, Addison-Wesley.

Additional materials for this textbook, such as data files, additional exercises, and Stata tutorials, can be found online at:

<http://media.pearsoncmg.com/ph/bp/bridgepages/teamsite/stockwatson>

Slides, and assignments, will be posted on Canvas on a daily basis.

4. Software

The software used in this class is Stata (version 17 or later), which is available for free to all Georgetown students.

To download Stata: go to <http://georgetown.onthehub.com/WebStore/Welcome.aspx>, sign up and enter "Stata." You can select the version compatible with your computer.

5. Assignments, Requirements and Grading Criteria

- **Homework Assignments:**

Regular problem sets will be posted, and answer keys will be provided. Many of the exercises will come from the SW book, and they can be either theoretical or practical.

There will be three assignments. Each homework will be graded out of 10 and equally weighted in the final assignment grade. Submissions are only accepted on Canvas. Late submissions will **not be allowed** except under exceptional circumstances.

Assignments are crucial study aids and require timely and independent effort to master the material. The problem sets are indicative of midterm and final exams, so it is important to ensure you understand and can solve problems independently. Form study groups to discuss problems; however, assignments must be submitted individually.

- **Exams:**

There will be a midterm and a final. The midterm is on **July 24th**, and the final exam is on **August 7th**. Note that the exam dates may be subject to change. Material covered in midterm will be everything up to that point; the final exam will cover the whole course material.

- **Grade Requirements:**

Homework assignments:	30%
Midterm:	30%
Final exam:	40%

6. Course Structure

Here is a list of the topics covered over the course of the semester.

- [Introduction and review of probability and statistics](#)

Readings: SW Chapters 1,2 and 3

- [Linear regression, testing, and confidence intervals](#)

Readings: SW Chapters 4 and 5

- **Multiple regression**
Readings: SW Chapters 6 and 7
- **Nonlinear regression functions, measurement error, sample selection, simultaneous equations**
Readings: SW Chapters 8 and 9
- **Panel Data**
Readings: SW Chapter 10
- **Instrumental Variables**
Readings: SW Chapter 12
- **Experiments and Quasi-Experiments** (if we have time)
Readings: SW Chapter 13

More details on the organization of the course will be announced at the beginning of the Session.

7. Accommodations:

Accessibility and Inclusion: Georgetown's educational mission of *cura personalis* emphasizes the care of the whole person. The university is dedicated to creating an inclusive and accessible learning environment that adheres to universal design principles and meets the needs of its diverse student body. As your instructor, I am committed to fostering a learning environment that respects and celebrates a diversity of thoughts, perspectives, and experiences, and acknowledges your identities (such as race, gender, class, sexuality, religion, ability, etc.). Please inform me early in the semester if any changes need to be made to your name or pronouns so that I can update my records accordingly.

8. Academic Integrity and Support Services

Georgetown University holds its students to the highest standards of academic and personal integrity. While the majority of students uphold these standards, there are occasional violations of the code of conduct. Cheating can harm the University community in various ways, such as causing frustration for honest students who see unfairness going undetected, and distorting the grading curve in a class, resulting in lower grades for students who worked hard and completed their own work.

Academic dishonesty is a significant offense, and any students found in violation are subject to academic penalties that may include failure of the course, termination from the program, and revocation of degrees already conferred. All students are required to fully abide by the policies and procedures of Georgetown's Honor System and to pledge their commitment to the Honor Code.

Plagiarism:

Plagiarism is a serious offense that can harm your career in academia and the workplace. Please work with integrity and honesty in all your assignments. Check out Plagiarism.org for guidance on plagiarism and paraphrasing. All submissions must be your original work. Any suspected plagiarism will be referred to the Honor Council for investigation. Please read the honor code material online at the Honor Council website:

<http://honorcouncil.georgetown.edu/system/policies/standards-of-conduct/>

9. Title IX Syllabus Statement

Sexual Misconduct:

Georgetown University and its faculty and staff are committed to supporting survivors and those impacted by sexual misconduct, which includes sexual assault, sexual harassment, relationship violence, and stalking. Georgetown requires faculty members, unless otherwise designated as confidential, to report all disclosures of sexual misconduct to the University Title IX Coordinator or a Deputy Title IX Coordinator. If you disclose an incident of sexual misconduct to a professor or staff member in or outside of the classroom (with the exception of disclosures in papers), that faculty or staff member must report the incident to the Title IX Coordinator, or Deputy Title IX Coordinator. The coordinator will, in turn, reach out to the student to provide support, resources, and the option to meet. Please note that the student is not required to meet with the Title IX coordinator and no action will be taken without the student's awareness. More information about reporting options and resources can be found on the Sexual Misconduct Website: <https://sexualassault.georgetown.edu/resourcecenter>.

If you would prefer to speak to someone confidentially, Georgetown has a number of fully confidential professional resources that can provide support and assistance. These resources include:

- Health Education Services for Sexual Assault Response and Prevention:
sarp@georgetown.edu
- Counseling and Psychiatric Services (CAPS): 202.687.6985

Additional resources are included below:

- Georgetown Self-Care Resource Guide:
<https://studenthealth.georgetown.edu/health-promotion/self-care/>
- Georgetown Wellness Wheel:
<https://studenthealth.georgetown.edu/hoya-wellness-wheel/>

- Georgetown Guide to Recognizing Students in Distress:

<https://studentaffairs.georgetown.edu/studentoutreach/facultystaffresources/>

Pregnancy Modifications and Adjustments:

Georgetown University is committed to creating an accessible and inclusive environment for pregnant students. At any point throughout their pregnancy students may request adjustments/modifications based on general pregnancy needs or accommodations based on a pregnancy-related complication or medical need. Students may also request accommodations following labor and delivery based on a complication or medical need.

To request pregnancy modifications, please complete the SCS Pregnancy Modification Request Form: <https://forms.gle/ZBfASxui7u13A8TU6>

More information about pregnancy modifications can be found on the Title IX Georgetown University Website:

<https://titleix.georgetown.edu/title-ix-pregnancy/student-pregnancy/>