



Carleton University

Department of Economics

Carleton University - ECON 5712

Micro-Econometrics

Winter Term 2024

Instructor: Matt Webb, Loeb Building, B-846

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Lectures: Wednesdays 11:35-2:25

Office hours: Tuesdays 12:00 - 1:00, Wednesdays 10:00-11:00 Loeb Building, B-846

Course Webpage: brightspace

Course Location: Log into Carleton Central to view the location on your timetable.

Lectures are held for three hours per week.

Prerequisites:

Prerequisite(s): ECON 5027 (or equivalent), or permission of the Department.

Readings:

- There is no required textbook for this class.
- Readings will be assigned for each of the topics.

Reference Books

- Angrist, Joshua D., and Jörn-Steffen Pischke. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press, 2009.
- Cunningham, Scott. Causal Inference: The Mixtape. Yale University Press, 2021.
- Huntington-Klein, Nick. The effect: An introduction to research design and causality. Chapman and Hall/CRC, 2021.

- Cameron, A. Colin, and Pravin K. Trivedi. *Microeconometrics: methods and applications*. Cambridge university press, 2005.

Programming Languages:

Students are allowed to use any statistical programming language (Stata, R, Python) that they like during the course. That said, students will benefit from knowing multiple languages. Bonus marks may be given for submitting different assignments using different languages.

Evaluation:

- Assignment I: 10%
- Assignment II: 15%
- Assignment III: 15%
- Replication Presentation 20%
- Final Exam: 40%

Important Dates:

The evaluation dates listed below are subject to change, but are unlikely to do so:

- Assignment I
 - Available online January 24th
 - Due February 7th, in class, or before
- Reading Week: February 21st
- Assignment II
 - Available online February 14th
 - Due March 6th, in class, or before
- Assignment III
 - Available online March 13th
 - Due March 27th, in class, or before
- Replication Presentation
 - In class on April 3rd
- Final Exam:
 - TBD, during final exam period
 - Students are not to make travel plans during the exam period: April 13th – 25th

Assignments:

Late assignments will be penalized 10% per calendar day.

Students are required to submit their own assignments. Students may work on the assignments in collaboration with their classmates.

Proposed Topics Covered:

Week	Day	Date	Topic
1	Wednesday	January 10	Potential Outcomes and Review
2	Wednesday	January 17	Experiments
3	Wednesday	January 24	Linear Regression
4	Wednesday	January 31	Non-parametrics, nearest neighbour, and regression trees
5	Wednesday	February 7	Instrumental Variables I
6	Wednesday	February 14	Instrumental Variables II
7	Wednesday	February 21	READING WEEK
8	Wednesday	February 28	Cluster Robust Inference
9	Wednesday	March 6	Difference-in-differences I
10	Wednesday	March 13	Difference-in-differences II
11	Wednesday	March 20	Synthetic Controls and Non-linear DiD
12	Wednesday	March 27	Additional Topics
13	Wednesday	April 3	Student Presentations

Notes: * indicates an asynchronous lecture

Additional Information

Course Standing

Standing in a course is determined by the course instructor subject to the approval of the Department Chair and the Faculty Dean. This means that course grades may be scaled upwards or downwards in a rank preserving manner to better fit the relevant departmental distributional norm. No grades are final until they have been approved by the Dean.

Academic Misconduct - Plagiarism

Please be aware that plagiarism is serious offence at Carleton and should be recognized and avoided. For information please see <https://carleton.ca/economics/courses/writing-preliminaries/academic-integrity-and-offenses-of-conduct/>.

Copyright of Course Materials

Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Accessibility and Accommodation

For Students with Disabilities:

Students with disabilities requiring academic accommodations are encouraged to contact a coordinator at the Paul Menton Centre for Students with Disabilities (ext. 6608) to complete the necessary letters of accommodation. After registering with the Centre, please set up an appointment with me to discuss your needs at least two weeks prior to a test or in-class mid-term exam. This is necessary in order to ensure sufficient time to make the necessary arrangements.

For Religious Observance:

Students requesting academic accommodation on the basis of religious observance should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory academic event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student.

Students who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton's Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance.

For Pregnancy:

Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a letter of accommodation. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.