

Fall 2025 ECON 3210 E

Introductory Econometrics

Course Outline

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Brightspace Course Page: https://brightspace.carleton.ca/d21/home/369565

For lecture and tutorial locations, please check Carleton Central.

Welcome to Introductory Econometrics!

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Course Description

This course builds on the material covered in ECON 2210. Topics include correlation, simple and multiple linear regression, and an introduction to statistical computing using an econometrics

package. The emphasis is on understanding appropriate methods and their properties, as distinct from their formal theoretical development. Empirical applications.

Learning Outcomes

By the end of this course, students will:

- 1) be conversant with and be able to define basic econometric terminology
- 2) be familiar with the setup and assumptions of the classical normal linear regression model
- 3) have a good understanding of and be able to implement the basic principles of estimation and hypothesis testing within the context of the regression model
- 4) be able to interpret and assess the quality of an estimated regression model
- 5) understand the basic principles of regression model specification
- 6) be aware of common issues associated with the regression model, how to test for these issues, and how to respond to these issues appropriately
- 7) understand the basic elements of modern econometric software and have had experience in using this software and interpreting the relevant output
- 8) be familiar with the basic steps involved in the implementation of a regression project

Prerequisites and Preclusions

The prerequisites for this course are ECON 2210 (or equivalent) with a grade of C- or higher, and ECON 1401 and ECON 1402 with a grade of C- or higher (or an equivalent department approved MATH course pair with a grade of C- or higher in each), or permission of the department, as outlined in the 2025-2026 Undergraduate Calendar. Students who believe that they have taken a similar background course or courses from another university must provide appropriate documentation to the Department of Economics Undergraduate Administrator, Sean Hall seanhall3@cunet.carleton.ca

Please note that a grade of C+ or higher in this course is required to qualify for ECON 3900, ECON 4002, and ECON 4706. Also, DEF(erred final grade) status at the end of this course precludes (continued) registration in any other course for which the former is a prerequisite.

Also, please note that this course precludes additional credit for STAT 2509, STAT 2607, and ECON 2220 (no longer offered).

Organization

This is an in-person course and is NOT suitable for online students. The class will meet twice a week at 11:35 a.m. on Tuesdays and Thursdays for an 80-minute lecture. In addition, an 80-minute tutorial session will be held at 1:05 p.m. on Thursdays immediately after the lecture. The tutorial sessions will be used for additional coverage of important course material, together with assignment-related activities. For lecture and tutorial locations, please check Carleton Central.

There will be three (3) required assignments and an in-person final exam.

Brightspace and the Carleton email system will be used extensively as a means of communication with students. Therefore, students are strongly advised to access Brightspace and

to check their Carleton email at regular intervals in order to check for new information. To access Brightspace and the Carleton email system, students require a MyCarletonOne account. For questions about MyCarletonOne accounts, students should access carleton.ca/its/get-started/ (and then click on either New Students or New Grad Students, as appropriate) or contact the ITS Service Desk.

Success

Success in this course, as in many other core economics courses, typically requires regular class and tutorial attendance combined with consistent allocation of appropriate study time outside of the classroom. In this connection, note that students may find that it is very difficult to catch up in this course if they fall behind. So, please endeavour not to fall behind.

Academic Integrity and Plagiarism

Please ensure that you are familiar with and comply with the Academic Integrity Policy

And, more specifically, with regard to the written work required for this course, please be sure to avoid any form of plagiarism:

The Academic Integrity Policy defines plagiarism as "presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one's own." This includes reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source. Examples of sources from which the ideas, expressions of ideas or works of others may be drawn include but are not limited to: books, articles, papers, literary compositions and phrases, performance compositions, chemical compounds, artworks, laboratory reports, research results, calculations and the results of calculations, diagrams, constructions, computer reports, computer code/software, material on the internet and/or conversations.

Examples of plagiarism include, but are not limited to:

- any submission prepared in whole or in part, by someone else, including the unauthorized use of generative AI tools (e.g., ChatGPT);
- using ideas or direct, verbatim quotations, paraphrased material, algorithms, formulae, scientific or mathematical concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings without appropriate acknowledgement;
- submitting a computer program developed in whole or in part by someone else, with or without modifications, as one's own; and
- failing to acknowledge sources through the use of proper citations when using another's work and/or failing to use quotation marks.

Plagiarism is a serious offence that cannot be resolved directly by the course instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the

student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.

Assignments

Assignments will be posted on Brightspace and will be submitted through Brightspace according to the following schedule:

	<u>Posted</u>	<u>Due</u>
Assignment 1	September 30	October 14
Assignment 2	November 4	November 18
Assignment 3	November 18	December 2

Final Exam

The final exam will be in-person and comprehensive and will be scheduled by Examination Services during the regular final examination period (December 8-20). Note that students should not make travel plans during this final examination period as this would not be a valid reason for missing a final exam.

Evaluation

The final % grade for this course will be calculated as follows:

Assignments 40% (3 assignments, equally weighted) Final Examination 60%

This % grade will then be converted into the alphabetical grade system using the standard equivalences, as outlined in Section 5.4 of the Academic Regulations of the University in the 2025-2026 Undergraduate Calendar.

In the event that one or more components of the term work are not completed, the weight of the incomplete component(s) will not be transferred to the final examination without a documented and compelling reason.

If you require academic consideration for one or more components of the term work, then you should contact the instructor as soon as possible. The instructor may then require you to complete the appropriate Academic Consideration for Coursework Form, as per the <u>Academic Consideration Policy</u>

Students who do not write the final examination because of illness or other circumstances beyond their control may apply to write a deferred final examination. In order to write a deferred final examination, students must contact the Registrar's Office. (For further details, see Section 4.3 of the Academic Regulations of the University in the 2025-2026 Undergraduate Calendar.) In the event that a student writes a deferred examination, the deferred examination will carry the same weight as the final examination in determining the course grade. Needless to say, any deferred examination will not be identical to the original final examination.

Finally, please note that: "Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by an instructor may be subject to revision. No grades are final until they have been approved by the Dean."

Educational Materials

The Studenmund textbook and the STATA econometrics computer package are both required for this course. For details, see below:

Textbook: Studenmund, A.H. (2017), <u>Using Econometrics</u> (7th Edition). Boston, MA: Pearson.

The 7th edition is essential for this course. Earlier editions are NOT recommended. The use of second-hand copies of the 7th edition is perfectly acceptable.

Please note that one fairly inexpensive option for obtaining access to an electronic version of the textbook is to purchase it directly from the publisher at:

 $\frac{https://www.pearson.com/en-ca/subject-catalog/p/using-econometrics-a-practical-guide/P20000006422/9780137506323}{\text{puide}/P200000006422/9780137506323}$

The current price for 12-month access to this electronic version of the textbook through this source is S67.99 + tax. NOTE: This price is subject to change.

The textbook can also be obtained through the Campus Store. For details, see https://carleton.bookware3000.ca

Computer Package: The use of the STATA econometrics computer package will be an integral part of this course.

Personal copies of STATA will be available (free of charge) for download under Carleton's STATA site-licence. STATA can also be accessed through the Carleton student computer networks.

Course Content

- 1. Introduction and Overview, Studenmund Ch. 1.
- 2. Ordinary Least Squares, Studenmund Ch. 2.
- 3. Learning to Use Regression Analysis, Studenmund Ch. 3.
- 4. The Classical Model, Studenmund Ch. 4.
- 5. Hypothesis Testing and Statistical Inference, Studenmund Ch. 5.
- 6. Specification: Choosing the Independent Variables, Studenmund Ch. 6.
- 7. Specification: Choosing a Functional Form, Studenmund Ch. 7.
- 8. Multicollinearity, Studenmund Ch. 8.
- 9. Serial Correlation, Studenmund Ch. 9.
- 10. Heteroskedasticity, Studenmund Ch. 10.
- 11. Running Your Own Regression Project, Studenmund Ch. 11.

Mental Health Resources and Academic Accommodations

Please note that you are responsible for reading and being aware of the information relating to Carleton University and other resources for mental health and academic support, as well as academic accommodations, found HERE

IF YOU HAVE PROBLEMS WITH THIS COURSE, PLEASE LET ME KNOW!

IF I DON'T KNOW THAT YOU HAVE PROBLEMS, I CAN'T FIX THEM!