

ECON 337

Introductory Econometrics 1

Department of Economics
McGill University
Fall 2023

Instructor: Sílvia Gonçalves

Email: silvia.goncalves@mcgill.ca

Office hours: Monday, 4.00pm-5.00pm, Leacock 506.

Regular classes: Monday and Wednesday 2.35pm-3.55pm, Leacock 219.

TA: Julia Koh

Email: yookyung.julia.koh@mail.mcgill.ca

Office hours: Time and location to be announced on MyCourses.

Conference: Tuesday, 5.30pm-7pm (starting September 12), Leacock 14.

Course Overview and Learning Outcomes

This is an introductory econometrics class. The aim is to provide students with a solid knowledge of the linear regression model in the cross sectional and time series context. The course will include theoretical derivations along with empirical examples to help motivate the material. Students are expected to work on practical examples using Stata.

Restrictions: A grade of 65 percent or better in ECON 227 or ECON 257 or an equivalent qualification in statistics.

Classes: We will hold twice-weekly in person classes. No recorded classes will be available.

MyCourses: You should regularly check the myCourses page for announcements, up-to-date information, additional readings, class notes, problem sets and other items to assist you in the course. We will also make heavy use of the Discussion Board under myCourses, and students are strongly encouraged to post their questions about the course material there. No questions about course material will be answered by email. Students can always come to office hours to ask their questions in person.

Course Materials: The lectures will be based on material from the following textbook:

- “Introductory Econometrics: a Modern Approach, 7th edition”, by Jeffrey Wooldridge.

This book is mandatory and I assume that everyone has it. To obtain a copy and have access to the student manual and data sets, you need to buy the book.

- Slides will be made available after each class. These will be uploaded to MyCourses.
- Exercises at the end of each chapter will be recommended for practice. These might involve the use of data, available online using the cengage account.

Statistical Software: The course will require the use of the statistical program Stata. Stata is the statistical software used by most empirical economists. Knowledge of Stata is not a prerequisite for this course. I will post a separate document on how to use Stata at McGill on mycourses. There are tons of online resources on data analysis with Stata, or Stata more generally. A webpage with links to lots of useful resources for economists (going far beyond what you need in this course) is <https://www.stata.com/links/resources-for-learning-stata/>.

TA support: The TA will hold one weekly conference. These conferences are meant to help you with Stata and practice exercises. The schedule with the locations will be posted on MyCourses.

The TA will hold weekly office hours. In these sessions, the TA will be available to answer your questions, help you to review the course material, and help you solve problems and exercises. The schedule with the location will be posted on MyCourses.

Grading: The final grade will be based on:

- Two homeworks (25%). These will be available on MyCourses in due time. Only a random subset of the questions will be graded by the TA.

Note that I will also post a list of suggested exercises from each chapter in Wooldridge's book on MyCourses, but these will not be graded.

- One midterm exam (30%), on Monday, **October 16**, during regular class time, based upon the material covered until then. This exam is mandatory.

If you miss the midterm for any reason (e.g., illness, technical, religious, work obligation, exam scheduling conflict, etc.), the weight is shifted automatically to the final. There is no makeup, alternate or deferred midterm under any circumstances, nor may the exam be written early.

- Final exam (45%), covering all the material. This exam is also mandatory. It will be a 3-hour exam and will take place in December, at the date specified by McGill.

If you miss, or cannot write, the final, you must request a deferred exam according to the process described here (www.mcgill.ca/exams/dates/supdefer). Final exam accommodations are almost never approved for reasons relating to personal vacation/travel or family events.

Course Content

Due to time constraints, it is possible that some topics will not be covered or some topics added. I maintain discretion regarding changes in this outline. Any changes will be announced in class and/or on MyCourses.

1. Introduction:

- The Nature of Econometrics and Economic Data (chapter 1).

2. Regression analysis and cross-sectional data

- The Simple Regression Model (chapter 2)
- Multiple Regression Analysis: Estimation (chapter 3)
- Multiple Regression Analysis: Inference (chapter 4)
- Multiple Regression Analysis: OLS Asymptotics (chapter 5)
- Multiple Regression Analysis with Qualitative Information (chapter 7)
- Heteroskedasticity (chapter 8)

3. Regression analysis and time series data

- Basic regression analysis with time series data (chapter 10)
- Further issues in using OLS with time series data (chapter 11)
- Serial correlation and heteroskedasticity in time series regressions (chapter 12)

McGill Policy Statements

- *Language of Submission:* In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

En français: Conformément à la Charte des droits de l'étudiant de l'Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l'un des objets est la maîtrise d'une langue).

- *Academic Integrity:* McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see <http://www.mcgill.ca/integrity> for more information).

En français: L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires.

- *Copyright:* Instructor-generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures.
- *Disabilities:* If you have a disability, please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 514-398-6009 before you do this.
- *Plagiarism:* Plagiarism is a serious academic offence. Please consult and read carefully McGill's Academic Integrity website at <http://www.mcgill.ca/integrity/studentguide/>. If you have any questions or uncertainties about what constitutes plagiarism, there are many resources at the University that can help you, including me.
- *Final Exams:* According to Senate regulations, instructors are not permitted to make special arrangements for final exams. Please consult the Calendar, section 4.7.2.1, General University Information and Regulations at www.mcgill.ca.
- *Other:* Additional policies governing academic issues which affect students can be found in the McGill Charter of Students' Rights (see <http://www.mcgill.ca/students/srr/>).