Nature of the Course:

This is an introductory course in Econometrics. The objective of the course is to present and discuss methods for analyzing economic relationships using simple econometric models. The techniques are illustrated using relevant empirical data and are useful in applied research such as micro and macro econometrics.

Prerequisites

ECON 1000 or FYSM 1003, ECON 2201 (or equivalent) with a grade of C- or higher, and ECON 2202 (or equivalent) with a grade of C+ or higher. Precludes additional credit for ECON 4706. Students who believe they have taken a similar background course or courses from another university must provide appropriate documentation to the Department of Economics Undergraduate Administrator (Amanda Wright).

Tutorials will start from the third week and students should attend weekly tutorials. During a tutorial the T.A. will briefly summarize the main points explained during the formal classes, provide further examples or go through problem sets in the textbook, and implement regression methods using STATA.

Plagiarism:

Please be aware that plagiarism is serious offence at Carleton and should be recognized and avoided. For information on how to do so, please see “Pammett on Plagiarism and Paraphrasing” at www.carleton.ca/economics/courses/writingpreliminaries

Requests for Academic Accommodations:
For Religious Obligations

To be worked out on individual basis with instructor. Consult Equity Services Website or an Equity Advisor (ext. 5622) for Policy and list of Holy Days (www.carleton.ca/equity)

For Pregnancy

Contact Equity Services (ext. 5622) to obtain letters of accommodations

For Students with Disabilities:

Students with disabilities needing academic accommodations are required to contact a coordinator at the Paul Menton Centre to complete the necessary letters of accommodation. The student must then make an appointment to discuss their needs with the instructor at least two weeks prior to the mid-term examination. He/she must also check with the PMC for accommodations for formally scheduled final examinations.

Classroom Conducts:

Carleton University is committed to providing a safe environment conducive to learning. It is a violation of the standards of academic integrity for a student registered in a class to disrupt the class or other period of instruction with any action or behaviour reasonably judged by the instructor or teaching assistant to be detrimental to the class (Academic Integrity Policy, Section VI.8). Instructors are required to report all alleged cases of violation of these standards to the Faculty Dean.

Texts and References:


Notes:

1. Students should log into cuLearn daily as all correspondence, changes to schedules, assignments and messages will be posted there. Please make sure that you have a Carleton Connect account. For those students who do not already have their cuLearn account set up, please go to www.carleton.ca, choose cuLearn, and then select Student Resources. The specific site location for student account setup is: http://carleton.ca/culearnsupport/students/

2. Generally I will not reply to questions about course material via e-mail or telephone. Such questions should be raised during office hours. For verification and security purposes, I will not reply to e-mails originating from non-Carleton e-mail accounts, and
which are not signed with a student name and student number.

3. All relevant information will be given out in class, and it is your responsibility to collect that information in class. If you cannot be in class, it is your responsibility to find out what material was covered by making arrangements with a colleague.

4. Classroom teaching and learning activities, including lectures, discussions, presentations, etc., by both instructors and students, are copy protected and remain the intellectual property of their respective author(s). All course materials, including PowerPoint presentations, outlines, and other materials, are also protected by copyright and remain the intellectual property of their respective author(s).

Students registered in the course may take notes and make copies of course materials for their own educational use only. Students are not permitted to reproduce or distribute lecture notes and course materials publicly for commercial or non-commercial purposes without express written consent from the copyright holder(s).

**Course Evaluation**

The final grade will consist of the following elements weighted as shown below:

- Midterm Exam I (15%) 1.5 hours (*the date and time will be announced on cuLearn*).
- Midterm Exam II (15%) 1.5 hours (*the date and time will be announced on cuLearn*). There will be no deferred midterm exam. Students who can document a compelling reason for missing it will be excused and the weight (%) of the midterm will be automatically added to the final exam. If the mark in the final is higher than the second mid-term, I will ignore that midterm. (See also: *Course Requirements* below.)
- Exam III (45%), 3 hours, December 10 - 22 (*will be scheduled by the exam office*).
- Assignment I (15%, individual work)
- Assignment II (10%, group work). Note that all members of a group are supposed to make equal contributions to the group work. Therefore, I will randomly sample a few group members for an oral examination. If a group member fails an oral test, the mark of this group may be void.

Note: The assignments are due TWO WEEKS after they are made available online. All the assignments are due within 10 minutes of the beginning of the class on the due date. Late assignments will not be accepted. If a student fails to submit an assignment on time (*without* a verifiably good reason), a mark of zero (with a weight of 15% for the first or 10% for the second) will be added to final grade.

For your assignments, you can use Stata or Eviews. First, you need to download Stata/SE 14.0 for Windows from the following link:

http://carleton.ca/ccs/all-services/computers/site-licensed-software/
Note that the university has a volume license for Stata, so you can download it to your computer for personal use as long as you study at Carleton.

To do regression analysis in Stata, please carefully follow the instructions in the link to a video below. You will need Windows Media Player 2009 to play this MP4 media file.

https://www.dropbox.com/s/5tsddt8cd5g7hw9/Stata_Regression_Lecture_01.mp4?dl=0

An easy way to run regression is to use Microsoft Excel for Windows. First, you will need to install the Excel add-ins called Data Analysis and PHStat2 version 3.5 into Microsoft Office Excel 2007. I do recommend you to use Microsoft Office Excel 2007 because, in my experience, it is rather stable and looks less complicated than Microsoft Office Excel 2013. PHStat2 version 3.5 can be downloaded from

https://www.dropbox.com/s/qx6lfqfkc5ygr/PHStat2.zip?dl=0

After you have downloaded PHStat2, please carefully follow the instructions in the link to a video below to install both Data Analysis and PHStat2 add-ins. Note that my installation method works perfectly for Windows 7 Professional 64 bits.

https://www.dropbox.com/s/m0x2py7nwz9pzub/Install_Excel_add-ins.mp4?dl=0

To know how to run a simple linear regression using Excel, please watch this video:

https://www.dropbox.com/s/kbjokeyq4n25qt5/regression.mp4?dl=0

Course Requirements

Students must fulfill all the requirements described in Course Evaluation above in order to achieve a passing grade (D- or higher). Failure to write one or more of the midterm examinations (without a documented compelling good reason) will result in a grade of F (‘Failure’). Failure to write the final examination when the student has achieved satisfactory performance during the term will result in a grade of DEF (‘Deferred Final Examination’). Application to write a deferred final examination must be made at the Registrar’s Office. See Academic Regulation 2.3 for the official meanings of these grades, and note that it stipulates that no course grades are final until approved by the Faculty Dean. Note also that course grades may be scaled upwards or downwards in a rank-preserving manner to better fit the relevant departmental distributional norm.

Re-grading policy: If you feel that there is a marking error in your work, you can always make an appeal. The procedure is as follows: 1) write one page detailing where you should deserve extra points - please remember to provide a good justification as well; 2) submit this page to the T.A. within two weeks after grades are announced on cuLearn. If you are still not happy with the T.A.'s decision, you can bring this page to me.

Course Structure:
1. Introduction to Econometrics and Basic Probability Concepts

2. The Simple Linear Regression Model: Specification and Estimation, Properties of Least Squares

3. Inference in the Simple Linear Regression Model: Interval Estimation, Hypothesis Testing and Prediction

4. Prediction, Goodness of Fit and Modeling Issues

5. The Multiple Regression Model

6. Inference in the Multiple Regression Model

7. Using Indicator Variables

8. Heteroskedasticity