

Econometrics I Economics 3U03

Fall 2017

Class Meets: Weds 8:30-10:20 am, IWC E201

Lab Meets: Mons 1:30-2:20 pm, BSB 249 or
4:30-5:20 pm, KTH B121

Associate Professor Youngki Shin
shiny11@mcmaster.ca, x23672

Office Hours: Weds 10:30-11:30 am
KTH 440

Course Objectives

This course aims to provide students with empirical analysis technique in economics. Now that empirical evidence is an essential part of an economic analysis, understanding statistical tools and concepts correctly is important for critical reading of economic research or articles. Students will learn basic concepts in probability and statistics, causal inference, regression models, and hypothesis testing. Students will also participate hands-on exercises during the computer lab session and will learn how the econometric theory is applied to various real data sets in economics.

Prerequisites

Econ 2B03 or equivalent. For detailed information on prerequisites and antirequisites, please check the following webpage:

http://academiccalendars.romcmaster.ca/preview_program.php?catoid=7&poid=4220

Required Text & Software

This course requires the following textbook:

Stock, James H., & Mark W. Watson, 2015, *Introduction to Econometrics*, Third edition updated, Pearson Addison-Wesley (SW hereafter)

In addition, students will use the computer program R during the course. The software is available in the computer lab and students will learn how to install it in their own machine.

Evaluation

The assessment will be based on the following three components:

- Four assignments (10% each, best three outcomes will be accounted, 30% in total)
- Midterm exam (during the class hour, 30%)
- Final exam (40%)

Assignments should be submitted by the end of the class hour (i.e. 10:20 am) on each due date. Late assignments will be marked as zero. Please note that the evaluation scheme allows students one miss of assignments without asking any reason.

If you miss the midterm exam for documented illness, the final exam will be re-weighted as 70%. If you miss the final exam for documented illness, a make-up exam will be arranged. Students are required to submit all required documents.

The location and time of the final exam will be determined by the Registrar's office.

Course Outline and Schedule

Week	Date	Contents
1	September 6	Course overview and Introduction (SW ch. 1)
2	September 13	Review 1: Probability Theory (SW ch. 2)
3	September 20	Review 2: Statistics Theory (SW ch. 3)
4	September 27	Simple Linear Regression (SW ch. 4); <i>Due: Assignment 1</i>
5	October 4	Inference and Hypothesis Testing in SLR (SW ch. 5)
6	October 11	<i>No Class</i> (mid-term Recess)
7	October 18	Asymptotic Theory of SLR (SW ch. 17); <i>Due: Assignment 2</i>
8	October 25	<i>Midterm Exam (in class)</i>
9	November 1	Multiple Regression Model (SW Ch. 6);
10	November 8	Inference and Hypothesis Testing in MRM (SW ch. 7); <i>Due: Assignment 3</i>
11	November 15	Instrumental Variable Regression (SW ch. 14)
12	November 22	Asymptotic Theory of Multiple Regression (SW ch. 18)
13	November 29	Nonlinear Regression Models (SW Ch. 8); <i>Due: Assignment 4</i>
14	December 6	Review Session

In the computer lab session on Mondays, students will learn empirical applications related to the materials of the past week.

Important Dates

- Assignment Due: Sep. 30, Oct. 18, Nov. 8, Nov. 29
- No class: Oct 11
- Midterm Exam: Oct. 25

Additional Statements

Academic Dishonesty

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy.

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration.
3. Copying or using unauthorized aids in tests and examinations.

Academic Accommodation of Students with Disabilities

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140, ext. 2865 or email sas@mcmaster.ca. For further information, consult McMaster University's Policy for Academic Accommodation of Students with Disabilities.

Possible Course Modification

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

On Line Elements

Avenue will be used for course announcements, files that you can download, and your grades. In addition, we will use email. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster email accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

E-Mail Policy

In keeping with the official policy of the Faculty of Social Sciences, I will respond only to student emails sent from a McMaster account. Please do not use the email function within Avenue.