Economics 3U03 : Econometrics I   **Winter 2016**

Instructor

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Office Hours: See Avenue to Learn

Teaching Assistant

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Course Description
Elaboration of regression techniques developed in ECON 2B03. Problems of inference and interpretation in the analysis of economic data. Introduction to forecasting in economics.

The course focuses both on the *theoretical* concepts underlying the linear regression model and on *applications* of the theory to estimate linear regression models and perform inference in the linear regression framework (hypothesis testing, confidence interval, prediction interval, *etc.*).

Required Course Material
• *Introduction to Econometrics 4th edition* (2011) by Christopher Dougherty. Oxford University Press. A copy of *Introduction to Econometrics 4th edition* is on reserve (2 hours) in Mills library.

• The following resources are freely available at www.oxfordtextbooks.co.uk/orc/dougherty4e/

    ▷ study guide

    ▷ some PowerPoint slides

    ▷ data sets

    ▷ Gretl (GNU Regression, Econometrics and Time-Series Library) software and manual.

• You will require a standard McMaster calculator (Casio FX-991) for the tests and final exam.

Assessment

- The assessment is based on four assignments, two tests written during the term, and a final exam.

- Test 1 is 11:30-12:20 on **Friday February 12th**, 2016 in a location to be announced.

- Test 2 is 11:30-1:20 on **Tuesday March 15th**, 2016 in a location to be announced.

- Your grade for the course will be calculated as follows:

Item	Weight
Assignments*	15%
Test 1	15%
Test 2	25%
Final Exam (cumulative)	45%

* There will be 4 assignments. The assignment with the worst score will not be used in the calculation of your grade for the course. All other assignments will be worth 5%

- Assignments must be submitted by the deadline included in the question sheet. Assignments submitted after the deadline will not be graded.

- In order to avoid getting a grade of zero when you miss a test or do not submit an assignment you must complete and submit a *McMaster Student Absence Form* (MSAF) which can be found at
https://www.mcmaster.ca/msaf/index.html. Once I have received email confirmation of your submission of an MSAF the weight of the missed test or assignment in the calculation of the total grade will be transferred to the final exam.

- **There will be no makeup tests or assignments.**

- It is mandatory that students bring their McMaster student ID card to the two tests and the final exam.

- A student who does not respect the time limits during a test will get a 10% penalty on that test. Also, see the academic dishonesty statement on page 5?.

- Method of evaluation for tests and final exam: short-answer questions, numerical calculations, mathematical derivations, true-false, multiple choice and fill-in-the-blank questions.

- Your grades will be posted on Avenue to Learn. Please immediately report to the instructor any discrepancy between and actual and posted grades.

- Tests and assignments will be marked by the TAs according to my instructions. If you want clarifications about the marking of a test please contact the TA first and then contact me if you were unable to resolve your problem with him/her. Marking guidelines provided to the TA will be posted on Avenue to Learn.

Course web site

The course web site is on Avenue to Learn. 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 e-mail 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.

Here are some of the items you will find on the course web page:

- Office hours of the instructor and teaching assistants

- Reading schedule

- Some handouts/lecture notes

- Your grades

- Assignments

Computing

Parts of the assignments will involve the use of statistical computer softwares. The package I will use in class is `gretl` (Gnu Regression, Econometrics and Time-series Library) which is available for free. You can download the software and a user guide from the textbook companion web site. You can use other stats software if you wished (but not spreadsheet programs like MS Excel).

Guidelines and Expectations

Students are expected to come to class and to participate in various ways to the lectures, either by asking questions, by pointing out errors on the blackboard or by answering the questions I will ask during the lectures.

A reading schedule is posted on Avenue to Learn. Students are strongly encouraged to read the material before the lectures and to ask clarifying questions during lectures and office hours.

There are recommended practice questions from the textbook listed on Avenue to Learn. Answers to the starred exercises in the textbook are included in the online study guide. The assignments (even though they are only worth a small fraction of the total grade) are also important to improve your understanding of the material.

Students are assumed to be comfortable with linear algebra, basic probability theory and basic calculus. The course starts with a short review of random variables, sampling and estimation. Students who are not familiar with linear algebra and basic probability theory

will have to go beyond the review provided in class to follow the material presented in the course.

Contacting the Instructor

My office hours are listed on page 1. Please feel free to come to my office at those times to seek help or to discuss matters related to the course. Please note that there is no guarantee I will be available to assist you (even if I am in my office) if you drop by at random times outside of my designated office hours.

If my scheduled office hours and those of the TA conflict with your schedule, you can request an appointment with me via email at letendre@mcmaster.ca. Please insure that your email has subject line starting with "ECON 3U03," this will minimize the risk of your email being overlooked or perceived as spam. I do not use the email tool in Avenue to Learn.

Please note that a **policy of the Faculty of Social Sciences** which came into effect September 1, 2010 states "all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student's own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student's responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion."

Topics and Reading List
(Chapter references are from Dougherty)

Review of probability theory.
    Chapter "R" (opening chapter)

Simple regression analysis
    Chapters 1 and 2

Multiple regression analysis
    Chapter 3

Nonlinear models
    Chapter 4

Dummy variables
    Chapter 5

Specification of regression variables
    Chapter 6

Heteroskedasticity
    Chapter 7

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, specifically Appendix 3, located at http://www.mcmaster.ca/academicintegrity

The following illustrates only four 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 in group work, *e.g.* copying other students' assignments.

3. Copying or using unauthorized aids in tests and examinations.

4. Ignoring time limits during a test or exam.

A final warning: At certain points in the course it may make good sense to modify the course content described above. The instructor reserves the right to modify elements of the course and will notify students accordingly (in class and post any changes to Avenue to Learn).

January 15, 2016