

**MEMORIAL UNIVERSITY OF NEWFOUNDLAND**  
**ECONOMICS**  
**ECONOMICS 4550: *Econometrics I***  
**Fall 2020**

**Instructor** Roberto Martínez-Espiñeira

**E-mail** [rmartinezesp@mun.ca](mailto:rmartinezesp@mun.ca)

**Office** AA 3087

**Tel** 864 3676

**Website** <http://www.ucs.mun.ca/~rmartinezesp>

**Timetable** T & TH 12:30-13:45 (and asynchronously) through Brightspace

**Classroom** D2L Brightspace Online Room

**Office hours** Online TU&TH 10:30-12:30 or by appointment

## 1 Course Description

*Econometrics I* covers estimation of the general linear regression model with emphasis on fundamental theory and examples from published empirical research.

Prerequisites: MATH1000, ECON 2550, 3000, 3010

## 2 Textbooks

The main textbooks you would want to consult are:

- Hill, R. Carter, Griffiths, William E. and Lim, Guay C. *Principles of Econometrics* 5<sup>th</sup> ed. John Wiley & Sons, 2018<sup>1</sup>
- Adkins (2018) *Principles of Econometrics* 5<sup>th</sup> ed. free *GRET*L accompanying manual: [http://www.learneconometrics.com/gretl/poe5/using\\_gretl\\_for\\_POE5.pdf](http://www.learneconometrics.com/gretl/poe5/using_gretl_for_POE5.pdf)

## 3 Software Resources

We will be using mostly *GRET*L, which you can download for free and learn to use here: <http://gretl.sourceforge.net/>. Furthermore, from Lee Adkins' <http://www.learneconometrics.com/gretl.html> you can find datasets and scripts of examples that refer to most of the empirical examples contained in the textbook for this course.<sup>2</sup> It is strongly recommended that you install *GRET*L and start becoming familiar with it around the first week of the term. It is very user friendly and has a lot of user-friendly help available but it is up to you to make sure that you become a bit familiar with its basic operation by *Week 1*. Ideally, you will have *GRET*L running during the lecture too. The

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<sup>1</sup>It should not be a big problem if you happen to already own a 4<sup>th</sup> edition instead.

<sup>2</sup>Materials associated with the fourth edition are available in that page too.

instructor will use *Stata* sometimes during class, but it is not essential that students purchase it.<sup>3</sup>

## 4 Objectives of the course

- To enhance students' analytical and intellectual skills through the study of Econometrics
- To provide basic knowledge of Econometrics
- To equip the students with the skills needed to conduct and interpret basic ordinary least squares regression analysis
- To develop students' capacity for self-motivated learning and problem solving through the application of theoretical approaches to "real world"-like problems

## 5 Expected learning results

At the end of this course, you should be able to:

- understand the basic theory of econometric estimation and inference in order to support basic empirical research
- apply ordinary least squares regressions, interpret, and present the resulting econometric output obtained using computer software on real data
- interpret and discuss the results of applying basic econometric models in the literature

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<sup>3</sup>Unfortunately, *Using Stata for Principles of Econometrics, 5th Edition* is not free either but the interested reader can find it here: <https://www.wiley.com/en-us/Using+Stata+for+Principles+of+Econometrics>

The datasets in *Stata* format and the do files (called *scripts* in GRETL) can be found here: <https://www.stata.com/texts/s4poe5/>; and here for the fourth edition: <https://www.stata.com/texts/s4poe4/>

## 6 Assessment

The final grade for the course is based on term coursework and a final exam, as detailed in Table 1.

Table 1: Assessment summary

	date	weight	comments
2 Midterms	THU Wk 5, and THU Wk 10	50%	Your worst quiz will be 20% and the best quiz will be 30%
Final exam	TBA	50%	

Midterms will not be rescheduled. If you miss a midterm, the weight will be reallocated towards the final exam.

**Note: this year, due to the restrictions imposed by the measures to combat COVID19, the specific format of the tests and exams will be announced at a later date. It might involve remote examination tools, including oral online testing.**

## 7 Other policies

- Please e-mail me only from your MUN account
- Make sure you check your e-mail frequently (daily ideally)
- Make sure you check the website frequently (daily ideally). Many announcements pertinent to the course will only be on the website

### 7.1 Department of Economics Regulations:

- Students need to follow the MUN calendar for drop dates and deadlines
- It is not possible to drop a course once a student even sees a final exam or writes the final
- The Economics Department does NOT have Supplementary Exams.

### 7.2 Academic Honesty and Plagiarism

Plagiarism involves presenting the ideas or works of another as one's own. This applies to all material (essays, reports, term projects, seminar presentations, statistical data, computer programs, research results, theses, etc.. ) Properly acknowledging the use of sources is a required part of scholarship and failing to do so is contrary to accepted norms of academic behaviour. Information on acceptable writing practices is available through the Writing Centre at [www.mun.ca/writingcentre](http://www.mun.ca/writingcentre)"

See also Section 6.12.4 of the University Calendar on Academic Misconduct: <http://www.mun.ca/regoff/calendar/sectionNo=REGS-0748>

### 7.3 Conduct of Examinations

Memorial University provides formal instructions for examinations (Calendar 6.8). For all examinations, students must be registered in the course; are permitted only to bring pens, pencils and, only if permitted, other items for the examination; are not allowed to use communication devices; and may not speak to each other unless part of the examination process. In this course, a student leaving the examination room will not be permitted to return. Please consult before the test with the instructor if you require accommodation regarding this norm.

A list of instructions is available online here:

[http://www.mun.ca/regoff/calendar/sectionNo=REGS-0628:](http://www.mun.ca/regoff/calendar/sectionNo=REGS-0628)

Information on required documentation for excused absences is available in Section 6.7.5 of the General Academic Regulations (Undergraduate) in the University Calendar:

<http://www.mun.ca/regoff/calendar/sectionNo=REGS-0601#REGS-1949>

**Note: this year, due to the restrictions imposed by the measures to combat COVID19, the specific format of the tests and exams will be announced at a later date. It might involve remote examination tools, including oral online testing.**

### 7.4 Students requiring special accommodation

Memorial University is committed to facilitating and promoting an accessible, inclusive, and mutually respectful learning environment. Students requiring special accommodation are asked to communicate firstly with the Glenn Roy Blundon Centre ([www.mun.ca/blundon](http://www.mun.ca/blundon)) at the earliest opportunity. University policies and procedures pertaining to accommodations for students with disabilities can be found at [www.mun.ca/policy/site/policy.php?id=239](http://www.mun.ca/policy/site/policy.php?id=239)

### 7.5 Important Dates to Remember

A list of key dates to remember is available here:

[http://www.mun.ca/regoff/2017-2018\\_University\\_Diary.pdf](http://www.mun.ca/regoff/2017-2018_University_Diary.pdf)

## 8 Preliminary Course outline

This document shows the general contents of the course, and the sequence of topics. These will be broken down into a series of lectures for each topic. For more detailed and up to date information on the lectures schedule and further reading for each section, consult the on-line *Course Schedule*. Note that Adkins' software-based textbooks follow the same sequence as Hill et al.'s main textbook.

NB: this list of topics is subject to alteration during the term

### 8.1 An Introduction to Econometrics

What is Econometrics?

Probability concepts and basic statistics, basic operation of GRETL

- Hill et al. Ch. 1

### 8.2 The Simple Linear Regression Model

Ordinary Least Squares with one single explanatory variable

- Hill et al. Ch. 2

### 8.3 Interval Estimation and Hypothesis Testing

- Hill et al. Ch. 3

### 8.4 Prediction, Goodness of Fit and Modeling Issues

- Hill et al. Ch. 4

### 8.5 The Multiple Regression Model

- Hill et al. Ch. 5

### 8.6 Further Inference in the Multiple Regression Model

- Hill et al. Ch. 6

### 8.7 Using Indicator Variables

- Hill et al. Ch. 7