MEMORIAL UNIVERSITY OF NEWFOUNDLAND
ECONOMICS
ECONOMICS 4551: *Econometrics II*
WINTER 2020-2021

Instructor Roberto Martínez-Espiñeira
E-mail rmartinezesp@mun.ca
Office AA 3087
Tel 864 3676
Website `http://www.ucs.mun.ca/~rmartinezesp` but please refer to your D2L/Brightspace course area
Timetable Mon&Wed **12:30-13:45** pm (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 II covers further problems in econometric theory and technique; multicollinearity, autocorrelation, nonlinear estimation, and the identification and estimation of systems of equations. Published empirical research will be discussed and each student will be expected to perform an original empirical study.

Prerequisite: Economics 4550

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^{th} ed. John Wiley & Sons, 2018[1]
- Adkins (2018) *Principles of Econometrics* 5^{th} ed. free *GRETL* accompanying manual: `http://www.learneconometrics.com/gretl/poe5/using_gretl_for_POE5.pdf`

Other good textbooks that can be very helpful too include:

- Kennedy, P. *A Guide to Econometrics*, Sixth Edition John Wiley & Sons, 2008
- Stock, J.H and M. W. Watson *Introduction to Econometrics*, 2nd ed. Addison-Wesley, 2006

[1] It should not be a big problem if you happen to already own a 4^{th} edition instead.

3 Software Resources

We will be using both STATA, which is available to you in the MUN library and GRETL, which you can download for free and learn to use by looking at this link: `http://www.learneconometrics.com/gretl/ebook.pdf`. This website (`http://www.learneconometrics.com/gretl.html`) also contains datasets and examples which refer to most of the empirical examples contained in the textbook for this course. We will run GRETL during the lab sessions, so it is recommended that you install it and start becoming familiar with it around the second week of the term. If possible, have GRETL available on your personal computers during class. It is also advisable that you use two different packages to run the main analysis involved in your own project.

4 Objectives of the course

- To establish a basic understanding of the properties of frequently applied basic and advanced econometric techniques under non-classical conditions commonly encountered in practical settings.
- To equip the students with the skills needed to conduct and interpret econometric analysis beyond what ordinary least squares regression analysis would allow
- To provide experience in setting up and implementing the students own econometric projects.
- To equip students for further study in Economics and/or employment in related fields

5 Assessment

The final mark for the course comes from the coursework and the final exam (See Table 1)

Table 1: Assessment summary

	date	weight	comments
2 midterms	MON Week 6 and Week 11	60%	min(Q2, Q3) 20%; max(Q2, Q3) 40%
Final exam	TBA	40%	

Midterms will not be individually rescheduled for ANY reason. If you miss one, the weight will be reallocated towards the final exam. Late project submissions will be penalized at a rate of 5 percent per day.

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.

6 Other policies

- Please e-mail me only from your MUN account
- Make sure you check your e-mail frequently (daily ideally) and the D2l Brisghtspace course area
- This term you will need to use a computer with video capabilities to complete your exams

7 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.

8 Other regulations

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) 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`

9 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 `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`

10 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`:

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.

11 Important Dates to Remember

A list of key dates to remember is available here:

`http://www.mun.ca/regoff/2017-2018_University_Diary.pdf`

12 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 and your Brightspace/D2L course area*. The chapters in Hill et al's book below should correspond with the ones in Adkins' companion book.

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

12.1 Brief Review of OLS

- Hill et al., ch. 2-7
- Kennedy, chs. 1-3, 11

12.2 Heteroskedasticity

- Hill et al., ch. 8
- Kennedy, ch. 8.1-8.3

12.3 Time-series with stationary variables. Dynamics, Autocorrelation, and Forecasting

- Hill et al., ch. 9
- Kennedy, ch. 8.4

12.4 Endogeneity, Instrumental Variables, and Simultaneous Equations Models

- Hill et al. Ch 10, 11
- Kennedy, ch. 9.1-9.3, 11

12.5 Non-stationary time-series models and cointegration

- Hill et al., ch.12
- Kennedy, ch. 19

12.6 Panel Data Models

- Hill et al. ch. 15
- Kennedy, ch. 18

12.7 Limited and Discrete Dependent Variable Models

- Hill et al., ch. 16
- Kennedy, chs. 15 and 16