MEMORIAL UNIVERSITY OF NEWFOUNDLAND
ECONOMICS
(ECONOMICS 6002 FALL 2013-2014)

Course Name Econometrics
Program MA Economics
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Timetable Slot 13 Fall MON-WED 2:00 to 3:15
Classroom SN1103
Office hours MON 1:00-2:00 TUE 2:30-4:30 WED 1:00-2:00 or by appointment

1 Textbooks

The main textbooks you would want to consult are:

- Baum, C. *An Introduction to Modern Econometrics Using Stata*, Stata Press 2006, which will also guide you through your learning STATA and which you should purchase[1]
- Greene, W.H. *Econometric Analysis*, Seventh Edition,[2] Pearson/Prentice Hall, 2012, which is more of a reference book than a textbook as such
- A. Colin Cameron and Pravin K. Trivedi *Microeconometrics: Methods and Applications,* Cambridge University Press, New York May 2005, which contains all the microeconometrics you will need in this course and much more
- A. Colin Cameron and Pravin K. Trivedi *Microeconometrics Using Stata,* Stata Press 2009, which is much more applied and will also integrate smoothly with Stata

Other good textbooks that perhaps you have used during your undergraduate degree can be helpful too if you have to refresh some of your background knowledge. These include:

- Hill, R. Carter, Griffiths, William E. and Lim, Guay C. *Principles of Econometrics* 3rd ed. John Wiley & Sons, 2008
- Jeffrey M. Wooldridge *Introductory Econometrics: A Modern Approach, 4th Edition*, South-Western, 2009

[1] Note the errata available at http://www.stata-press.com/books/errata/imeus.html
[2] Older editions like the 5^{th} and the 6^{th} should work almost as well.

- 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

More advanced and specialized books that might come handy depending on the nature of your project are:

- Long, S. and J. Freese *Regression Models for Categorical Dependent Variables Using Stata*, 2nd Edition, College Station, TX: Stata Press, 2006
- Badi H. Baltagi *Econometric Analysis of Panel Data, 4th Edition,* Wiley, 2008
- Wooldridge, J. *Econometric Analysis of Cross Section and Panel Data* MIT Press, 2002
- James W. Hardin, Joseph M. Hilbe *Generalized Linear Models and Extensions, 2nd Edition* College Station, TX: Stata Press, 2006
- A. Colin Cameron, Pravin K. Trivedi *Regression Analysis of Count Data* Cambridge University Press, 1998
- John P. Hoffmann *Generalized Linear Models: An Applied Approach* Pearson, 2004
- Cheng Hsiao *Analysis of Panel Data, 2nd Edition* Cambridge University Press, 2003
- Rabe-Hesketh, S., and A. Skrondal. 2005. *Multilevel and Longitudinal Modeling Using Stata.* College Station, TX: Stata Press.

2 Software Resources

We will be using STATA 12, which will be available to you through your LABNET accounts in the computers in lab CP2003 (Chemistry-Physics Building) and at the QEII Library Commons. There is a lot of online documentation to become familiar with Stata:

- There are pull down menus for all (and more) the commands you will need in the package interface itself, note that the command dialogs have a link to the relevant "help" file that you can access clicking on the "?" button
- The "help" files will be useful too
- For more complicated usually googling "STATA" + whatever your problem is will help a lot: you will find help files, tutorials, solved examples, papers on the issue etc.

- There are also many "Getting Started with STATA" tutorials, those are a good idea to get you started

We will also become familiar with Stata during the class itself.

3 Objectives of the course

- To enhance students' analytical and intellectual skills through the study of Econometrics
- To strengthen the knowledge of Econometrics the student gained in previous Econometrics modules
- To develop students' capacity for self-motivated learning and problem solving through the application of theoretical approaches to "real world"-like problems
- To equip students for further study in Economics and/or employment in related fields

4 Expected learning results

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

- understand the theory of econometric estimation and inference at a level sufficient to support empirical research at the masters level
- apply empirical econometric techniques, interpret, and present the resulting econometric output obtained using computer software on real data
- design and implement your own econometric study
- interpret the results of applying econometric models in the technical literature

5 Assessment

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

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

The Project is an important component of this course, and planning for it should begin at an early stage. The report on your empirical project is due on DEC 2^{nd} and it should include a copy of your raw computer output (log file) and your command file (.do file) in an Appendix. You must also submit the data you used. Late papers will be penalized at the rate of 5 points per day.

Table 1: Assessment summary

	date	weight	comments
2 quizzes	Oct 16^{th} and Nov 20^{th}	35%	Your worst quiz will be 10% and the best quiz will be 25%
Project proposal	Wed Wk 5	5%	2-page proposal to be submitted
Project draft	Mon Wk 10	10%	
Project presentation	Wks 12-13	5%	
Final paper	DEC 4^{th}	10%	
Final exam	TBA	35%	

6 Other policies

- Class attendance and submission of assignments are compulsory
- E-mail 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
- 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. Economics Department does NOT have Supplementary Exams.

6.1 Academic Honesty and Plagiarism

Cheating includes but is not limited to allowing another student to copy from your work, presenting someone else's work as your own including through failure to credit the source of ideas, consulting electronic devices such as mobile phones or MP3 players and/or interacting with others while a test is ongoing. Any submission in this course that is similar to another author's work, beyond chance, will be treated as plagiarism. Information about procedures and penalties for academic misconduct is outlined in the University Calendar.

6.2 Campus Support

A number of student support services exist on campus:

- The Academic Advising Centre (SN-4053) provides academic guidance to students in their first year of study. Students seeking advice about a specific Major or Minor should contact the designated undergraduate advisor in that department.

- The Commons (QEII library) provides access to print, electronic and technology resources.
- The Counselling Centre (UC-5000) helps students develop their personal capabilities, ranging from study strategies to assisting distressed students.
- Student Affairs and Services (Answers, UC-3005) answers questions about such things as courses, housing, books, financial matters and health.
- The Writing Centre (SN-2053) is a free, drop-in facility for students and helps them become better writers and critical thinkers.
- The Glenn Roy Blundon Centre (UC -4007) serves students whose disabilities involve conditions affecting mobility, vision, hearing, learning (disabilities), chronic illness, or mental health; support is also provided to students with documented temporary illnesses and injuries.

6.3 Important Dates to Remember for Fall 2013 Semester

September 4	Lectures begin, Fall Semester
September 4	Deadline for fees payment, Fall semester
September 18	End of registration period, last day to add courses
September 18	Last day to drop courses
October 14	Thanksgiving Day, no lectures, Fall semester break begins
October 16	Fall semester break ends and lectures resume
October 23	Last day to drop courses without academic prejudice
November 4	Registration begins for next semester
November 11	Remembrance Day holiday, No lectures
December 4	Lectures end, Fall Semester
December 9	Exams begin, Fall Semester
December 18	Exams end, Fall Semester
January 6, 2014	Lectures begin for WINTER semester

6.4 Sick notes

If you are applying for a waiver of regulations, requesting a deferred final exam or assignment/paper etc. for medical reasons, please refer to General University Regulation 5.14.6 Information Required in Certificates from Health Professionals. To ensure that you meet the requirements outlined in this regulation you are encouraged to use the Student Medical Certificate which is available online through the Registrar's Office website:

http://www.mun.ca/regoff/STUDENT_MEDICAL_CERTIFICATE.pdf

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

7.1 INTRODUCTION

7.2 REVIEW OF THE CLASSICAL LINEAR REGRESSION MODEL

7.2.1 Review of the General Linear Model and Ordinary Least Squares

7.2.2 Model Specification: (missing variables, non-linearities, independent binary variables)

7.3 EXTENSIONS OF THE CLASSICAL LINEAR REGRESSION MODEL

7.3.1 Heteroskedasticity: effects heteroskedasticity on OLS, correcting for heteroskedasticity, testing for heteroskedasticity, Generalized Least-Squares (GLS)

7.3.2 Panel Data Models: FE versus RE, Hausman-Taylor, random coefficients models, SURE

7.3.3 Non-Linear Estimation

7.3.4 Instrumental Variables Estimation: Dealing with Endogeneity and Sample Selection: Instrumental Variables

7.4 FURTHER TOPICS IN ECONOMETRICS

7.4.1 Maximum Likelihood Estimation

7.4.2 Limited and Discrete Dependent Variable Models: Logit and Probit, Ordered Logit-Probit, Multinomial Logit, Conditional Logit, other discrete-choice models

7.4.3 Count data: Poisson, Negative Binomial, Truncation, censoring, double-hurdle and zero inflated models

7.4.4 Time-Series Models: Unit roots and cointegration

7.4.5 Autocorrelation

7.5 ECONOMETRIC PROJECT