Carleton University
ECON 5029 - Methods of Economic Research
Professors: Lynda Khalaf and Marcel Voia
Winter 2015

1 Course Objectives

This course aims to initiate graduate students in economics to applied research, with focus on empirical analysis. The prerequisites to this course are: ECON 5020 (ECON 5000 if taken before 2012-2013, ECON 5001 if taken before 2007-2008) and ECON 5027 (ECON 5005 if taken before 2012-2013).

The course will cover the following: (i) formulation of a research question; (ii) elaboration of a research proposal including a proposed research methodology; (iii) data collection and statistical analysis; (iv) economic analysis and discussion, including identification of methodological limitations and further research directions; (v) report writing and oral presentation and defense. The research question will be focused so that the latter 5 steps can be achieved within the course time frame.

The professors will act as a research advisor and coordinator; students will be responsible for executing steps (i)-(v). The proposal will be submitted [the deadline is specified below] and graded, and will receive formal feedback. Oral presentations will take the form of a workshop-conference as is usual in economics. Students will present their own work, and will also possibly present formal discussions of the work of another team.\(^1\) The oral presentation will be graded and will receive formal feedback. The final report will take feedback on the proposal and on the oral presentation into consideration. Students will choose their research topic, subject to the approval of the supervising professor.\(^2\)

Class lectures will be held in parallel, to address selected econometric special topics which arise in current empirical works. Lectures will focus on identifying problems and applying up-to-date solutions which reflect on-going research in econometrics. Topics considered include: (i) systems of regression possibly simultaneous equations, (ii) panel regressions, (iii) the statistical assessment of structural models: instrumental variables and estimation via the Generalized Method of Moments, (iv) cointegration, (v) discrete choice models, (vi) introduction to program evaluation.

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\(^1\)Formal discussions will be considered depending on the number of registered students, at the discretion of the professors.

\(^2\)In principle, students have complete freedom in choosing the research topic. However, restrictions will apply depending on the number of registered students, at the discretion of the professors.
On these issues, the course provides an overview of the popular state-of-the-art inference procedures, yet the presentation is not recipe-book/tool-kit driven. Rather, the course addresses the fundamental issues that will allow practitioners to use the econometric methods in question as appropriate and effective inferential strategies. The emphasis is on concepts rather than technical detail and exposition is intuitive though formal, with focus on applicability.

**Compulsory companion tutorials are offered for this course.** Each student should be registered in one 1h30 session. Two such sessions are offered in the 2015 Winter term (W01 and W02), to make sure students receive individual guidance on their research projects. The tutorials are an integral part of the course. Attendance is required and cannot be substituted by *e.g.* out-of-class meetings with the professor nor with the TA. Students should attend tutorials in the section for which they have registered.³

## 2 Lectures

Seminar core course: Monday 2h35-5h25. Tutorials: Tuesday 10h05-11h25, and Wednesday 5h35-6h55. Office hours of Lynda Khalaf and Marcel Voia: 1h30 each per week, to be determined.⁴

## 3 Grading Scheme and Regulations

- **Grades**

  1. Term paper (a total of 65%; requirements are detailed below). Group work [groups of up to THREE only] is allowed and encouraged, though each group has to submit a differentiated term paper. Evaluation of all documents presented will reflect, in addition to econometric techniques, writing and presentation and adequate literature review. Requirements are as follows.

     (a) **a written one-page document that briefly formulates the research question [5%].** *Deadline: Monday February 2, 5h30 pm, in class*. Failure to submit this document on time will result in a grade of zero out of 5%.

     (b) **a written research proposal [20%].** Ideally, the proposal should: (i) formulate the research question [in much more details than the previously submitted one-page document] with reference to available literature; (ii) set the statistical framework; (iii) describe the proposed method for statistical analysis as well as the data to be used, (iv) suggest expected outcomes and outline issues that require further work. Students will receive formal feedback [grade and recommendations] following the submission of the proposal. Evaluation of the final paper will take these comments into consideration [students must demonstrate attempts to integrate the comments in question

³While the content is similar for both tutorials, lecture sequencing may not fully coincide. Each section has a fixed maximum capacity in order to give all students enough time for useful class interaction.

⁴There will be no office hours after the official last day of classes.
into their submitted work. **Deadline:** *Monday March 2, 5h30 pm, in class.* Failure to submit this document on time will result in a grade of zero out of 20%.

(c) **an oral presentation in class** [10%], **March 25, 30 & 31st, or April 1, 6 & 7.** Oral presentations will take the form of a workshop-conference. Students will present their own work, and will also possibly present formal discussions [to be arranged given the number of registered students, at the discretion of the professor] of the work of another team. Failure to show up for a scheduled presentation will result in a grade of zero out of 10%. Absences only if backed by a legitimate medical report will result in reporting 10% to the grade on the final report (in which case the final report will count as 40%). **Attendance on presentation dates is obligatory for a total of 9 hours.** Failure to attend all presentation sessions - even if the student does not miss his/her own presentation - will result in a 50% penalty on the presentation grade.5

(d) **a final report** [30%]. **Deadline:** *April 15 (time and drop location to be announced).* Failure to submit this document on time will result in a grade of zero out of 30%. Delays backed by a legitimate medical report will lead to arranging an alternative deadline, following the rules of the Department of Economics.

2. **Exam (35%), 3 hours. March 23.** Failure to write the examination will result in a final course grade of ABS. In order to write a deferred final exam students must contact Marge Brooks, Graduate Administrator, Economics Department.

- **Regulations**

1. Plagiarism. Please be aware that plagiarism is serious offense at Carleton and should be recognized and avoided. For further information on how to do so, please see “Pammett on Plagiarism and Paraphrasing” at www.carleton.ca/economics/courses/writing-preliminaries.

2. Academic Accommodations. Please check the official graduate calendar website for dates and deadlines: http://www1.carleton.ca/registrar/registration/dates-and-deadlines/, and www.carleton.ca/equity for further information on accommodations and equity services.

   (a) For Religious Obligations: To be worked out on individual basis with instructor. Consult Equity Services Website or an Equity Advisor for Policy and list of Holy Days.

   (b) For Pregnancy: Contact Equity Services to obtain letters of accommodations.

   (c) For Students with Disabilities: Students with disabilities needing academic accommodations are required to contact a coordinator at the Paul Menton Centre (PMC) to complete the necessary letters of accommodation. The student must then make

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5For example, if the presentation earned 10/10 yet the student does not attend ALL other presentations, the final grade will be 5 out 10. And so on so forth.
an appointment to discuss their needs with the instructor at least two weeks prior to
the first class test or ITV test. This is to ensure sufficient time is available to make
the necessary accommodation arrangements.

3.1 Basic Textbooks

3.2 Reference Manuals
Further reference papers and reference manuals will be recommended depending
on the topic chosen by each group. Class notes will also be available to guide readings.
Selected exercises will be provided as a preparation for the exam.

3.3 Basic Textbooks

3.4 Reference Manuals
Class notes will be available to guide readings. Selected exercises will be provided as a preparation for the exam. Extra readings will also be recommended for specific Chapters.

1. Graduate level textbooks

2. Introductory level (review) textbooks
4 Tentative Lectures and tutorial Outlines

1. **January 5**: Introduction, general directives. Review. Chapters 2-5.
   
   (T) **January 06 - 7.** General directives, formulation of research question. Writing Tips for graduate economic research.

   
   (T) **January 13 - 14.** Hands-on examples, formulation of research question. In class consultations.

   
   (T) **January 20 - 21.** Hands-on examples, formulation of research question. In class consultations.

   
   (T) **January 27 - 28.** Hands-on examples, formulation of research question. In class consultations.

5. **February 2**: Discrete choice models. Chapter 19. **Deadline for submitting "Research Question".**
   
   (T) **February 3 - 4.** Exercise Session (exam preps).

6. **February 9**: An introduction to Program evaluation.
   
   (T) **February 10 - 11.** Hands-on examples, proposal. In class consultations.

7. **February 23**: **Poster session type presentation of proposal: your proposal in about three slides.**
   
   (T) **February 24 - 25.** *Poster session type presentation of proposal: your proposal in three slides, continued.*

8. **March 2**: An introduction to Cointegration, some sections of Chapter 21. **Deadline for submitting "Proposal".**
   
   (T) **March 3 - 4.** Exercise Session (exam preps).

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6The poster session is not graded, but you will receive feedback. It will be held if the number of students is manageable enough.
9. **March 9:** GARCH models.
   
   (T) **March 10 - 11.** Presentation preps. In class consultations.

10. **March 16:** Exercise Session (exam preps).
    
    (T) **March 17 - 18.** Exercise Session (exam preps).

11. **March 23:** In-class exam. 3 hours.
    
    (T) **March 24. No tutorial**

    (T) **March 25.** Class presentations. Attendance is obligatory

12. **March 30:** Class presentations. Attendance is obligatory.
    
    (T) **March 31 - April 1.** Class presentations. Attendance is obligatory

13. **April 6:** Class presentations. Attendance is obligatory.
    
    (T) **April 7.** Class presentations. Attendance is obligatory.\(^8\)

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\(^7\)April 8 follows a Friday schedule hence there will be no tutorials on the last Wednesday of the year. To ensure symmetry between the two tutorials sections (12 tutorial sessions for all), the Tuesday tutorial following the exam is not offered.

\(^8\)April 8 follows a Friday schedule hence there are no classes for this course.