ECO 499H1Y LEC0101:
Honours Essay in Applied Microeconomics

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I. Course Description and Objectives

ECO499 Honours Essay in Applied Microeconomics is an advanced level course for students at the University of Toronto (St-George campus). The goal of the course is for each student or a team of two students to write an original research paper (essay) in applied microeconomics, which includes both an analytic framework and original quantitative data and regression analysis.

The objectives and learning outcomes will be particularly relevant for those students considering the pursuit of a research degree (i.e., a PhD). However, many of the skills to be developed will be broadly applicable, and thus the course could be of interest even to those not currently considering further studies.

The journey will require consistent effort throughout the academic year. While you will have the guidance of both Prof. Bobonis and a faculty adviser, you will mostly be working independently. To help keep you on track, there are graded milestones throughout the year.

II. Key Information

Course site: ***Quercus*** (all announcements and material)
Calendar: see ***Quercus*** homepage
https://q.utoronto.ca/courses/358147

Instructor: Gustavo J. Bobonis
Email: gustavo.bobonis@utoronto.ca
Office: 150 St. George Street, #304

Communication: see **Communication** below

All announcements will be made using *Quercus*. All material will be posted on *Quercus*.

III. Learning Outcomes

By the end of this course, the students will:

1. Write an original research paper (essay) in applied microeconomics, which includes both an analytic framework and original quantitative data and regression analysis.

2. Develop research skills needed to conduct empirical research in microeconomics. These skills include, but are not limited to, identifying a well-posed and feasible research question; placing this research question in the context of existing research; formulating a research plan; identifying and obtaining the required data; conducting a sophisticated statistical analysis to test your hypothesis; and presenting your results both in the format of a standard economics journal article and a formal oral presentation.

IV. Prerequisites

a) Microeconomic Theory: ECO200Y1 / ECO204Y1 / ECO206Y1

b) Macroeconomic Theory: ECO202Y1/ ECO208Y1/ ECO209Y1;

c) Quantitative Methods in Economics: ECO220Y1 / ECO227Y1 (STA237H1, STA238H1) / (STA247H1, STA248H1) / (STA257H1, STA261H1)

d) Econometrics: ECO372H1/ ECO374H1/ ECO375H1;

e) An overall average of 73% across all ECO courses taken.

Recommended Preparation: ECO374H1/ ECO375H1 and ECO372H1

Note: Prerequisites are strictly checked and enforced and must be completed before taking this course. By taking this course you acknowledge that you will be removed from the course at any time if you do not meet all requirements set by the Department of Economics. Please talk to Ms. Sally Wong (Undergraduate Administrator, Department of Economics) if you have any doubt about whether you meet the requirements.

V. Reference Textbook and Software

Cunningham, Scott (2021). ***Causal Inference: The Mixtape***. Yale University Press: New Haven & London. 352pp. ISBN: 9780300255881.

It is available at ***UofT Library*** (***online***)
https://www-degruyter-com.myaccess.library.utoronto.ca/document/doi/10.12987/9780300255881/html

as well as on Amazon, Indigo and many other online platforms. I strongly recommend that you have your own (pdf) copy. Not only is it an engaging and accessible book, but it is also one that can stay useful for a lifetime.

Software (recommended)

Stata is a proprietary commercial software, available on Windows, macOS and Linux. It comes in several "flavours" of increasing memory capacity. If you already have Stata version 14 or above, you do not need to buy the latest version, as most commands we will use haven't changed. Stata is also available on computers of the Map and Data Library room at Robarts Library; it is your responsibility to adequately transfer your files.

VI. Course Structure (The Details)

Research Paper Project

You choose your own topic. The topic must be approved by the course instructor. Here are some guidelines.

- It must be economics. I define economics broadly.
- It must be microeconomics.
- The best research questions are narrow and well defined. (You should think in terms of testable hypothesis.)
- It must be the case that empirical evidence can help answer the question.
- The empirical analysis must be feasible. A major part of feasibility is data availability.
- Simple replications of published research is not acceptable. That is, you must do

more than just running the same regressions on the same data set.

- A research paper asking whether previously published results are robust (e.g., hold in a different data sample) are okay. The extent to which a robustness check (or external validity) thesis is compelling depends on the extent to which it is plausible that the original result may not hold in this alternative environment.

Each paper must be supervised by a Department of Economics-affiliated professor.

You can choose to write the research paper by yourself or with one co-author (in the course). You are encouraged to work with a co-author, as there are generally strong gains to doing empirical work in teams. (There is no penalty for working with a co-author.)

Class Meetings and Schedule

Classes meetings will be used for students to present the background research and work in progress and for classmates to give each other constructive feedback. (Note: class attendance is mandatory.) For each week, you are expected to complete the work due, and participate in group discussions.

Fall Term Period

Week	Meeting Date	Class Slot	Due
1	Wed, Sept. 4	Organizational Meeting / Intro / How to Find a Topic Q&A	
2	Wed, Sept. 11	Individual consultations 1 (How to Find a Topic) Feedback RI1	Research idea (RI)1 /
3	Wed, Sept. 18	Presentations - paper summary (Econ. Dept. faculty member) Finding and downloading data Feedback RI2	RI2 / Presentation 1
4	Wed, Sept. 25	Presentations - paper summary (cont'd) Feedback RI3	RI3 / Presentation 1 (cont.)
5	Wed, Oct. 2	Presentations - review of papers Feedback RI4	RI4 / Presentation 2
6	Wed, Oct. 9	Presentations - review of papers (cont'd)* Feedback RI5	RI5 / Presentation 2 (cont.)
7	Wed, Oct. 16	Presentations - replication study Feedback RI6	RI6 / Presentation 3
8	Wed, Oct. 23	Presentations - replication study (cont'd)	Presentation 3 (cont.)
9	Wed, Oct. 30	Fall Reading Week	
10	Wed, Nov. 6	Presentations - paper idea	Presentation 4
11	Wed, Nov. 13	Presentations - paper idea (cont'd) & theoretical framework of paper*	Presentation 4 (cont.) / Presentation 5
12	Wed, Nov. 20	Presentations - theoretical framework of paper (cont'd)	Presentation 5 (cont.)
13	Wed, Nov. 27	Individual consultations with students (projects)	

Research ideas (RI) (1-6): Submit 1-2 paragraphs with a simple research idea (200 words max). The paragraph should: (a) establish an empirical (policy/applied) research question (one sentence); (b) explain/argue why it is interesting (1-2 sentences); describe a possibly feasible research project to address the question (possible data; research design) (2-4 sentences) (*single or coauthored*). (Submit ideas Tuesday 12p, for me to review and prepare feedback before class.)

Individual consultation 1: Students will meet one-on-one with the instructor to present / discuss a summary of an applied microeconomics empirical paper of a faculty member in the department. Pick a paper and tell me what it is about and why you find the paper interesting (*single authored*).

Presentation & paper summary: Approx. 20 minutes presentation of a summary of a paper of a Dept. of Economics faculty member (*single authored*). Notes: no equation; tables and graphs are fine; 3-5 pages total, all content included; work with the faculty member; use slides for your presentation, no more than 10 slides.

Write the paper and slides with a "reader" in mind. You can choose from one of two:

> (a) A classmate in economics: i.e. explain the paper to a classmate who has not read the paper. Why the paper is interesting to you. Your goal is to convince the classmate to read the paper.
>
> (b) Your classmate, parent or sibling who is not an economics major. The goal is to show that economics has insightful things to convey to non-economists. So you need to avoid jargon.

Presentation - review of papers: Approx. 12 minutes presentation of a review of two papers in a narrow area of economics (*single authored*). This should be related to your assignment for the paper idea presentation (see below) *and* the intended paper. *Notes*: 6 slides presentation: (a) slide 1: why the topic is interesting; (b) slide 2: what are the main hypotheses? (c) slides 3-4: what kind of data are used in the papers; (d) slides 5-6 what are the results and are the results convincing?

Presentation - replication study (empirical): Choose a published paper which has deposited their data on the web. Replicate the first two tables of the paper. One table must be the summary statistics and one table should be some regression results. Use slides only *(single authored)*. The objective here is to learn how to do empirical work by replicating someone else's work. This is hard work. You need to get started early.

**Presentation - research paper proposal idea:* Approx. 12 minutes presentation of the idea for the research paper (*single or co-authored*). The presentation should: (a) establish an empirical (policy/applied) research question; (b) explain/argue why it is interesting; describe a feasible research project to address the question (planned data; research design).

**Presentation - theoretical framework of paper:* Presentation of the theoretical framework of your paper (*single or co-authored*). The presentation should:
(a) establish an empirical (policy/applied) research question;
(b) explain the objectives of the players/stakeholders/agents;
(c) explain the constraints (money/time/information, etc.) of each player;

(d) explain the timing of the model;
(e) explain the predictions (observable comparative statics and equilibrium outcomes) of the model;
(f) describe the data and how you will test your predictions.

Winter Term Period

Week	Meeting Date	Class Slot	Due
1	Wed, Jan. 8	Individual consultations with students	
2	Wed, Jan. 15	Individual consultations with students	
3	Wed, Jan. 22	Presentations - 1st progress report	Progress report #1
4	Wed, Jan. 29	Presentations - 1st progress report (cont'd)	Progress report #1 (cont.)
5	Wed, Feb. 5	Individual consultations with students	
6	Wed, Feb. 12	Individual consultations with students	
7	Wed, Feb. 19	Winter Reading Week	
8	Wed, Feb. 26	Presentations - 2nd progress report (cont'd)	Progress report #2
9	Wed, Mar. 5	Presentations - 2nd progress report (cont'd) (online)	Progress report #2 (cont.)
10	Wed, Mar. 12	Individual consultations with students (online*)	
11	Wed, Mar. 19	Individual consultations with students	
12	Wed, Mar. 26	Final presentations of research papers (cont'd)	Final presentations
13	Wed, Apr. 2	Final presentations of research papers (cont'd)	Final presentations (cont.)

**Progress reports 1 and 2*: *Approx.* 15-minute presentations of progress in data analysis and Interpretation. The Idea Is to receive regular feedback from Instructor and peers regarding ways to Improve the analysis and framing/Interpretation of results.

**Research Papers*: Paper should be double space; cover page, tables, figures, and references do not count for page length.

In-class Behavior

To keep group meetings and tutorials as useful and productive as possible, I ask you to keep a professional and adequate attitude in class, to limit disruptions to other students (and to the instructors). This includes arriving on time (or being discrete if you if you must enter the room late), not chatting with your classmates (except related to course material), not visiting websites, watching or listening to other media, not texting/messaging. I do not like reminding students about this, but I will if I must.

Office Hours

Office hours will take place by appointment, at a specified time different than the class time slot (see details on *Key Information*).

VII. Evaluation

Evaluation for the course is a mix of background research and the evaluation of the scaffolded assignments related to the research paper. The breakdown is as follows:

Evaluation	Date	Percentage of Final Grade
Presentation - paper summary	Weeks 3/4	8%
Presentation - review of papers	Weeks 5/6	8%
Presentation - replication study	Weeks 7/8	8%
Presentation - paper idea	Weeks 10/11	9%
Presentation - theoretical framework	Weeks 11/12	9%
Presentation - 1st progress report	Weeks 16/17	9%
Presentation - 2nd progress report	Weeks 21/22	9%
Final research project presentation	Weeks 25/26	10%
Final paper	April 2025	30%

Missed Term Work

You are expected to complete all required work as scheduled in the Evaluation section. Assignments dates and instructions are posted well in advance, and it is your responsibility to ensure adequate time to complete the work and deal with any issues, including technical issues. Assignments are due on Wednesdays of the scheduled week *at 10:00am*. Failure to submit an assignment will result in a grade of zero.

Assignments are considered submitted by the time all the files have been uploaded in the correct format to Quercus according to the assignment instruction. Assignments that are submitted late will suffer a penalty of 10 percentage points per day of lateness, starting immediately at the deadline (by the deadline). Make sure to allow ample time for submission before the deadline; excuses such as: “the website is slow”, “I only submitted one minute late”, “I forgot to upload one of the files”, etc. are not valid excuses. These rules are there to limit unwarranted individual requests.

Academic Skills Resources

Even the most seasoned, organized, and dedicated student can benefit from speaking with a Learning Strategist to explore setting achievable goals and time management strategies. You can schedule an appointment with a Learning Strategist at any time of the year.
https://sidneysmithcommons.artsci.utoronto.ca/can-a-learning-strategist-help-me/

IX. Communication

I tend to use Quercus extensively as a means of communication with the class, so I recommend you check the announcements regularly.

E-Mail

Please feel free to email me questions or comments pertaining to the course, with the following proviso:

(1) The answer requires a one or two-line response (maximum). It is my experience that email is an inefficient way to discuss economics. Questions that require more than one or two-line answers are more appropriate for individual consultations.

(2) I will normally reply to emails within 24 hours, except on weekends.

(3) I will not answer emails regarding information that can be found in the syllabus or on the Quercus page, questions about grades, or questions about the course material (which should be posted on Quercus).

Please do not send attachments and do not submit term work by email. Please always include [ECO499] in the title of any email. Emails that do not include this will be ignored.

Artificial Inteligence (AI) Tools

Students may use artificial intelligence tools, including generative AI, in this course as learning aids or to help produce assignments. However, students are ultimately accountable for the work they submit.

● Students must submit, as an appendix with their assignments, any content produced by an artificial intelligence tool, and the prompt used to generate the content.

● Any content produced by an artificial intelligence tool must be cited appropriately. Many organizations that publish standard citation formats are now providing information on citing generative AI (e.g., MLA: https://style.mla.org/citing-generative-ai/).

● Students may choose to use generative artificial intelligence tools as they work through the assignments in this course; this use must be documented in an appendix for each assignment. The documentation should include what tool(s) were used, how they were used, and how the results from the AI were incorporated into the submitted work.

● Note that some generative AI applications may require a subscription fee. Students may opt-out of using a system if they have concerns about the cost, privacy, security or other issues related to this technology.

X. Student Well-Being and Academic Accommodations

Well-Being

University of Toronto aims at giving you an enriching learning experience, and has resources to help you stay healthy and be well: *http://studentlife.utoronto.ca/bewell*

However, sometimes things do not go as planned. **In case of emergency, call 911.** For ongoing injury, illness, or personal/family problems, or if you feel you are falling behind in your courses, you must contact your College Registrar immediately. The earlier you do, the easier it is to find solutions.

There are also a number of resources in case you are feeling distressed: http://studentlife.utoronto.ca/feeling-distressed

Once again, the earlier you reach out, the easier it is to remedy the situation and find solutions. Do not wait until the end of the academic year.

Ongoing Learning Disability or Accommodation Requirement

Students with diverse learning styles and needs are welcome in this course. If you have an ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) (*http://accessibility.utoronto.ca*) at the beginning of the academic term. (Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs.) AS will then assess your medical situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your condition with any instructor, and your instructors will not reveal that you are registered with AS.

For more information on services and resources available to instructors and students, please contact Tanya Lewis, Director, Director of Academic Success and Accessibility Services, at (416) 978-6268; *tanya.lewis@utoronto.ca*.
Accessibility services: *http://studentlife.utoronto.ca/as/*

Accommodations for Religious Observances

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of backgrounds, cultural traditions, and spiritual beliefs. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (like an evaluation) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

XI. Academic Integrity

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, citing, and using source material appropriately, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism, representing someone else's words as your own or submitting work that you have previously submitted for marks in another class or program, is a serious offence that can result in sanctions. Speak to me for advice on anything that you find unclear. Also, see the U of T writing support website at *http://www.utoronto.ca/writing*. Consult the Code of Behaviour on Academic Matters (*http://www.governingcouncil.utoronto.ca/policies/behaveac.htm*) for a complete outline of the University's policy and expectations.

Potential offences include, but are not limited to:

- In papers and assignments:
    - Using someone else's ideas or words without appropriate acknowledgement. This includes verbatim copying of any lecture notes distributed by the instructor.
    - Submitting your own work in more than one course without the permission of the instructor.
    - Making up sources or facts.
    - Obtaining or providing unauthorized assistance on any assignment.

- In academic work:
    - Falsifying institutional documents or grades.
    - Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

I do encourage you to pay close attention to these sections on Perils and Pitfalls *http://academicintegrity.utoronto.ca/perils-and-pitfalls* and Smart Strategies *http://academicintegrity.utoronto.ca/smart-strategies*.