ECO422H1 S

Special Topics in Economics

Winter 2025 Syllabus

Course Meetings

ECO422H1 S

Section	Day & Time	Delivery Mode & Location
LEC0201 Studying Social Science Questions with Big Data	Wednesday, 3:00 PM - 6:00 PM	In Person: OI 5240

Refer to ACORN for the most up-to-date information about the location of the course meetings.

Course Contacts

Course Website: https://q.utoronto.ca/courses/377626

Instructor: Professor Fatih Guvenen
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Course Overview

Seminars or workshops may be offered in one or more subjects each year.

This course is a rigorous introduction to empirical research using big data to study questions about socio-economic inequalities and socio-economic risks. The course has two broad themes.

Course Learning Outcomes

The first learning outcome is substantive in nature. We will cover a growing body of empirical research that draws new insights from big data into economic inequalities and microeconomic risks. In particular, we will discuss different types of inequality (in annual versus lifetime incomes; at the top versus elsewhere; between versus within: firms, regions, genders, etc.; inequality in wealth, health, and others), why each type of inequality matters, what we know about them, and how they have changed over time. Similarly, we will discuss different types of microeconomic risks (facing households, workers, or firms), how they vary across the population, the non-Gaussian nature of these risks, and how these risks vary over the business

cycle and over longer horizons. Most of the research we will cover are from the last 10 years or so and use newly available big socioeconomic datasets from administrative records.

The second broad theme is methodological: We will learn some key empirical tools that are most suitable for studying inequality and risk from big data. The core of these techniques revolves around data visualization, which we will learn by applying to the topics described above.

Prerequisites: ECO200Y1/ ECO204Y1/ ECO206Y1, ECO202Y1/ ECO208Y1/ ECO209Y1, ECO220Y1/ ECO227Y1/ (STA237H1, STA238H1)/ (STA247H1, STA248H1)/ (STA257H1, STA261H1), at least 1.0 credit in ECO at the 300+ level. Further prerequisites may be required and may vary from year to year, consult the Department of Economics website/current Timetable for more information.
Corequisites: None
Exclusions: None
Recommended Preparation: None
Credit Value: 0.5

Prerequisites:
Knowledge of econometrics at the level covered in a semester-long introductory course on econometrics is required. Knowledge of programming and familiarity with Stata or R is a plus but not required. However, if you are not familiar with Stata or R, you should expect to work harder than others to catch up, especially in the first half of the semester.

Marking Scheme

Assessment	Percent	Details	Due Date
Problem Set	60%	Problem sets: SIX assignments on empirical analysis for social sciences. Dates entered above. Total weight 60%	2025-01-30,2025-02-13,2025-02-27,2025-03-13,2025-03-27,2025-04-03
Class Attendance	10%	Attendance: Each class attendance will be worth 1.25% of the student's grade (must complete at least 8 attendances after the first class out of the 11 weeks).	No Specific Date

Assessment	Percent	Details	Due Date
Proposal Presentation	8%	Each assignment will ask students to write Stata or R codes to do data analysis to implement new techniques learned in class and/or to answer a substantively important or interesting socio-economic question. Assignments are due at the beginning of class on the specified week. Late assignments will not be accepted. Deliverables: For each assignment, students will submit: (i) All Stata or R programs (that they wrote) that generates the answers to the questions in the problem set; and (ii) A concise, well-written report (5-10 pages long) written as an executive summary that includes the graphs, tables, figures, etc. produced to answer the questions in the problem, along with a clear discussion of how each of these outputs answer the questions asked. Someone who reads the problem set and your report should be able to find the answers to every question asked, along with how you reached that conclusion by reading your report (without looking at your code).	No Specific Date

Assessment	Percent	Details	Due Date
Final Report	22%	In Week 5, I will distribute a list of empirical questions that students can choose for their report. The report should provide a careful and rigorous empirical analysis to answer the question based on the methods and techniques we learn in class. The report should be concise, well-written, and carefully substantiate every claim it makes with the analysis made. Each student will pick a different question as will be explained in class. Students will give an 8-minute in-class presentation about the question and their answer during the last two lectures of the semester. The report and presentation count for a total of 30% of final grade.	2025-04-02

Summary of marking:

• Six Problem Sets: 10% x 6
• Class attendance: 10%
• Proposal presentation: 8%
• Final Report: 22%

Late Assessment Submissions Policy

Late assignments will not be accepted, unless approved by the instructor in advance.

Policies & Statements

Late/Missed Assignments

This item is listed here to remind you to include your late/missed assignment policy; if you have late penalties, you are required to publish them in your syllabus. Please see the A&S Academic Handbook (https://www.artsci.utoronto.ca/faculty-staff/teaching/academic-handbook) sections on missed term work (Section 4.7), late term work and extensions (section 4.8), and missed term tests (Section 5.3) for more information.

Religious Accommodations

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 cultural and religious traditions. 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 (such as a test or in-class assignment) 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.

Students with Disabilities or Accommodation Requirements

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year by visiting https://studentlife.utoronto.ca/department/accessibility-services/. 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 assess your 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 needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

Late/Missed Assignments

Late assignments will not be accepted.