

## ECON 2708 A – Applied Data Analysis

Department of Economics

Carleton University

Winter 2024

### **CONTACT INFORMATION**

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**Office Hours:** TBD

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**EMAIL POLICY:** I prefer in-person interactions. Please email me (using your Carleton email account) only if you need to request an appointment because you cannot make my office hours or in case of emergency.

### **COURSE LOGISTICS**

**Course delivery:** In-person.

**Lectures:** Tuesdays and Thursdays 1:05 PM –2:25 PM.

**Tutorials:** Thursdays 2:25 PM - 3:55 PM.

**Brightspace Course Page:** <https://brightspace.carleton.ca/d2l/home/221270>

### **COURSE DESCRIPTION**

This course will teach you how to work with data with a focus on the study of applied economic problems. We will use different types of data and empirical approaches. Topics will include identifying relevant datasets, collecting and cleaning both research-ready and user-assembled data sets, data visualization, summary statistics, and empirical analysis. We will emphasize the need for reproducibility of our analysis, both for research purposes and teamwork. In this course we will use Stata as our main software.

### **LEARNING OUTCOMES**

By the end of the course you should expect to be able to:

- Develop data organizational and analytical skills.
- Understand the need for and learn to apply procedures to ensure reproducibility and transparency.
- Understand the limits of datasets.
- Evaluate and apply the appropriate empirical approach to address an empirical question.
- Prepare a report describing a research question, the empirical approach used to address it, and the results obtained.
- Learn how to use Stata.

## **PRECLUSIONS and PREREQUISITES**

Prerequisite(s): COMP 1005 with a grade of C- or higher; and ECON 1402 (or equivalent), with a grade of C- or higher; and ECON 2210 (or equivalent), with a grade of C+ or higher.

Students who believe they have taken a similar background course or courses from another university must provide appropriate documentation to the Department of Economics Undergraduate Administrator.

## **TEXTBOOKS**

There are no required textbooks for this course but here are is a useful reference for Stata-specific commands for data handling: **Michael N. Mitchell, Data Management Using Stata: A Practical Handbook, Stata Press, Second Edition, 2020.**

## **TUTORIALS**

Tutorial attendance is mandatory. Tutorials will cover practice exercises of the concepts reviewed in class with alternative data sources. A successful outcome in this class will crucially depend on the amount of time you put into working with data.

## **OFFICE HOURS**

Please review the class material and come with specific questions. All questions are welcome. If you cannot make my office hours or the TA's office hours, email me to schedule a different time/day.

## **EVALUATION**

This course will not include exams since management of data cannot really be evaluated without asking you to work with a dataset. Hence, your performance will be evaluated based on five assignments of increasing difficulty and a final project that you will have to present by the last lecture. Each student's grade will be calculated using the following instruments and weights:

<b>Instrument</b>	<b>Weight</b>
Tutorial attendance	10%
Assignments (13% each)	65%
Final project	25%
Total	100%

**Assignments:** Each of the five assignments will ask you to work with a particular dataset which will be given to you or which you will have to download from a public source. The assignments will cover all the material seen in class from evaluating data sources to cleaning, analyzing and visualizing data. The deadline for each assignment will be announced at least one week in advance. Late assignments will receive a 10% deduction and may be submitted up to 3 days past the due date. Assignments submitted later than that will not be accepted.

**Final project:** The final project will require you to find a data source to analyze using the concepts described in class. A full list of requirements and guidelines will be provided during the first week of the course.

### **SATISFACTORY PERFORMANCE CRITERIA**

Students must fulfill all of the preceding course requirements in order to achieve a passing grade (D- or higher). See Academic Regulation 5.4 for the official meanings of the grades, and note that it stipulates that no course grades are final until approved by the Faculty Dean.

### **Plagiarism, Resources and Mental Health, Academic Accommodations**

Please be aware that plagiarism is a serious offense at Carleton and should be recognized and avoided. You are responsible for reading and knowing the information about plagiarism, Carleton University Resources, and academic Accommodations found [in this link](#).