ECO220 (Introduction to Data Analysis and Applied Econometrics)

Tentative Course Outline for Section L0201, Summer 2025

1 Instructor Information

First Half Lectures [May/June]

Instructor: Nanxi Fu E-mail: nanxi.fu [at] mail.utoronto.ca Lectures: Tuesdays and Thursdays [1PM - 3PM] SS2135 Office: GE248 Office Hour: Thursday 3PM - 4PM, in person, GE248

Second Half Lectures [July/August]

Instructor: Quinlan Lee E-mail: qt.lee [at] mail.utoronto.ca Lectures: Tuesdays and Thursdays [1PM - 3PM] SS2135 Office: GE74 Office Hour: Thursdays 3PM - 4PM, in person, GE74

Data Analysis Course Module (DACM) [May - August]

Coordinator: Benjamin Lauzon E-mail: benjamin.lauzon [at] mail.utoronto.ca Tutorials: Most Fridays [11AM - 1PM] Office: GE246

2 Course Information

2.1 Course Overview

The purpose of this course is to provide a comprehensive introduction to econometric methodology and data analysis. The content can be separated into four major sections:

- 1. Understanding Data: The collection, processing, and interpretation of raw data.
- 2. **Probability:** The mathematical tools we use to quantify uncertainty.
- 3. **Statistical Inference:** The use of probability to infer characteristics from a population using a sample of data.
- 4. **Regression:** Building and understanding statistical models of economic relationships.

Using a combination of lectures and practicums, you will have an opportunity to build your foundation of knowledge in econometrics and apply the theory you learn with real life examples. By the end of the course, you should feel comfortable working data, interpreting your results and explaining your findings to others.

2.2 Course Delivery Format

All lectures are expected to be in-person for the duration of the term. If a lecture needs to be online, an announcement will be made in advance via Quercus. Although participation is not enforced in this course, you will find that attending lectures is the best way to understand the material that will be tested. Lectures will not be recorded, so if you miss a class, it is your responsibility to make up for the material that you missed.

2.3 Textbook and Slides

Recommended Textbooks: There are two recommended textbooks for this course:

- 1. Business Statistics, 4th Canadian Edition, by Sharpe, De Veaux, Velleman, and Wright.
- 2. Introductory Econometrics: A Modern Approach, 6th Edition, by Wooldridge.

For the first half, you will find that Business Statistics is a good complement to the structure of the course. For the second half, the lectures follow closely to the ordering of the Introductory Econometrics textbook. However, it is generally a difficult read for second year students, since it is and advanced undergraduate textbook. As such, there are no mandatory readings for this course, but we make these recommendations so students have a reference text in case they want further readings.

Slides: The instructors will provide slides in the course, which are mandatory reading materials. However, it is important you attend lectures, since many concepts on the slide deck will be explained in detail during class.

2.4 Data Analysis Course Module (DACM)

DACM: DACM practicums are **mandatory** TA run tutorials where you learn data analysis skills, reinforce your understanding of core course curriculum, and practice effective writing skills. These tutorials will require the use of Excel. Therefore, it is important to bring your laptop with an up-to-date installation of Microsoft 365 ProPlus. Also, bring pencils, erasers, your TCard, and the course aid sheets. **NOTE:** You must attend with your ACORN section. (If you attend with the wrong section you cannot get credit for submitted work.).

3 Assessments

3.1 Grade Breakdown

Your grade in this course will be determined by two term tests, participation in 8 DACM tutorials and a final examination.

Assessment	Weight	Instructor	Date
Term Test 1	22%	Nanxi	June Exam Period
Term Test 2	22%	Quin	July 29, 1PM - 3PM
DACM participation (Best 4 of 6)	12%	Ben	See Section 3.3
Homework (4)	4%	Nanxi and Quin	See Section 3.4
Final Examination	40%	Ben, Nanxi and Quin	August Exam Period

3.2 Tests

Each term test will be worth 22% and is typically a 2 hour assessment. One will be held in the first half of the term, with questions written by Nanxi. A second one will be held in the second half of the term, with questions written by Quin. There are NO DACM questions on term tests.

3.3 DACM

There will be **six mandatory** DACM practicums throughout the Summer term. DACM practicums will occur on May 23rd, June 6th, June 13th, July 4th, July 11th and July 25. Note that the quality of your work counts! Therefore, attendance is not what determines your grade but rather the effort and quality demonstrated within your submitted work. The best 4 of 6 practicums are worth 3% of your final grade, for a total of 12%.

3.4 Homework

There are a total of four problem sets that will be assigned throughout the term, with 2 in each half. They are worth 1% each. If you missed your homework, please refer to the missed homework section in section 4.5.

- Homework 1: Due on May 27th at noon. Submit through Crowdmark.
- Homework 2: Due on June 10th at noon. Submit through Crowdmark.
- Homework 3: Due on July 18th at noon. Submit through Crowdmark.
- Homework 4: Due on August 1st at noon. Submit through Crowdmark.

3.5 Final Exam

The final exam is a three hour assessment which covers all materials in the course, including both halves and DACM. It will be written by Ben, Nanxi and Quin. Typically, 15% of the final exam is a DACM related question, and the remaining 85% are split evenly between the two halves.

4 Other Important Things

4.1 Email Policy

Generally, questions about the course material should be asked during lecture time, office hours or on Piazza. If you have a personal question, you can email us, but please include ECO220 in the subject line. Note that Nanxi is in charge of the first half of the course, Quin is in charge of the second half of the course, and Ben is responsible for DACM. Further, we will only answer emails sent from official UofT email accounts.

4.2 Piazza

Piazza will be made available in both terms. This is a forum for students to ask questions about the course material, and is the best way to reach the instructors. We also encourage students to try to answer questions as well! Piazza is treated as a classroom and hence any questions or material answered there is also fair game for any test or exam.

4.3 Tutorials

4.3.1 First Half

There will be two tutorials going over the two homework assigned scheduled on May 29 and June 12, 4:30-6pm at SS 2102. The tutorials are optional. However, it is recommended to attend if you have questions for homework or TAs.

4.3.2 Second Half Course

There will be two tutorials going over the homework, with date TBD. As in the first half, the tutorials are optional, but it is recommended that you attend if you have questions.

4.4 Office Hours

Each week, there will be office hours hosted by the instructors and the TAs. The schedule is to be determined, but they will be posted once the course starts. This is another great opportunity to ask us questions related to course materials.

4.5 Missing Assessments

Missed Test: You can miss a test for absolutely any reason, but you MUST fill out the missed test form within \pm 72 hours of the assessment date.

- There are also NO make-up tests for this course. A student that has filled out the missed test form within ± 72 hours of the assessment date will have the weight of that test shifted to the final exam.
- Only the weight of one test can be shifted to the final exam. If you miss both tests, it is recommended that you drop the course and re-take it at a later time or speak to your college registrar immediately to discuss your options.

Missed DACM: The 2 lowest grades in your DACM practicums are automatically dropped from grade calculation. This is done automatically, and in particular, you do not need to submit any documentation if you miss a practicum. No further accommodations will be made for DACM.

Missed Homework: Homework must be handed in by the due date. If not, your mark will be 0 for that problem set unless you have a valid reason (which requires one of the four formal documentations: 1. Absence Declaration via ACORN, 2. U of T Verification of Illness or Injury Form (VOI), 3. College Registrar's letter, 4. Letter of Academic Accommodation from Accessibility Services).

Missing the Final Exam: If you miss the final exam, you need to submit a petition to the Faculty of Arts and Science for a deferred final exam. Please consult this link for more information on the petition process.

4.6 Automatic Adjusted Weights for Relatively Poor Test Performance

Automatic adjusted weights policy encourages you to take both of the term tests and may help if your performance is relatively poor for one test because of any kind of problem or challenge. If you write both term tests, you can have more weight applied to the test with the higher score. In particular, the best test will be weighted at 26%, and the worst one will be weighted at 18%. Any questions around your academic integrity for any work disqualify you from automatic adjusted weights.

4.7 Appealing Grades

After your tests are returned, you will have an opportunity to review them via Crowdmark. A form to appeal your grade will be made available for one week after the return date. By submitting an appeal, you agree to having your entire test remarked. In particular, it is possible for your grade to increase OR decrease after the regrading process. Note that there are no grade appeals for DACM.

4.8 Cheating or Academic Dishonesty

Don't cheat or commit academic offenses; its not worth it. If you cheat or commit an academic offense, we are obligated to report it to the relevant university authority, and it could negatively affect your academic record. Everything you need to know about academic integrity is right here.

4.9 Recording, Photography and Sharing Course Material

In general you shouldn't be recording the lecture unless you ask us for explicit consent to do so. Some students may need to record the lecture for accessibility reasons, and we are happy to accomodate, but you will have register for it (see below). Under no circumstances should you publish any of the course material online or distribute it to others outside of the class. This is an infringement of copyright.

4.10 Accommodations

Some students may require special accommodation on assessments for wide range of reasons. We are very happy to provide those accomodations to you, but you will have to register for them formally. For example, you can click here to learn about religious accomodations, or here to learn about accessibility services. From our understanding, it takes time for accommodation to be processed, so the sooner you submit the paperwork, the better.

Moreover, if you are struggling with the course, or expect to miss a significant portion of classes and/or tests, we also encourage you to reach out to your college registrar immediately. Note that missing one week of class is equivalent of missing **2.2 weeks of lectures** in a regular term (since the summer course runs more than 2 times as fast). Hence, any significant absence could have an important impact on your chances at success in this course.

4.11 Equity Statement

The equity statement of our university can be found here. In short, its everyone's responsibility to foster a positive, respectful and welcoming environment for all. As the instructors, we will do our best to ensure our learning environment is inclusive so that all our students can feel safe and comfortable being a member of our class.

If there is anything else that you find missing from the syllabus or unclear, please e-mail Nanxi or Quin and let us know!