

Department of Economics
Carleton University
ECON 2210B - Introductory Statistics for Economics
Fall 2024

Instructor: Matt Soosalu

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Instructor Office Hours: Monday 1:00 - 2:00 PM, Loeb D886. If you cannot make this time send me an email and we can try and arrange something else.

TA: TBD

Course Time and Day: Tuesday and Thursday 10:05 - 11:25. See your schedule for location.

Visit Brightspace for the course page. The course page will be available prior to the first lecture.

Prerequisites and Preclusions:

Precludes additional credit for BIT 2000, BIT 2009, BIT 2100 (no longer offered), BIT 2300 (no longer offered), ECON 2200 (no longer offered), ECON 2201 (no longer offered), ENST 2006, GEOG 2006, STAT 2507, STAT 2601, STAT 2606 (no longer offered), and STAT 3502. Prerequisite(s): ECON 1401/MATH 1401 (with a grade of C- or higher) and ECON 1402/MATH 1402, or equivalent department-approved MATH course pair. May be taken concurrently with ECON 1402/MATH 1402.

Please note that a grade of C- or higher in ECON 2210 is required to qualify for ECON 2220. Also, please note that a grade of C- or higher in ECON 2210 is required to qualify for ECON 3900 and ECON 3920, and that a grade of C+ or higher is required to qualify for ECON 2708, ECON 4002 and ECON 4706. DEF(erred final grade) status at the end of this course precludes (continued) registration in any other course for which the former is a prerequisite.

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.

1 Course Description

Basic statistical methods for the study of economics. Topics include descriptive statistics, elementary probability theory, sampling distributions, estimation and hypothesis testing for one and two population parameters.

Required Text: Groebner, David F., Shannon, Patrick W., and Fry, Phillip C. (2024), Business Statistics: A Decision-Making Approach (11th Edition), Pearson.

You will not need MyLab for this course.

Other (helpful) text: Older version, such as the 10th edition.

2 Class Format

2.1 Lectures

Lectures will be held in class at the school assigned time and meeting place. In the first class, goals, logistics, and expectations of the course will be explained and the course outline will be reviewed. Students

are expected to attend lectures.

2.2 Tutorials

The tutorial period will be run by a TA who will review practice problems and answers to assignments and midterms after they have been handed in.

2.3 Brightspace

This course will make extensive use of Brightspace. On top of all assignment submissions, materials such as lecture slides and additional readings will be posted on Brightspace. Brightspace will also be used to send announcements to the class.

Please make sure you are familiar with Brightspace **before** classes begin. For additional information on Brightspace and how to navigate it, please see: [Brightspace Tour for Students](#).

3 Evaluation

Student performance in this course is evaluated as follows:

3.1 Problem Sets (20%)

There will be four assignments in this course. Each will be worth 5 percent of your final grade. Assignments will be due two weeks after they have been assigned. The TA will review answers in the tutorial. No late assignments will be accepted. Assignments are meant to help prepare you for the midterm and final exam. Although students may work together for assignments everyone is responsible for handing in their own *unique* assignment. Use of unauthorized material (generative AI tools (ChatGPT or other), or any online databases) to complete your assignment will be considered a form of plagiarism. Assignments that are the same as others, regardless if you worked together or not, will be subject to plagiarism regulations.

3.2 Midterm 35%

The midterm will take place during class on October 15. This will be a closed book midterm.

There will be no deferred midterm. If you are absent for a midterm, email me as soon as possible to discuss how we will weight your course evaluations differently. I reserve the right to request a Self-Declaration form or PMC letter of accommodation depending on the length of incapacitation

3.3 Final Exam (45%)

The final exam will be online as scheduled by the University during the exam period. Students are not to make travel plans during the exam period as that is not a valid reason for missing a final exam. For updates on the schedule, consult [Scheduling and Examination Services](#). The final exam will be cumulative, though it will be weighted toward the second half of the course.

Further details on the Problem Sets, Midterm, and Final Exam will be discussed in the first class and posted on Brightspace early in the semester.

Satisfactory Performance Criteria

Students must fulfill all of the course requirements, including the final exam, in order to achieve a passing grade (D- or higher).

Academic Standing

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

4 Topics to be Covered

Throughout the semester we will be discussing the following topics in order. Listed with each topic are the required readings from the textbook.

1. Descriptive Statistics and Basic Probability

- Chapter 1: The Where, Why, and How of Data Collection
- Chapter 2: Graphs, Charts, and Tables-Describing Your Data
- Chapter 3: Describing Data Using Numerical Measures
- Chapter 4: Using Probability and Probability Distributions

2. Important Probability Distributions

- Chapter 5: Discrete Probability Distributions (except for the discussion of the Hypergeometric Distribution in Section 5.3)
- Chapter 6: Introduction to Continuous Probability Distributions

3. Statistical Inferences Based on Single Samples

- Chapter 7: Introduction to Sampling Distributions - Sections 7.1 and 7.2
- Chapter 8: Estimating Single Population Parameters - Sections 8.1 and 8.2
- Chapter 9: Introduction to Hypothesis Testing - Sections 9.1 and 9.3
- Chapter 10: Estimation and Hypothesis Testing for Two Population Parameters - Sections 10.1, 10.2, and 10.3
- Chapter 11: Hypothesis Testing for One and Two Population Variances - Section 11.1

Disclaimer: I may make slight modifications/additions to the list of topics and/or readings. Any such change will be announced in class and/or on Brightspace.

Re-grading, Late and Missed Assessments Policy: Any request for regrading assignments or exams must be submitted in writing within one week of that assignment or exam first being returned to the class. The request should contain a detailed explanation of why you feel you should receive a higher grade. Please note that the entire assignment or exam will be regraded and not just the contentious question. As a result, the revised grade may be higher than, lower than or the same as the original grade.

Late assignments will not be accepted as answers will be taken up during the tutorial. If you cannot make the tutorial you are expected to electronically send a copy of your assignment to the TA and myself prior to the due date. You are then required to submit the paper version to be graded.

Deferred Finals: Students who do not write the final examination because of illness or other circumstances beyond their control may apply for to write a deferred final examination by contacting the Registrar's Office no later than three working days after the original final examination was scheduled. In the

event that a student writes a deferred examination, the deferred examination will carry the same weight as the final examination in determining the course grade. Any deferred examination will not be identical to the original final examination.

Deferred finals (which must be applied for at the RO) are only available if the student is in good standing in the course, so if there is a minimum standard a student must meet in order to be in good standing, and entitled to write a deferred final exam, this standard must be stipulated here.

Plagiarism: Please be aware that plagiarism is a serious offence in this course and at Carleton in general. All graded submissions for this class are solo projects, therefore each student must submit independent and original work in order for your work to be considered for grading. For more information, please visit [Academic Integrity and Offenses of Conduct](#). You are responsible for reading and knowing the information about plagiarism, about Carleton University resources, and about academic accommodation found [here](#).

Academic Accommodation You may need special arrangements to meet your academic obligations during the term. For an accommodation request and for more information on academic accommodation, please contact the departmental administrator and visit: [Academic Accommodations](#).