



ECON 2500 (M): Introductory Statistics for Economists I

Course outline (Winter semester, 2023-24)

Instructor

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Schedule

Lectures: Tuesdays and Thursdays, 16:00-17:30 (room DB 0006)

Office hours: TBA

Midterm: TBA (tentatively, late February)

Teaching assistant

Abdullah Mahir Masud (email: ammasud@yorku.ca)

Course description

This is an introductory course in statistics. The course will familiarize students with the principles and methods of basic data analysis, fundamental concepts of the probability theory, and will cover foundations for statistical inference. The course is intended to help students to achieve a basic statistical literacy and develop “statistical thinking”. Students will learn how to conduct empirical analysis using statistical methods, extract and interpret quantitative information from data.

Course organization

There will be two 90-min lectures per week. All relevant course materials, as well as course updates, will be uploaded on eClass.

Evaluation

The total final grade (100%) will consist of

- 3 problem sets (20%) [2 out of 3 problem sets (with better scores) will be accounted in the final grade]
- midterm exam (30%)
- final exam (50%)

Constructive in-class participation (active participation in discussions, answering questions, etc.) will be rewarded by adding an extra bonus to the final grade (up to 5%, mostly relevant for the cases with a “border” grade).

Important: there will be no make-ups for the midterm exam (30% weight will be shifted to the final exam, and, in case the midterm is missed, the weight of the final exam will be 80%). Late submissions of the problem sets will be penalized.

Textbooks

- Main textbook: David Diez, Mine Cetinkaya-Rundel, and Christopher Barr, “[OpenIntro Statistics](#)”, 4th Edition [pdf version can be freely downloaded at www.openintro.org/book/os/]
- Optional alternatives:
 - Richard D. De Veaux, Paul F. Velleman, David E. Bock, Augustin M. Vukov, and Augustine Wong, “[Stats: Data and Models](#)”, 4th Canadian Edition, Pearson
 - Optional (also a very good choice): David S. Moore, George P. McCabe, Bruce A. Craig, “[Introduction to the Practice of Statistics](#)”, 10th Edition

Add/Drop deadlines

Last date to add to the course (with permission of instructor): January 22 (January 31)

Last date to drop the course without receiving a grade: March 11

Course withdrawal period (with grade “W” on transcript): March 12 - April 8

Attendance policy

Attendance is expected, but not strictly mandatory. Constructive in-class participation (active participation in discussions, answering questions, etc.) will be rewarded by adding an extra bonus to the final grade (up to 5%, mostly relevant for the cases with a “border” grade).

Updates and announcements

Regular course updates and extra announcements are expected to appear on eClass. Please, check regularly for the corresponding updates.

Important: It is students’ responsibility to be aware of any policy (or schedule change). If you miss classes, check if any schedule or policy changes were announced.

Course contents and schedule

# of lectures	Chapters	Topics	Reading (OpenIntro)
1	Introductory class	Course organization, Q&A	
4	Introduction to data	Types of variables, descriptive statistics and visualization of data, relationship between variables	1.1, 1.2, 2
8	Probability and random variables	Modeling randomness, probability space; conditional probability and Bayes' Theorem; random variables and probability distributions; Normal distribution	3, 4.1
1	Midterm		
10	Foundations for statistical inference	Random sample, sampling error and sampling distribution, Central Limit Theorem; inference for a single proportion and for the difference of two proportions (confidence intervals, hypothesis testing), inference about means	1.3, 1.4, 5, 6.1, 6.2, 7.1, 7.2, 7.3
	Final Exam		

Some changes in the schedule are highly possible, as well as minor adjustments of the course content and selected topics.

Exam policy (Midterm and Final)

Both exams are closed book (a single hand written double-sided A4 formula sheet and a basic non-programmable calculator are allowed), independent work is required for all exams. All instances of academic dishonesty in this course will be reported to the appropriate university authorities and can be punishable according to the Senate Policy on Academic Honesty.

You may submit a request to have your term tests re-checked or final exam re-graded. Quiz and midterm re-check requests need to be sent to the instructor or TA within one week of grade release. In your written request, you must identify the questions and the possible errors and/or omissions.

Re-grading of your test will be done in a manner consistent with the rest of the class. A re-check or regrade may result in a raised mark, lowered mark, or no change. In the process, the instructor has the authority to re-grade other questions on the exam if they find it necessary to do so.