

Queen's University
Department of Economics
ECONOMICS 250: INTRODUCTION TO STATISTICS
Winter Term 2009

0. Lectures

Times: Monday 4:00-5:20, Wednesday 2:30 - 3:50

Location: Richardson Labs 104

1. Instructor

Afrasiab Mirza

Office: Dunning Hall, Room 345

Office Hours: Monday 3:00-4:00, Wednesday 4:00-5:00

Email: mirza@econ.queensu.ca

Note: email has become overwhelming and so please do not send questions regarding the course (except for illness). I am happy to answer questions after class or in office hours.

2. TA's

Hajnalka Illes - A506, illesh@econ.queensu.ca,
Thursday 10-12

Ayman Mnasri - D342, mnasria@econ.queensu.ca,
Monday 10-11, Friday 10:15-11:15

3. Aims of the Course

The principal aim of this course is to provide a basic training in the ideas and practice of statistical reasoning. Ways of learning from quantitative data serve as a valuable part of one's intellectual toolkit whatever one's career; this course tries to teach them. The textbook is an excellent resource and contains many practical applications.

With this goal in mind, this course undergoes considerable change from year to year in an attempt to keep abreast of the latest tools and methods for effective communication of statistics.

4. Course Materials

The textbook for the course is *Statistics for Business & Economics* by Newbold, Carlson and Thorpe (Pearson Publishing) (this is a Queen's Version). The textbook has been customized for Econ 250 and is available in the campus bookstore.

My lecture notes can be found on my class web page and can be downloaded. I suggest you bring these to class so that you can easily follow the lectures and make annotations to the notes.

5. Evaluation

The marking scheme for the course will be as follows:

Option A

Attendance/Participation	10
2 Midterm Tests (February 11th and March 11th, in class)	40 (20 each)
Exam (Exam Schedule)	50

Option B

Attendance/Participation	10
2 Midterm Tests (February 11th and March 11th, in class)	30 (15 each)
2 Assignments due (February 11th and March 11th)	10 (5 each)
Exam (Exam Schedule)	50

Notes:

- To do Option B both assignments have to be handed in on time.
Insurance Policy: For Option B, if using the grades for Option A give higher marks, then Option A is selected even though the student completed all the work for Option B
- Attendance is mandatory
- There will be 8 pop attendance checks of which you have to be here for 5 of them to earn the full 10 points to your grade.
- The 3 freebies are to cover legitimate illness and other valid reasons for being away so there is no need to produce documents in case of short absences (of course prolonged illness or missing a test should always be documented for the instructor)

- Points are subtracted proportionate to attendance below 5. That is, miss 6 attendance sheets and you receive a 4 out of 10.
- Over the term questions will be posed that you will try to answer in class. While we cannot split the class up formally into groups, we encourage you to talk (quietly) with your neighbour(s) in getting an answer. Answers for these problems can then be found on the Econ 250 homepage on the WEB. The intention here is to encourage you to test yourself immediately after seeing the material. If the concept is unclear, we can see this quickly and make the necessary adjustments. Too often in statistics, students fall behind and hope that with divine inspiration somehow everything will come together at the midterm or final. Unfortunately, this typically does not happen.
- University-approved calculators may be brought into the tests. See <http://www.queensu.ca/calendars/artsci/pg14.html> for a list of calculators
- Statistical tables will be provided in the question sheets.

6. Tutorials

There will be tutorials prior to each test. The instructors and TA's will have regular office hours weekly to handle questions.

7. Econ 250 Homepage

Econ 250 has a homepage which can be reached by going to the Economics Department homepage (<http://qed.econ.queensu.ca>) and following *Course Documents*. On this page there is a complete course outline, old exams (midterms and finals), some solutions, examples, in class work and messages. You should check this regularly.

8. Outline

Topic	Week	Chapter
populations, samples, graphs and tables	1	1
frequency distributions, histograms	1	2
summation, descriptive statistics	2	3
probability	2-4	4
random variables, expectations	5	5
discrete univariate distributions (binomial)	5	5
continuous univariate distributions (normal)	6	6
functions of random variables	6	5
sampling and sampling distributions	8	7
standardization, central limit theorem	8	7
estimation, t-distribution,	8	8
confidence intervals (means and proportions)	9	8
confidence intervals (differences)	9	9
hypothesis testing	10-11	10
regression (if time permits)	12	

By far the best way to learn statistics is to do problems, so budget some time to do plenty of them.

9. Academic integrity

Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility (<http://www.academicintegrity.org>). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the “freedom of inquiry and exchange of ideas” essential to the intellectual life of the University (see the Senate Report on Principles and Priorities at <http://www.queensu.ca/secretariat/senate/policies/princpri/> Report on Principles and Priorities)

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (<http://www.queensu.ca/calendars/artsci/pg4.html>), on the Arts and Science website (see <http://www.queensu.ca/calendars/artsci/pg4.html>, and from the instructor of this course.

Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen’s. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.