

Boston College
Department of Economics

EC151.03
Statistics for Business and Economics
Fall 2009
MWF 10:00 – 10:50
Campion 231

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Text: Statistics for Business and Economics (6th edition), Newbold, Carlson, Thorne (BC edition)

Grading: Quizzes (3), homework assignments (2), and exams (3) will have the following weights in determining your final grade:

Quizzes and homework: 30% or 150 points
Two midterm exams: 40% (20% each) or 200 points (100 each)
Cumulative final exam: 30% or 150 points

Due dates for homework assignments and dates of quizzes will be announced in advance. Quizzes will be open book. Exams will not be, but you will be allowed a standard 8 x 11 “cheat sheet” on which you can write anything you want (both sides). I will determine initial letter grades by the following scale:

$100 \geq A \geq 93$	$83 > B- \geq 80$	$70 > D+ \geq 67$
$93 > A- \geq 90$	$80 > C+ \geq 77$	$67 > D \geq 63$
$90 > B+ \geq 87$	$77 > C \geq 73$	$63 > D- \geq 60$
$87 > B \geq 83$	$73 > C- \geq 70$	$60 > F$

These are the **lower bounds** for your final grades. If I think that the course was too difficult I will curve up. I will not curve down, so if you have a 92% in the course A- is the lowest grade that you can receive. In curving the final grade, I will aim for a mean GPA for the course that is equivalent to the mean GPA at BC.

In addition to performing well on tests, homework assignments and quizzes, you can improve your final grade in the following ways:

- 1) By attending class, coming to office hours and asking questions. In determining final grades, I frequently find that students are very near a cutoff point between two grades. If I think that you have been engaged with the material and made a genuine effort to learn it, then you will likely be awarded the higher of the two grades. It also can't hurt to turn in your work on time.
- 2) By catching me making a mistake on the blackboard. If you correct my mistake, you get an extra credit point.

Readings: Take them seriously. This is a math course, and the way to read for a math course is with a pencil and paper, working out the examples for yourself in order to understand the mathematical tools that you are learning. Most of you will not be able to excel in this course without doing the readings **and** regularly attending lectures.

In general, you should do the reading corresponding to the material presented in class **before** the class meeting. If you think that you struggle with mathematical concepts, you are encouraged to **read ahead**. This is the best advice I ever received from a math teacher. If you read in advance and have a good idea what questions you want answered in class, you will get a lot more out of the lectures. If you find that your questions aren't answered by the lecture, ask them!

My teaching: Although I am a graduate student and am supposed to be spending most of my time working on my dissertation, I take my teaching very seriously. I want to give lectures that help you learn. From previous evaluations I have a pretty good idea of my strengths and weaknesses as a teacher. However, I always appreciate honest feedback from students. You can give me this feedback in person, by email, or anonymously. Please be constructive if you do choose to give me feedback. If you tell me to make the course easier or assign fewer readings, I won't take you seriously. I put a lot of effort into this course and I expect my students to do the same.

Policies for late work, missed exams, quizzes, etc.: I will announce due dates for homework assignments (there will be two) and dates of quizzes (there will be three) in class. I will accept late work **if you have contacted me before** the due date or date of the quiz in order to explain why you cannot complete the work on time. In the case of homework, we will agree upon a date by which you must turn in the assignment (otherwise you receive no credit). In the case of a quiz, we will agree on a day and time that you will come to my office and take the quiz (failure to take the quiz by this date will result in you receiving no credit).

Unlike homework and quizzes, I try not to offer makeup exams. Sometimes legitimate reasons such as family emergencies arise that cause students to miss exams. If you miss an exam, I will simply shift the weight of the missed exam onto subsequent exams. For example, if you miss the first midterm, the second midterm will be worth 30% of your grade and the final exam worth 45%.

While I try not to offer make-up exams, sometimes it is unavoidable. Here is how you can obtain one:

For athletes: if you must miss the exam because of traveling for athletic competitions, you will be offered the chance (which you can decline) to make up the exam **AT AN EARLIER DATE**.

For everyone: If extreme circumstances cause you to miss an exam, you will be offered a makeup exam if you have a signed letter from the dean explaining the circumstances. Note that you still must inform me of the reason for missing the exam **AHEAD OF TIME**.

Academic Integrity: You are encouraged to work together on homework (though you must turn in your own work) and to study together for exams. However, working together on exams is a violation of academic integrity (as is misinforming me about the reason for a missed exam or late homework). Please familiarize yourself with the "Academic Integrity" Section of the Boston College Catalog (35-36) or online at <http://www.bc.edu/integrity>.

Here is a tentative outline of what we will cover, and where you can find the topics in the book:

<u>Date</u>	<u>Topics</u>	<u>Chapter</u>
W Sep 9	Syllabus Statistics	
F Sep 11	Describing data graphically	2
M Sep 14	Describing data numerically	3
W Sep 16	Introduction to Probability Theory	4.1, 4.2
F Sep 18	Probability Theory: Probability Rules	4.3
M Sep 21	No Class	
W Sep 23	Probability Theory: Bivariate probabilities	4.4
F Sep 25	Probability Theory: Bayes' Theorem	4.5
M Sep 28	Probability Theory: Permutations and Combinations	4 Appendix
W Sep 30	Probability Distributions: Discrete	5.1, 5.2, 5.3
F Oct 2	Probability Distributions: Continuous	6.1, 6.2
M Oct 5	Discrete probability distribution: Binomial	5.4
W Oct 7	Discrete probability distribution: Poission	5.6
F Oct 9	Continuous probability distribution: Normal	6.3, 6.4
M Oct 12	Columbus day: no class meeting	
W Oct 14		
F Oct 16	MIDTERM 1	
M Oct 19	Sampling and Sampling Distributions	7
W Oct 21	Estimators and estimates	8
F Oct 23	Confidence Intervals and "t" Distribution	8
M Oct 26	Additional Topics in Estimation	9

W Oct 28	Hypothesis Testing	10
F Oct 30	Hypothesis Testing	10
M Nov 2	Hypothesis Testing	10
W Nov 4	Hypothesis Testing	10
F Nov 6	Hypothesis Testing	10
M Nov 9	Hypothesis Testing	10
W Nov 11		
F Nov 13	Midterm II	
M Nov 16	Hypothesis Testing (2 parameters)	11
W Nov 18	Hypothesis Testing (2 parameters)	11
F Nov 20	Using Chi-Square distribution	16
M Nov 23	Goodness-of-fit	16
W Nov 25	Thanksgiving: no class meeting	
F Nov 27	Thanksgiving: no class meeting	
M Nov 30	ANOVA	17
W Dec 2	Simple Regression	12
F Dec 4	Simple Regression	12
M Dec 7	Simple Regression	12
W Dec 9	Simple Regression	12
F Dec 11	Review	
Sa Dec 19	FINAL EXAM @ 12:30	