

Boston College  
Department of Economics

EC151.03  
Statistics for Business and Economics  
Spring 2010  
MWF 10:00 – 10:50  
Gasson 204

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**Text:** Statistics for Business and Economics (6<sup>th</sup> edition), Newbold, Carlson, Thorne (BC edition)

**Grading:** Quizzes (3), homework assignments (3), 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

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 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.
- 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. You can find a copy of the textbook on reserve in the library.

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:** I take my teaching very seriously, and 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.

**Statistical Software:** It will be a good idea to get familiar with Excel, SPSS and/or STATA. Most of your assignments can be done by hand, but a few problems will require you to use one of these. The more you are able to use them for your work, the better. You'll find these programs to be amazing time-savers.

**Policies for late work, missed exams, quizzes, etc.:** Due dates for HW assignments and dates of quizzes are on the syllabus. 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. When you contact me, we will agree on a make-up date, which you will honor (or receive no credit for the assignment).

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 Jan 20	Syllabus Statistics	
F Jan 22	Describing data graphically	2
M Jan 25	Describing data numerically	3
W Jan 27	Introduction to Probability Theory	4.1, 4.2
F Jan 29	Probability Theory: Probability Rules	4.3
M Feb 1	<b>Quiz 1</b> , Bivariate probabilities	4.4
W Feb 3	Probability Theory: Bayes' Theorem	4.5
F Feb 5	Probability Theory: Permutations and Combinations	4 Appendix
M Feb 8	Probability Distributions: Discrete	5.1, 5.2, 5.3
W Feb 10	Discrete probability distribution: Binomial	5.4
F Feb 12	Discrete probability distribution: Poission	5.6
M Feb 15	Probability Distributions: Continuous	6.1, 6.2
W Feb 17	Continuous probability distribution: Normal	6.3, 6.4
F Feb 19	Sampling and Sampling Distributions, <b>HW 1 due</b>	7.1,7.2
M Feb 22	HW 1 Returned	
W Feb 24	<b>MIDTERM 1</b>	
F Feb 26	NO CLASS – Leave for Spring Break early	
M Mar 8	Estimators and estimates	7.3, 8.1
W Mar 10	Confidence Intervals: Variance Known	8.2
F Mar 12	Confidence Intervals: Variance Unknown	8.3, 8.4
M Mar 15	Additional Topics	9.1, 9.2, 9.3

W Mar 17	Hypothesis Testing	10.1
F Mar 19	<b>Quiz 2</b> , Hypothesis Testing	10.2
M Mar 22	Hypothesis Testing	10.2
W Mar 24	Hypothesis Testing	10.3, 10.4
F Mar 26	Hypothesis Testing, <b>HW 2 due</b>	10.5
M Mar 29	HW 2 Returned	
W Mar 31	<b>Midterm II</b>	
W Apr 7	Hypothesis Testing (2 parameters)	11.1
F Apr 9	Hypothesis Testing (2 parameters)	11.2
M Apr 12	Using Chi-Square distribution	7.4, 16.1
W Apr 14	Goodness-of-fit	16.1, 16.2
F Apr 16	ANOVA	17.1, 17.2
M Apr 19	NO CLASS – Patriot’s Day	
W Apr 21	<b>Quiz 3</b> , ANOVA	17.1, 17.2
F Apr 23	Correlations	12.1
M Apr 26	Linear Regression	12.2
W Apr 28	Least Squares Estimation	12.3
F Apr 30	Explanatory Power & Statistical Inference, <b>HW 3 due</b>	12.4
M May 3	HW 3 Returned	
W May 5	NO CLASS – You’ll be busy enough	
W May 12	<b>FINAL EXAM @ 12:30</b>	