

Boston College
Department of Economics

EC151- Statistics for Business and Economics
Richard McGowan, S.J.

Fall, 2009
Tues, Thurs: 1:30

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

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Office Hours: Wed: 9-11; 3-4:30; Tuesday and Thursday: 3:00-4:15

If you can not meet me at any of these times, please make an appointment to meet me. The graduate assistant will also have office hours that will be posted. The ADC (the Academic Development Center in O'Neill) also has tutors available for you to consult.

Course Structure:

The course will consist of problem review and lecture. Usually, I will go over assigned problems as well as cover new material every class. It is important to note that we will be covering a fair amount of material in limited amount of time. In "doing" Statistics, a considerable amount of computation is required (so give up two six packs of the "less Carbs beer" and buy a good financial calculator). A statistics textbook is not a novel so be prepared with paper and pen to figure out what the authors are trying to explain. Much of this calculation is rather mindless and best suited for the computer (or someone, *anyone* else). In this class, these mindless tasks will be minimized by learning the use of computer packages (such as SPSS, Excel). You will have three computer projects so that you will be required to learn a statistical package. These projects will also give you a chance to present and write up your conclusions from analyzing some "real" world data so that you can appreciate how a manager would use statistical information to make decisions. In general, Statistics is a subject that is best learned at the point of a pencil and taken a little bit at a time. You can not read a Statistics textbook like a novel or a newspaper. It takes a fair amount of time and effort with pen and paper at your side.

I would highly advise you to make class although I will not keep attendance. There will be quizzes, computer assignments and two hourly exams during the semester that will help you keep up with the work. Finally, feel free to stop me at any point to ensure that you understand the material before we move on. The only dumb questions are those not asked (and you'd be surprised how grateful the rest of the class is when a "dumb" question is asked).

If you have a disability and will be requesting accommodations for this course, please register with either Kathy Duggan (Kathleen.duggan@bc.edu) Associate Director, Academic Support Services, the Connors Family Learning Center (learning disabilities and ADHD) or Suzy Conway (suzy.conway@bc.edu), Assistant Dean for Students with Disabilities (all other disabilities). Advance notice and appropriate documentation are required for accommodations.

Course Objective:

You will not be a statistician at the end of this course. But you will have an appreciation of the power as well as the limitations of statistical thinking. Some of you will find Statistics to be interesting- even fun- some of you won't; most will find it somewhere between tolerable and at least entertaining. Regardless, a proper dose of Statistics will be invaluable in your future as a student and a businessperson. Sure you can get through life without it- but the same can be said for literacy, not to mention other "collegiate" activities, such as getting into a Mary Ann's or waiting for the Neutron bus for those who are spending Freshman year abroad!

What you will not be expected to do is memorize formulas although some concepts will come second nature to you. I will try and give you examples from Economics, Finance, Accounting and Marketing as well various stories from my research on the various "sin" industries such as cigarettes, gambling and alcohol. Hopefully this applications approach will make you feel that this material is not just merely a theoretical nightmare or another educational hoop that needs to be jumped through.

Finally, Statistics involves a type of thinking that needs to be developed if a person hopes to have a career where decisions have to be made on the basis of analyzing data. Hence, it is utilized in every aspect of economics and business. It is my duty to make the course as interesting and thought provoking as possible.

Grading Procedure:

- 1.) There will be quizzes as well as case studies that will account for 20% of the final grade.
- 2.) Two hourly exams: 45% of the final grade
- 3.) Cumulative Final exam: 35% of the final grade

N.B. All exams and quizzes will be open notes and book. There will also be a back-test file which is kept on the reserve desk at O'Neill. You can also find all of the handouts and back tests on my web page. The answer book for your text book is also at the reserve desk. **Please take the tests, quizzes and hand in the cases on time!** Unless you have an excuse that would have Yankee and Sox fans embracing!

Grade Equivalents

A = 93 or above	B- = 80 - 77	D+ = 64 - 62
A- = 92 - 90	C+ = 76 - 74	D = 61 - 57
B+ = 89 - 86	C = 73 - 69	D- = 56 - 54
B = 85 - 81	C- = 68 - 65	F = 54 and under

Tentative Schedule for topics and exams:

<u>Topic</u>	<u>Classes of</u>	<u>Chap. in text</u>
Descriptive Statistics	Sept. 8, 10	2, 3
Probability Theory Bayes' Theorem	Sept.15, 17, 22	4
Concept of a Probability Distribution: Discrete & Continuous	Sept. 24, 29	5.1, 5.2, 5.3, 6.1, 6.2
Probability Distributions: Binomial, Poisson, Normal	Oct. 1, 6, 8	5.4, 5.6, 6.3, 6.4

EXAM 1: Tuesday, October 13- CHAPS. 1, 2, 3, 4, 5

Sampling, Confidence Intervals, Sample Size, Proportions, "t" distribution	Oct. 15, 20, 22	7, 8, 9
Hypothesis Testing (Single population)	Oct. 27, 29, Nov. 3, 5,10	10

EXAM 2: Thursday, November 12 - CHAPS. 6, 7, 8

Hypothesis Testing (Two population parameters)	Nov. 17, 19	11
Chi-Square Distribution ANOVA	Nov.24, Dec. 1	16, 17.1, 17.2
Simple Regression	Dec.3, 8, 10	12

FINAL EXAM: Wednesday, DEC. 16th at 12:30 PM in Lyons 011 (or as it is commonly known, the Rat!)