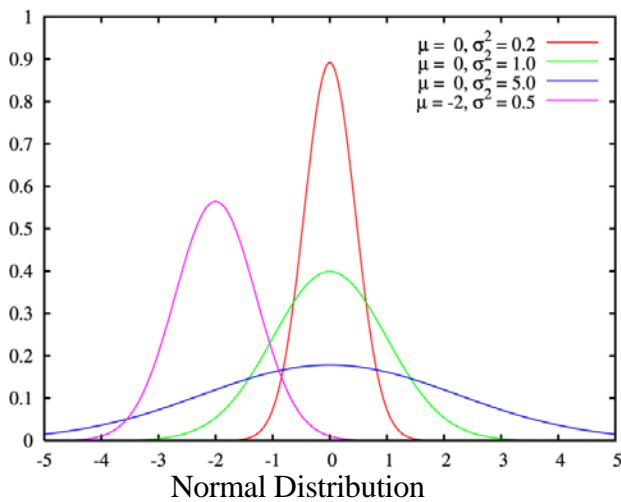


# SYLLABUS - ECONOMIC STATISTICS – ECON 230



Pafnuty L. Chebyshev (1821 -1894)

*"Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write"*  
– H.G. Wells

## Basics:

**Instructor:** Don Negri  
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**Phone:** x6326

**Introduction:** Nineteenth century British Prime Minister Benjamin Disraeli once said *"There are three kinds of lies - lies, damn lies, and statistics"*. Despite the Prime Minister's skepticism, social sciences increasingly rely on quantitative analysis as a means of studying social phenomenon. In the information world in which we live, descriptive statistics and statistical analysis are used by business, newspapers, government, politicians, and television to educate, persuade, and sometimes deceive. The goal of this course is to familiarize students with basic statistical methods and reasoning. Statistics provides a framework for summarizing data, sampling public opinion, testing the significance of responses from surveys, examining the relationships between variables and making economic forecasts.

This course will acquaint you with the basic techniques of statistical analysis and demonstrate how they can be used to make intelligent decisions in various aspects of policy analysis. It will also make you aware of ways in which statistics may be used to misrepresent data and real world situations. Emphasis will be placed on statistical concepts and practical, real-world applications rather than statistical theory or mathematical equations. By the end of the course, students should be able to:

1. Offer appropriate and effective descriptions of sets of data
2. Apply basic concepts of **probability theory**
3. Model random processes described by both **discrete and continuous random variables**
4. Calculate and interpret **sampling distributions**
5. Calculate and interpret **confidence intervals** for both large and small samples dealing with population **means** and **proportions**

6. Form and test well-defined **hypotheses** about a population's mean or proportion
7. Be able to conduct and interpret the results of a simple **regression analysis**
8. Confidently distinguish between lies, damn lies, and statistics

In addition, you will learn some of the basic skills for using Excel to present and analyze data.

### Required Texts:

1. McClave, Benson & Sincich, *Statistics for Business and Economics*, 10<sup>th</sup> Edition, Prentice Hall, 2008

Available in digital form for about \$61 at URL: <http://www.coursesmart.com/> [Search for the author "McClave" who has several books; then be sure to choose "*Statistics for Business and Economics, 10<sup>th</sup> Edition*" ]

2. Mark Dummeldinger, *Microsoft Excel Manual for Statistics for Business & Economics*, Prentice Hall, 2005

**Office Hours: Monday 12:30 – 2:00, Wednesday 1:30 – 3:00 & Friday 9:30 – 10:30, and by appointment**

**WEB Page:** <http://www.willamette.edu/cla/economics/dnegri.htm>

(Includes: syllabus, homework assignments and answers, previous exams and Excel instructions)

**Review Sessions:** There will be occasional evening review sessions (times TBA).

**Evaluation:** There will be 4 midterm exams and a final exam. In addition, there will be between 9 and 10 homework assignments designed to give students practice in applying concepts learned in class and from the book. One assignment will not count toward your grade (I will count the best ones, or you can skip one assignment). And finally, *No late homeworks will be accepted!*

Grades will be based on the following weight distribution.

Participation	- 3%
Homeworks	- 13%
Exam 1	- 10%
Exam 2	- 17%
Exam 3	- 18%
Exam 4	- 17%
Final exam	<u>- 22%</u>
	100%

**Final Exam: MWF 8:00, Section 1 – Wednesday, May 13, from 8:00 to 11:00**

**Homework:** Your homework assignments will take one to two weeks to return. If you want to guarantee that they will be available to study from for exams then make a copy before handing in your homework. Feel free to work the homework in groups. However, I urge you to at least try solving the problems first on your own. I also recognize there may be some homework problem answers "floating around." Again, it behooves you to make a serious effort before resorting to mindless copying. If you are having difficulty, work on the odd-numbered problems in the text. The answers are in the back of the book. The more problems you work, the more proficient you will become with the material, the better you will perform on the exams, **guaranteed**. And, *no late homeworks will be accepted*.

**Computer Assignments:** There will be several assignments using Microsoft Excel. When you finish the computer assignments, **examine the output!** What do the numbers mean? You are expected to understand what the computer has generated for you. Here are some useful websites to help you with Excel.

Excel Tutorials: 1. <http://phoenix.phys.clemson.edu/tutorials/excel/index.html>  
2. <http://www.usd.edu/trio/tut/excel/index.html>

**Textbook Resources for Students:** The disk that comes with the text book includes some helpful applets.

**Some friendly advice:** First, learning statistics is a cumulative process, each step building on the previous foundation. Do not fall behind! If there is something you do not understand in the reading, homework, or in lectures, do not procrastinate, get some help (come to office hours, ask questions in class). Second, reading the text and coming to class are not sufficient to learn the material; you must also work problems. Finally, class participation has been **statistically linked** with better grades on tests. In fact, the difference in performance of students who regularly attend and those who attend sporadically is approximately a full letter grade (Romer, *Journal of Economic Perspectives*, 1993). Above all else, remember that the only dumb question is the one you want to ask but don't. So please, ASK! Asking questions helps you to learn and helps me to teach.

Note: Students with disabilities should check in with the Disability Services Office in Bishop Wellness Center as early as possible.