

# Cedar Crest College

Social Science Statistics – SOC 324-70 (Three Credits)

Spring 2010

Tuesday 4:00 p.m. – 6:30 p.m. Curtis 135

**Professor:** Patrick Ratchford

**Office:** Curtis 217

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## Office Hours

Monday, Wednesday 11:30 a.m. – 3:30 p.m.

Tuesday 9:00 a.m. – 11:00 a.m. , 2:00 p.m. – 4:00 p.m.

*Additional office hours are available by appointment.*

**Required Text:** Triola, *Essentials of Statistics*, 3<sup>rd</sup> ed., Pearson/Addison Wesley, ©2008.

**Calculator:** A basic scientific calculator is required. See me if you have any questions about what type of calculator to buy. (Students may not share calculators during an exam.)

## Course Description

*“There are three types of lies: lies, damned lies, and statistics” Benjamin Disraeli*

In this course we will examine the uses and abuses of Statistics in the social sciences.

**Course Outcomes:** Upon successful completion of the course the student should be able to

- Compute and interpret basic descriptive statistics including, the mean, median, standard deviation, percentiles, correlation coefficients.
- Understand basic methods of sampling.
- Compute confidence intervals based on simple random samples.
- Conduct hypothesis tests based on simple random samples and compute the P-value for test statistics.

## Assessment

There will be two take-home exams each accounting for 20% of your final average. There will also be an in-class midterm contributing 20% of your final average and a final exam contributing 25%. The remaining 15% will consist of take-home assignments or short in-class quizzes. Practice homework will be assigned and discussed each week. (Some of the take-home assignments may use Microsoft Excel or the statistics package SPSS.) ***There will be no extra credit given.***

The grade scale that I will use to assign final grades is A (93 and up), A- (90-93), B+ (87-90), B (83-87), B- (80-83), C+ (77-80), C (73-77), C- (70-73), D+ (67-70), D (60-67), F (Below 60).

***Attendance in class is expected of all students and mandatory on exam days, but it will not be factored numerically into your grade.*** If you miss a class it is your responsibility to obtain the notes and assignments from that class from **someone else in the class**. Make-up exams will be given only with **prior notification** and documentation of a legitimate excuse. Make-ups for in-class quizzes will not be given under any circumstance. (I will drop one lowest assignment grade. Beyond that you will receive a

zero for every unexcused missed assignment.) All take-home assignments and exams are due *in-class* on the due date and will not be accepted otherwise. Do not drop your exam off in the bin outside my office door without first clearing it with me; I will not accept it.

### Notes

- ◆ I fully support the Cedar Crest College Honor Code and the Classroom Protocol code as stated in the Customs Book. Appropriate classroom behavior is implicit in the Cedar Crest College Honor Code. Such behavior is defined and guided by complete protection for the rights of all students and faculty to a courteous, respectful classroom environment. That environment is free from distractions such as late arrivals, early departures, inappropriate conversations and any other behaviors that might disrupt instruction and/or compromise students' access to their Cedar Crest College education.
- ◆ Students should not make any travel arrangements for the end of the semester until after the final exam schedule is published.
- ◆ **Cell phones should be turned off or set to vibrate for the duration of the class period. Texting during the class period is not permitted. Cell phone calculators may not be used during the midterm or final exams.**
- ◆ Collaboration on daily practice homework is expected and encouraged, but any work turned in for a grade should be your own. Violations of the college plagiarism policy will be reported to the dean and result in a grade of zero for the particular assignment / exam.
- ◆ Basic arithmetic skills are a prerequisite for this course
- ◆ It is vitally important for you to keep current with the work. Students who fall behind early quickly find themselves in a hole that is very difficult, if not impossible, to get out of. I'm more than willing to meet with you during my office hours or otherwise to help you succeed, but you must make the effort. Feel free to drop by my office, even if it's not my scheduled office hour.
- ◆ The format of the course will be lecture/discussion with much emphasis on homework discussion. In order for this to work it is vitally important for you to come to class prepared.
- ◆ It will be beneficial for you to have read the day's material **before** coming to class.
- ◆ Students with documented disabilities who may need academic accommodations should discuss these needs with me during the first two weeks of class. Any student who wishes to request accommodations should contact the Advising Center.
- ◆ Professional tutoring is available from Gary Moll in Academic Services. Gary can be reached at extension 3485 or via e-mail at [gmoll@cedarcrest.edu](mailto:gmoll@cedarcrest.edu) .

## Tentative Schedule

Day	Date	Material Covered*
Tuesday	1/19	Introduction and Graphical Summary of Data (Chapters 1 and 2)
Tuesday	1/26	Numerical summary of Data (Chapter 3)
Tuesday	2/2	Basic Probability (Chapter 4)
Tuesday	2/9	Probability Distributions (Chapter 5)
Tuesday	2/16	Normal Probability Distribution (Chapter 6)
Tuesday	2/23	Sampling and Design of Experiments (Chapter 1)
Tuesday	3/2	Midterm Exam
Tuesday	3/9	No class – Spring Break
Tuesday	3/16	Confidence Intervals (Chapter 7)
Tuesday	3/23	Hypothesis Testing (Chapter 8)
Tuesday	3/30	Two sample Inference (Chapter 9)
Tuesday	4/6	No Class – Monday Schedule
Tuesday	4/13	Review
Tuesday	4/20	Correlation and Regression (Chapter 10)
Tuesday	4/27	Chi-Square and ANOVA (Chapter 11)
Tuesday	5/4	Review
TBA		Final Exam

