

Social Statistics
Sociology 202
M-W-F 9:10 -10:00
Social Science, Room 254
Fall 2009

Instructor: Dusten Hollist

Office: Social Sciences 321

Office Hours: M, W, F 2:10p - 3:30p; or by appointment

Email Address: dusten.hollist@umontana.edu

Phone: 243-2843

OBJECTIVE

The goal of this course is to introduce you to basic statistical concepts and techniques. The information gained will provide you with a foundation to understand the statistics often visible in our daily lives, in the newspaper and other popular media (i.e. television and radio). It will also give you the tools needed to enroll in more advanced statistics courses, if you choose to do so. There are a variety of topics covered in this course. These will range from basic organization of data, graphic presentation of data, probability, sampling distributions and statistical inference.

LEARNING GOALS

Upon completion of the course, you will be able to demonstrate an understanding of the symbols used in statistical research and how they transform numbers to give them meaning. This will include relaying, interpreting, and effectively communicating social information in terms of statistical symbols, operations, and reasoning; and applying creative thinking skills using the language and logic of statistical analysis in order to address a variety of applied and theoretical social problems.

TEXTS

Healy, Joseph F. 2009. *Statistics: A Tool For Social Research*, 7th Edition. Wadsworth: Belmont, CA.

Kranzler, John H. 2003. *Statistics for the Terrified*. Prentice Hall: Upper Saddle River, NJ.

The Healy text is required. The Kranzler text is optional. It is intended for students who have suffered negative experiences with math courses in the past and come here fearful of statistics. It contains learning strategies and ideas for understanding the concepts and practice behind the statistics we will be learning.

COURSE REQUIREMENTS

Class Time:

Class time will be divided between presentation of the concepts that provide the foundation of statistical analysis, the actual nuts and bolts associated with the applications of the statistics, and interpreting what the results obtained allow us to say about the data and our research questions.

It is imperative that you respect the opinions and comments of other students in the course. Failure to respect other students or the instructor will result in removal from the class and an out-of class meeting with me in my office. Other disruptive behaviors such as talking out of turn, sleeping, or reading the newspaper will likewise not be tolerated.

Although attendance will not be taken (you are a grown-up now), you are expected to attend class. It will be very difficult to do well if you do not attend regularly. Unlike many other courses you might have taken, it will be difficult to catch-up and cram for exams. Statistics are based on a building-block principle where later ideas build upon previous ones. Make it a point to attend class! The TA and I will not provide notes or schedule special meeting times to go over material that is missed due to a non-university sanctioned absence.

Grades:

There will be five quizzes and five problem sets that will comprise the total points for the semester (See the reading and quiz schedule at the end of this document). Each of the quizzes is worth 50 points. Each of the problems sets is worth 10 points. Thus, there are a total of 300 points possible for the term. Final grades will be determined based on your average score out of the total points possible. Grades will be assigned according to the following scale:

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|---|---------------------|---|------------------|
| A | 90 to 100 percent | B | 80 to 89 percent |
| C | 70 to 79 percent | D | 60 to 69 percent |
| F | 59 percent or below | | |

Class Policies:

Each of the quizzes must be taken at the place and time they are scheduled. I *will not* accept late work. Exceptions will be made only for university sanctioned excuses (i.e. documented medical or family problems; university approved absences for athletic participation, field trips, etc..). Reasonable accommodations will be made for students who have a documented disability. Please notify me during the first week of class of any accommodations that are needed for the course. Late notification may result in the requested accommodations not being available. All accommodations must be approved through Disability Services for Students (DSS) in Lommasson Center 154 (243-2243).

Academic Honesty and Integrity (UM official statement):

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the university. All students must be familiar with the Student Conduct Code. The code is available for review online at <http://www.umt.edu/SA/VPSA/index.cfm/page/1321>.

Final Note:

There will be times during the duration of the semester when you cannot figure something out. While I encourage you to master the concepts presented in this course on your own, you should not spend hours upon hours “hung-up” on something. I encourage you to develop a “study-buddy” or a group of “study-buddies” as a way to learn the information. Furthermore, class-time will always be open for questions and diagnosis of problems that emerge... so come prepared.

Reading and Quiz Schedule

Changes in the reading and exam schedule may occasionally be made. Advance notice of these changes will be made during class time.

| Monday | Wednesday | Friday |
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| Aug 31 st : Introduction to Statistics Healey Ch. 1 | Sept 2 nd : Introduction to Statistics Healey Ch. 1 | Sept 4 th : Basic Descriptive Statistics Healey Ch. 2 |
| Sept 7 th : Labor Day Holiday No Classes | Sept 9 th : Measures of Central Tendency Healey Ch. 3 | Sept 11 th : Measures of Central Tendency Healey Ch. 3 |
| Sept 14 th : Measures of Dispersion Healey Ch. 4 | Sept 16 th : Measures of Dispersion Healey Ch. 4 | Sept 18 th : Quiz #1 Covers chapters 1-4 |
| Sept 21 st : The Normal Curve Healey Ch. 5 Problem Set #1 Due | Sept 23 rd : The Normal Curve Healey Ch. 5 | Sept 25 th : The Normal Curve Healey Ch. 5 |
| Sept 28 th : Four Fundamental Concepts Healey Ch. 6 | Sept 30 th : Four Fundamental Concepts Healey Ch. 6 | Oct 2 nd : Estimation Healey Ch. 7 |
| Oct 5 th : Estimation Healey Ch. 7 | Oct 7 th : Estimation Healey Ch. 7 | Oct 9 th : Quiz #2 Covers chapters 5-7 |
| Oct 12 th : Hypotheses Testing I Healey Ch. 8 Problem Set #2 Due | Oct 14 th : Hypotheses Testing I Healey Ch. 8 | Oct 16 th : Hypotheses Testing II Healey Ch. 9 |
| Oct 19 th : Hypotheses Testing II Healey Ch. 9 | Oct 21 st : Hypotheses Testing II Healey Ch. 9 | Oct 23 rd : Analysis of Variance Healey Ch. 10 |
| Oct 26 th : Analysis of Variance Healey Ch. 10 | Oct 28 th : Analysis of Variance Healey Ch. 10 | Oct 30 th : Quiz #3 Covers chapters 8-10 |

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| Nov 2 nd : Analysis of Variance Healey Ch. 10 Problem Set #3 Due | Nov 4 th : Chi-Square Healey Ch. 11 | Nov 6 th : Chi-Square Healey Ch. 11 |
| Nov 9 th : Chi-Square Healey Ch. 11 | Nov 11 th : Veterans Day Holiday No Classes | Nov 13 th : Nominal Level Association Healey Ch's. 12, 13 |
| Nov 16 th : Ordinal Level Association Healey Ch. 14 | Nov 18 th : Ordinal Level Association Healey Ch. 14 | Nov 20 th : Exam #4 Covers chapters 10-14 |
| Nov 23 rd : Correlation and Regression Healey Ch. 15 Problem Set #4 Due | Nov 25 th : Thanksgiving Holiday No Classes | Nov 27 th : Thanksgiving Holiday No Classes |
| Nov 30 th : Correlation and Regression Healey Ch. 15 | Dec 2 nd : Correlation and Regression Healey Ch. 15 | Dec 4 th : Correlation and Regression Healey Ch. 17 |
| Dec 7 th : Correlation and Regression Healey Ch. 17 | Dec 9 th : Correlation and Regression Healey Ch. 17 | Dec 11 th : Correlation and Regression Healey Ch. 17 |
| Dec 14 th : Finals Week Problem Set #5 Due | Dec 16 th : Finals Week | Dec 18 th : Finals Week |