22S:002   STATISTICS AND SOCIETY   Spring 2007

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Office Hours: 5:30-7:00 PM Mondays and Tuesdays

Recommended text: *Statistical Reasoning for everyday life*, 2nd edition, by Bennett, Briggs, and Triola

Course Objectives

In this course we will attempt to assess basic statistical evidence. We will look at what does and does not constitute good statistical study and how to judge the evidence that is presented. We will see how to conduct a good study, from designing the study, through gathering the data and presenting the results in a coherent fashion. Very little calculation is required, though you will be responsible for constructing and interpreting simple plots and some of the commonly used statistics. No formulas need to be memorized. For other statistics, calculation is not required, but interpretations of these values will be covered. Think of the course as a consumer's guide to statistical arguments, as you might see them in your academic career, or your daily life.

Course Schedule

Week of	Topic	Readings
January 15	Populations and samples	Section 1.1
January 22	Sampling and Statistical Studies	Sections 1.2 and 1.3
January 29	Statistical studies – good and bad	Sections 1.3 and 1.4
February 5	Properties of measures and using percentages	Sections 2.2 and 2.3
February 12	Indices and summary measures	Sections 2.4 and 4.1
February 19	Shape of a distribution	Section 4.2
First Exam is Wednesday, February 21		
February 26	Variability and normal distributions	Sections 4.3 and 5.1
March 5	Calculating percentiles from a normal distribution	Sections 5.2 and 5.3
March 12	**Spring Break**	
March 19	Probability and expected value	Sections 6.2 and 6.3
March 26	Rules of probability and scatterplots	Section 6.4 and 7.1
April 2	Correlation	Section 7.1
Second Exam is Wednesday, April 4		
April 9	Correlation and best-fit lines	Sections 7.2, 7.3 and 7.4
April 16	Sampling distributions and confidence intervals	Sections 8.1, 8.2 and 8.3
April 23	Hypothesis tests	Sections 9.2 and 9.3
April 30	Contingency tables and Simpson's paradox	Sections 10.3 and 10.2
May 7	**Final Exam is Wednesday May 9 at 7:30 AM** (That means the morning)	

Course Grades

Grades are based on the three tests, quizzes and a homework grade. Homework is passed out on each Thursday and is due the following Thursday in discussion, with the exception of weeks when there is an exam. No late homework will be accepted; no exceptions. Quizzes are given in discussion section, either on Tuesday, Thursday, or both days. They are unannounced. These will consist of a problem or two covering material from that day. To account for absences, the lowest 3 quiz grades will be dropped.

Grades will be calculated as

Homework	15%
Quizzes	20%
Exams 1 and 2	20% each
Final exam	25%

For the final grade, there will be no curve, 90% or higher is an A, 80%-90% is a B, etc.

Exams are multiple-choice, and will be in the lecture room, unless otherwise specified. Each exam will cover all material in the weeks up to the exam date, with the exception of the final exam, which is cumulative. For each exam, you will be allowed one 8 ½ by11 sheet of paper on which anything may be written.

Statistics Lab

There is a statistics tutorial lab in rooms 202 CC. Hours are still being finalized and will be announced. At these times, at least one of the TA's from this class will be in the lab and will be available to assist you. These are in addition to the regularly scheduled office hours for your TA.

There is also a list of tutors available on the Statistics and Actuarial Science Department website: http://www.stat.uiowa.edu/courses/tutors.html

Special Needs

I would like to hear from any student who has special needs that might require a specific need as far as modification of the lecture room, alternative arrangements for testing or any other specific accommodation. Please contact me as soon as possible so that we can arrange to meet your needs.

Complaints and Misconduct

University policies regarding academic misconduct and student complaints concerning faculty actions can be found at http://www.clas.uiowa.edu/academic_handbook.

Words of Warning

Nothing in this course is so difficult that it is beyond any college student. What you will find is that the material at the beginning of the course is very familiar and so tends to be comparatively easy. This is not true for the material at the end of the semester. It has been my experience that attendance suffers as the semester wears on, and grades end up reflecting this fact. You can succeed in this class if you put forth effort. That includes going to all the lectures and the discussion sections. I do not require attendance, but if you choose not to come you should be willing to accept the consequences.