INTRODUCTION TO STATISTICS

Dr. Richard Spitzberg

Fall Semester

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Office Hours: TBD

Short description:

This is an introductory course in probability and statistics designed to provide students with the basic concepts of data analysis and statistical computing. Descriptive statistics is concerned with displaying and summarizing data. Topics include: graphing qualitative and quantitative data, measures of central tendency, measures of variability, bivariate data, properties and computation of Pearson's r, variance sum law for correlated and uncorrelated variables. Much statistical reasoning depends on the theory of probability. Topics include: basic concepts, independent events, sum of probabilities, conditional probability, Bayes theorem, permutations, combinations, Binomial, Uniform, Normal distribution, Central Limit Theorem. Statistical inference is the art of making valid generalizations from samples. Topics include: sampling distribution, estimation, measurement error, hypothesis tests, statistical significance, p values, and confidence intervals.

Assessment[*]:

Midterm:

An in-class midterm exam will be given at the midpoint of the semester. It will be preceded by an in-class review of all the material covered up to that point. Midterm exam will count for 15% of the final grade.

Final requirement:

A final exam will be given at the end of the semester. This will be either, an in-class two-hour exam. The final exam will count for 65% of the final grade.

Participation:

We want to encourage an atmosphere of active participation in class. Participation will count for 20% of the final grade.

Attendance:

Attendance is mandatory. Students are permitted a maximum of three absences without penalty. Any additional absences will affect the final grade and may result in failure of the course.

Academic conduct:

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[*] Please note that if distance learning is required, the assessment procedure, modes of assessment and weightings may be changed.

Plagiarism is taken extremely seriously. Any instance of academic misconduct which includes: submitting someone else's work as your own; failure to accurately cite sources; taking words from another source without using quotation marks; submission of work for which you have previously received credit; working in a group for individual assignments; using unauthorized materials in an exam and sharing your work with other students, will result in failure of the assignment and will likely lead to further disciplinary measures.

Additional requirements:

It is expected that students will keep phones turned-off while in class, except to take photos of the material presented for their class notes. Laptops may only be used to take class notes.