

**CALIFORNIA STATE UNIVERSITY, HAYWARD
DEPARTMENT OF STATISTICS**

**STATISTICS 1000
Winter 2004**

Lecture: MWF 9:05-10:30 NSc 207

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Office Hours: MWF 10:40-11:40 or by appointment and 24/7 by e-mail

My Website: <http://www.sci.csuhayward.edu/~esuess/>

Required Text:

- Utts and Heckard: Mind on Statistics, 2nd Edition, Duxbury 2004

Material To Be Covered:

- Basic Statistical Concepts: population, sample, variability, distribution, statistical reasoning
- Types of Data: quantitative, qualitative
- Descriptive Statistics: graphical methods (pie chart, bar graph, stem-plot, histogram, scatterplots) and numerical methods (mean, median, mode, percentiles, quantiles, variance, standard deviation, IQR)
- Basic Probability Concepts: sample space, outcome, event, probability, mutually exclusive, additive rule, independence, multiplication rule
- Probability Models: discrete models (binomial), continuous models (normal, t), expectation
- Sampling and Sampling Distributions: simple random sampling (SRS), Central Limit Theorem (distribution of the sample mean)
- Statistical Inference: confidence level, confidence intervals, statistical significance, hypothesis tests
- Linear Regression: correlation, least-squares regression line, hypothesis testing for model significance
- Other Topics: chi-square tests, multiple regression, analysis of variance (ANOVA)

Homework: Weekly assignments will be given each Monday at the beginning of class. A list will also be on the website.

Quizzes and Exams: A short quiz will be given every Friday, two midterms will be given and the final. The final will have two parts: the first is the Departmental Common Final, which is a 20 question multiple choice test, and the second part will be written by the instructor. You are expected to bring a calculator with you to all exams and your Student I.D. for identification.

Grading:

- Homework, Projects, and Quizzes 25%
- Midterm I 25%
- Midterm II 25%
- Final 25%

Policy on Make-up Exams: You are expected to take the quizzes and exams at the scheduled times. In case of genuine emergency, illness or hardship, for which you can present written documentation I may agree to arrange for a make-up exam. Make-up exams must always be arranged BEFORE the regular exam is given and always take place AFTER the regular exam. Quizzes *may not* be made up!

Class Expectations:

- No talking when the instructor is lecturing. No reading newspapers. No eating.
- Do attend class every day. Do bring your book. Do bring questions related to lecture, reading, or homework. Do raise your hand when you have a question. Do switch off all beepers and cellular phones.
- If for some reason you miss a day of class, it is your responsibility to get a copy of the notes from someone who attended the lecture that day so you can catch-up.