Course Outline

Course Title: Statistics for the Life Sciences
Course Code: STAT 201

Spring 2011
Credits: 3
Section: C100
Course Description:

This is an introductory course in research methodology and associated statistical analysis techniques for students with training in the life sciences. Aimed at a non mathematical audience, this course discusses procedures that are most commonly used in the summary of statistical surveys and in the interpretation of experimental data.

1. **Data summaries and displays:** Graphical displays, measures of central tendency, measures of dispersion, percentiles, the normal curve, computer generated graphs and data summaries.
2. **Summarizing the relationship between variables:** Scatter plots, the regression line, correlation, and causation.
3. **Basic probability calculations:** The addition and multiplication rules, and independence.
4. **Distributions for count data:** The binomial and Poisson distributions; where they arise, and their basic properties.
5. **Hypothesis tests and confidence intervals:** p-values, confidence levels, and their interpretation; inferences on a proportion and a mean based on the standard normal and t-distributions, underlying assumptions, and a mention of alternatives.
6. **ized block designs;one-and two-**

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Counts: tests for homogeneity and independence.

for STAT 101, 102, 203 (formerly 103), 270 (formerly MATH 272) or 301 may
credit.

SIC PRACTICE OF STATISTICS

_____. (5TH) W. H. Freeman
Course Material:

Assignment/Exam