Course Outline

Course Information | Program Information | Department Information | All SFU CODE Courses | Courses by term

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

Spring 2012

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.

- 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.
- Comparing two treatments: Completely randomized and paired designs; associated standard normal and ttests.
- Inference on the relationship between two variables: Simple linear regression and correlation analysis, plus, if time permits, comparing two lines and basic analysis of covariance.
- 8. Comparing several treatments: Completely randomized and randomized block designs; one- and two-way analyses of variance.
- 9. Analyzing Frequency Counts: tests for homogeneity and independence.

Requisite:

30 units. Students with credit for STAT 101, 102, 203 (formerly 103), 270 (formerly MATH 272) or 301 may not take STAT 201 for further credit. Quantitative.

Textbook:

- Moore, David S..

Course Material:

All course material available online the first day of classes

Course Requirements:

Assignment/Exam	Percentage
Assignment 1	5%
Assignment 2	5%
Assignment 3	5%
Assignment 4	5%
Mid-term Exam	30%
Final Exam	50%

Requirements Notes:

Please Note: Students requiring accommodation as a result of a disability must contact the Centre for Students with Disabilities at 778-782-3112 or csd_office@sfu.ca.

Students are responsible for following all exam policies and procedures (e.g., missing an exam due to illness) available here.

Fees:

- Course materials & service fee \$40.00 CAD

Delivery Method:

- WebCT

Please Note: This course outl∉T EMC P ₹ 344.45 Tm]0 0 1m