STAT 305

Spring 2012

Introduction to Biostatistical Methods for Health Sciences

Day Course

Topics:

The scheduling of the following topics is approximate:

1. Review of introductory statistics: Hypothesis testing, estimation and confidence intervals for means and proportions.

2. Review of basic concepts of probability with applications including diagnostic testing, sensitivity and specificity, the relative risk and the odds ratio.

3. Contingency Tables: The Chi-square test, r x c tables, multiple 2x2 tables, Simpson's paradox, Mantel-Haenszel method.

4. Correlation and simple linear regression: Regression concepts, estimation and testing for regression coefficients, evaluation of the model.

5. Multiple linear regression: Inference for regression coefficients, confounding and interaction, indicator variables, model selection, prediction, model assumptions and checking.

6. Logistic regression: Odds ratios, inference for regression coefficients, model assumptions and checking, case-control studies.

7. Time permitting: Survival analysis including life tables, censoring, Kaplan-Meier method, log-rank test.

Grading Scheme:

Assignments   25%
Quizzes   25%
Final Exam   50%
Grading is subject to change

Examinations:
There will be in-class quizzes and final which are closed book examinations. Exam questi1 0 0 1 59.6 434.35 Tmp0B1jTJE