

Youngstown State University

Department of Mathematics and Statistics

Course Syllabus for Statistics *3781H

Course Title: Biostatistics

Course Credit: 3 s.h.

Course Prereq: MATH 1581H or equivalent

Text: Biostatistics, by Wayne W. Daniel, 8th edition, John Wiley & Sons, Inc.

Course Description: A course in statistics with applications relating to biological sciences. Specific topics include: descriptive statistics, testing hypotheses, analysis of count data, correlation, regression, non-parametric statistics and analysis of variance.

Course Objectives: The goals for students in the course include:

- developing an understanding of the fundamental concepts of hypotheses formulation and testing, assumptions involved in those tests, and interpreting conclusions.
- developing the ability to communicate in statistics and produce well written statistical summaries
- developing the ability to read and understand the context of statistical situations
- developing the ability to work on statistics with peers in and outside the class
- developing the ability to use modern software to solve statistics problems
- developing the ability to communicate in mathematics

Course Assignments:

Chapter	Section	Topic
1	1.1 – 1.5	Introduction to Biostatistics
2	2.1 – 2.5	Descriptive Statistics
3	3.1 – 3.5	Probability
4	4.6 – 4.7	Probability Distributions
Supplement		Additional topics in Probability
5	5.1 – 5.6	Sampling Distributions
6	6.1 – 6.10	Estimation
7	7.1 – 7.8	Hypothesis Testing
8	8.1 – 8.3	Analysis of Variance
9	9.1 – 9.8	Regression and Correlation
12	12.1 – 12.6	The Chi-Square Distribution

Optional 8.4, 8.5, 12.7

Selected sections from Chapters 10, 11 and 13

The course will use SPSS or statistical software determined by the instructor.

Grading:

- Your grade will be determined by your performance on exams, a comprehensive final and homework assignments which may include an oral or written project.
- An important component of doing mathematics is expressing ideas in a clear and correct manner. The homework assignments will be collected frequently and constitute an essential part of the course. With practice, students become adept at communicating in mathematics. Responsible collaboration with student peers is encouraged, as it will help to assess whether a student is expressing mathematical ideas well. It is also important to work independently and turn in homework.

Semester: Spring 2007

Last date to withdraw with a "W" Thursday, March 29, 2007

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