

STATISTICS 4120/5120

FALL SEMESTER, 2009

Instructor: Nancy S. Boudreau
Department of Applied Statistics and Operations Research

E-mail: nboudre@bgsu.edu

Office and Phone: BA 361, 419-372-8396

Department Office and Phone: BA 344, 419-372-2363

Office Hours: M 12:30-1:30; R 12:45-1:30

In addition, I will be in my office on M from 10:30-11:30 on 9/21, 10/5, 10/26, 11/2, 11/9, 11/23, 11/30, 12/7

Also, I will be in my office on T from 12:45-2:00 on 9/8, 9/29, 10/27, 11/10, 11/24, 12/8

Text: Applied Nonparametric Statistical Methods, 4th edition, by Peter Sprent and Nigel.C. Smeeton

Grading: The final grade in this course will be based on a total of 375 points:
one in-class exam worth 150 points, homework assignments worth 25 points, project worth 50 points, and a final exam worth 150 points.

Topics

1. Chapter 1 – Some Basic Concepts
2. Chapter 2 – Fundamentals of Nonparametric Methods
(Permutation tests, Sign test, Randomization test, Pitman efficiency)
3. Chapter 3 – Location Inference for Single Samples
(Sign test, Confidence intervals, Wilcoxon test)
4. Chapter 4 – Other Single-Sample Inferences
(Goodness of fit tests, Runs test)
5. Chapter 5 - Methods for Paired Samples
(Sign test, Wilcoxon test, Confidence intervals, McNemar's test)
6. Chapter 6 – Methods for Two Independent Samples
(Median test, Confidence intervals, Wilcoxon-Mann-Whitney test, Siegel-Tukey test, Smirnov test)
7. Chapter 7 – Basic Tests for Three or More Samples
(Median test, Kruskal-Wallis test, Friedman Test, Multiple comparisons)
8. Chapter 10 – Correlation and Concordance
(Kendall's tau, Spearman's rho)
9. Chapter 11 – Bivariate Linear Regression
(Theil's regression method, hypothesis tests and confidence intervals)
10. Chapter 9 – Analysis of Survival Data (if time)
(Gehan-Wilcoxon Test, Peto-Wilcoxon test, Median tests)