

STA 6166 – Statistical Methods in Research I

Spring 2013

Instructor: Cynthia Garvan (cgarvan@ufl.edu)

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Cell Phone: 352 – 870 – 5403

Office Hours: Flexible! By arrangement of instructor and student.

Course Web Address: Sakai/E-learning

Course Description: Introduce basic data analysis tools and to train graduate students in statistical tools associated with hypothesis testing and linear models. The aim is to promote sound scientific research and experimentation based on good statistical thinking and practice.

Course Materials Required:

A First Course in Statistical Methods, by Ott and Longnecker, 2004

Software: You will need a computer for the homework assignments. The software SAS will be used for the course. Visit <http://software.ufl.edu/agreements/sas/student/index.html> for directions on obtaining SAS.

Homework: There will be homework problems assigned each week.

Exams: There will be three exams, given on the dates listed below. Exam details (length of time given to take exam, how exam will be turned in, etc.) will be given later and will depend on student access to FAX or scanner.

Exam 1: February 15th

Exam 2: March 22nd

Exam 3: April 24th

Grades: Homework is worth 40% and each exam is worth 20% of the final grade.

Grading Scale: The grading scale will be as follows:

A: 92-100%, A-: 88- <92%,

B+: 84- <88%, B: 80- <84%, B-: 77- <80%,

C+: 74- <77%, C: 70- <74%, C-: 67- <70%,

D+: 64- <67%, D: 56- <64%,

E: < 55%.

Course Policies:

Academic Dishonesty: I adhere to the University of Florida rules and guidelines for handling instances of academic dishonesty. Please refer to the Office of Students Services for detailed information about the current policies.

Instructor's Honor Code: We the members of the University of Florida community pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

Grading: Grades will be changed only when an error has been made by the instructor.

Incomplete: Incompletes are only assigned when extraordinary circumstances, arising after the date for dropping off the course, prevent the student from completing the course requirements. The student must be currently passing the

course and discuss the circumstances with the instructor before the final exam takes place. Having a failing grade in the course is not a valid reason for requesting an incomplete.

Students with disabilities: Students requesting classroom accommodation must first register with the Dean of Students office. The Dean of Students will provide documentation to the students who must then provide this documentation to the Instructor when requesting information.

Privacy Policies: Student records are confidential. Only information designated “UF directory information” may be released without your written consent. UF views each student as the primary contact for all communication.

Tentative material covered:

Topics	Book Sections
Introduction, Data Collection/Summaries, Populations/Samples	1.1-3.9
Probability, Random Variables, Graphical Representation	4.1-4.10
Sampling and Sampling Distributions, Estimating a Mean	4.11-4.13,5.1-5.3
Statistical Test for a Mean	5.4-5.7
Comparing Two Population Means and Medians	6.1-6.6
Introduction to F , chi-square Distributions, Inference on Variances	7.1-7.4
Introduction to Analysis of Variance and Experimental Design	8.1-8.3
1-Way ANOVA: Assumptions, Rank-Based Tests, Post-hoc tests	8.4-8.6
Randomized Complete Block Design	9.1-9.2
Latin Square Design, 2-Factor ANOVA	9.3-9.6
Categorical Data Analysis: Estimating and Comparing Proportions	10.1-10.3
Contingency Tables, chi-square-Tests, Odds Ratios	10.5-10.6
Introduction to Linear Regression	11.1-11.5
Correlation and ANOVA intro to Multiple Regression	11.7, 12.1-12.2
Multiple Linear Regression	12.1-12.5
Logistic Regression	12.6

The instructor reserves the right to update any parts of this syllabus as necessary. Students will be notified of any changes.