

SU DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
 SYLLABUS (*Tentative*)
 MATH 493/593 *Advanced Topics in Statistics: Advanced Statistical Methods*

INTENDED FOR: Students considering employment in areas of statistics. Students concentrating or minoring in statistics.

OBJECTIVES: To gain conceptual and practical information regarding some advanced and multivariate statistical techniques

PREREQUISITE: At least one course in inferential statistics with a “C” or better (MATH 155, 213 or equivalent). Math 313 or 314 is also preferred.

TECHNOLOGY: MINITAB and SPSS (computer software available in campus labs) will be used throughout the course.

TEXTBOOK: Advanced and multivariate statistical methods by Craig A. Mertler & Rachel A. Vannatta., 4th Edition, Pyrczak Publishing 2010 ISBN 1-884585-84-1.

		<i>Weeks</i>
	Review of descriptive and inferential statistics	1.5
Chapter 1-2	Introduction to Multivariate statistics	2.0
Chapter 3	Pre-Analysis Data Screening	1.0
Chapter 4-5	Univariate ANOVA and ANCOVA	3.0
Chapter 6	Multivariate ANOVA and ANCOVA	2.5
Chapter 7	Multivariate regression	2.0
	Optional Topics	1.0
	Tests	<u>1.0</u>
		14.0

EVALUATION

Quizzes, and Projects	25%
Tests	50%
Final Exam	25%

Writing Across the Curriculum

Writing will be a large component of this course. All data analyses must be accompanied by clearly written interpretations and conclusions.

The problem sets/projects will require graduate students to exhibit integrative thinking, synthesis, and analysis on material beyond the level usually expected of undergraduates.