Statistical Methods I

STAT 5710 – Fall 2014

Instructor:	Dr. Yali Liu
Office:	Gilbreath Hall 308 - H
Office Hours:	MW 10:30am - 11:30am or by appointment
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Class Time and Place: MW 1:40pm - 3pm; Gilbreath Hall 205

Credits: 3

Prerequisites: Math 2210 (Calculus III), Math 2250 (Linear Algebra), Elementary Statistics or permission of the advisor or instructor.

Textbooks: *Applied Linear Statistical Models, 5/E by Kutner, Nachtsheim, Neter, and Li, McGraw-Hill/Irwin, 2005.*

Computing: We will use the SAS statistical software mainly. Template SAS programs, data sets, and other information will be available through D2L. A useful website is http://www.ats.ucla.edu/stat/sas/examples/alsm/default.htm.

Course Objectives: To perform a wide variety of tasks, from the construction of graphical and numerical summaries for a set of data, to more complicated statistical procedures and tests using statistical software (e.g., SAS and R). At the end of this semester students will be able to:

1. understand the application of simple linear regression, multiple regression, logistic, log-linear model, and other statistical methods
2. properly apply these methods to real world problems using SAS/R/MINITAB statistical software and draw valid conclusions
3. present (both written and oral) these conclusions in a concise and clear manner.

Course Work:

Course Evaluation:

	% of grade
Midterm Exams	40
Homework	30
Final Exam	30
Total	100

- Homework problems will be handed out on most Thursdays and due one week late on Thursday. No late homework will be accepted but exceptions may be arranged if discussed in advance. When turning in your homework, each problem must be presented in order. This includes all relevant graphs and tables, which must be easily readable and appropriately labeled. You are limited to a maximum of 3 pages per problem. Any graph or figure that is turned in without comments or spans across more than one page will be ignored. Please edit SAS output using a word processor or editor. The homework accounts for 30% of your final grade.
- Two mid-term exams (in-class) will be given and the tentative dates are September 24 and November 5. Each exam accounts for 20% of your final grade.
- A comprehensive final exam will be held on Monday, December 8, 2014 at 1:20pm. It accounts for 30% of your final grade.
- Exams are closed-book but you can bring a help sheet (double-sided) handwritten by yourself (no photocopy or print). There will be no makeup of exams unless a request for any exceptional arrangement will be made one week before the exams.

Grading Scale: The grade will be based on a possible 100 points.

A	$93-100$	$A-$	$89-92$	$B+$	$84-88$	B	$78-83$	$B-$	$72-77$
$C+$	$66-71$	C	$60-65$						
F	less than 60 or for academic misconduct or an extremely low grade on the final exam								

Department Attendance Requirements: Attendance is required. The Math Department has this attendance policy: "The limit of absences for TR classes is 5. Should a student exceed the limit, the instructor has the authority to assign a grade of FN or W."

Attendance: You are expected to attend the lectures. You are responsible for any announcements and the material covered during the lecture.

Tentative course Schedule:

Chapters	**Description**	**Approx. time**
1-5	Simple Linear Regression	4wks
6-8	Multiple Regression	4wks
9-11	Model Selection	2wks
13, 14	Nonlinear Regression	3wks
12, 15	Other topics	1wk