Stat 445/545: **Analysis of Variance and Experimental Design**

Instructor: Guoyi Zhang, gzhang123@gmail.com Office hours: MWF 15:00pm-16:00pm in SMLC 318

Teaching Assistant:

Class Time/Place: 11:00am-11:50pm MWF - SMLC 352

Prerequisites: Stat 440/540 Regression Analysis

Text: Applied Linear Statistical Models, 5th ed. (If you already have 4th ed, it is ok to use it) by Kutner, Nachtsheim, Neter, and Li (Required); Analysis of Variance, Design and Regression, Applied statistical methods, by Ronald Christensen can be a reference.

Topics:

Chapter 16–18 Single-Factor ANOVA (about 3 weeks)

Chapter 19-21 Two-Factor ANOVA (balanced design) (about 3 week)

Chapter 22-23 Unbalanced Factorial Designs and General Multifactor Studies (about 2 weeks)

Chapter 24 Mixed Models (about 3 weeks)

Chapter 26-29 Design of experiments: Randomization, Randomized complete block designs, Nested and split plot designs and Repeated Measures (about 4 weeks)

Computing: SAS will be used in this class.

Grading: Homework, 50% (bi-weekly homework); Midterm Project, 25%; Final Exam, 25%. Midterm project is a take-home data analysis report. Topic, requirements and writing instructions will be given in the class. Final is a comprehensive exam given in class.

A+ 95%-100%

A 85%-94%

B 75%-84%

C 65%-74%

D 55%-64%

E Below 55