Math420: Experimental Design
Spring 2012

Instructor: Dr. Nan LIN
Office: Room 205, Cupples I
Email: nlin@math.wustl.edu

Time and location: 11am-12pm (Mon, Wed and Fri), Lopata Hall 201
Office hours: 3:30pm-4:30pm Wednesday

Objectives
To learn how to design an experimental study, carry out an appropriate statistical analysis of the data, and properly interpret and communicate the analyses.

Scope
Simple comparative experiments, randomized block designs, Latin squares designs, full and fractional factorial designs, nested and split-plot design, and response surface methods.

Prerequisite
Math3200 or equivalent.

Course materials and Computing
ISBN 0470128666


Class web page: All homework assignments, handouts, and other information will be available on Blackboard (http://bb.wustl.edu). Please check frequently for updates.

Computing: Real statistical analysis is practical only in the context of computer statistical packages. SAS will be used for problems that require the use of a computer package. Previous familiarity with SAS is not required but preferred. You can access SAS on computers in the Computing Center in Eads Hall.

Homework, Exams and Grades
There will be three or four homework sets, an inclass midterm, and a take-home final. Grades will be based on the homework sets (50%), the midterm (20%), and the final (around 30%). Cr means D or better if you elect “Credit/No Credit.” The final letter grade is given according to the following scale.

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\begin{array}{cccc}
[85, 87] & A− & [75, 77] & B− & < 60 & Fail
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Class Policies

1. Late homework: No credit.

2. Exam conflicts: Prior permission and arrangement only.

3. Collaboration: I encourage discussion of homework in broad, conceptual terms where one student is trying to educate another without giving away the answer, but all work turned in must be your own. For example, each student must write his/her own programs in entirety.

4. Academic Integrity: All students are expected to adhere to the university’s academic integrity policy. Any student who is found to have cheated on an assignment or exam will receive a zero score for that work, regardless of the extent of the offense.

5. Note: The instructor reserves the right to make any changes he considers academically advisable. Such changes, if any, will be announced in class. Please note that it is your responsibility to attend the class and keep track of the proceedings.