MATH-4823 APPLIED EXPERIMENTAL DESIGN

Instructor  Dr. Chulmin Kim (Boyd 326)
Phone & Email  678-839-4142 ckim@westga.edu The ONLY email accepted
Lecture  TR 12.30-1.45 pm (Boyd 306)
Office hours  TR 7.30-9.00 am (Boyd 326) 9.00-9.30 am (Boyd 205) Appoints

Course Objectives

This course provides an introduction to design and analysis of planned experiments. Topics will include one and two-way designs; completely randomized designs, randomized block designs, Latin-square and factorial designs. Use of technology will be an integral part of this course.

Suggested Text

- A: Applied Linear Statistical Models, 5th Ed., by Kutner, Nachtsheim, Neter and Li
- B: Design and Analysis of Experiments, 9th Ed., by Montgomery, D.C. (Wiley)

Coverage, HW Assignments and Exams

- Week 1 (Aug 16) CI & Hypo Review I (B: Ch2)
- Week 2 (Aug 21 & Aug 23) CI & Hypo Review II (B: Ch2) & Minitab
- Week 3 (Aug 28 & Aug 30) Inference I (B: Ch2)
- Week 4 (Sep 4 & Sep 6) Inference II (B: Ch2)
- Week 5 (Sep 11) HW1 (Sep 13) EX1
- Week 6 (Sep 18 & Sep 20) Single Factor Studies I (A: Ch16, B: Ch3)
- Week 7 (Sep 25 & Sep 27) Single Factor Studies II (A: Ch16, B: Ch3)
- Week 8 (Oct 2) Analysis of Factor Level Means (A: Ch17, B: Ch3) (Oct 4) No class
- Week 9 (Oct 9 & Oct 11) Two Factor Studies I (A: Ch19, B: Ch3)
- Week 10 (Oct 16 & Oct 18) Two Factor Studies II (A: Ch19, B: Ch3)
- Week 11 (Oct 23) HW2 (Oct 25) EX2
- Week 12 (Oct 30 & Nov 1) Randomized Complete Block Design (A: Ch21 B: Ch4)
- Week 13 (Nov 6 & Nov 8) Random and Mixed Effects Model I (A: Ch25 B: Ch4)
- Week 14 (Nov 13 & Nov 15) Random and Mixed Effects Model II (A: Ch25 B: Ch4)
- Week 15 (Nov 20 & Nov 22) No class
- Week 16 (Nov 27) HW3 (Nov 29) EX3
- Week 17 (Dec 4 & Dec 6) Latin Square, Factorial Design (B: Ch4-5)
- Week 18 (Dec 13) 11 am-1 pm Final (comprehensive)

You can discuss HW however you have to use your own words. To fail this will result 0. Exams are open book with calculator. I expect you spend at least more than 5 hours per week.

Point allocation: HW 3x20=60, EX1=100, EX2=100, EX 3=100, F=140
You get an A if total>=450, B if total>=400, C if total>=350, D if total>=300. F, otherwise. And the deadline for the “W” is Oct 8.