

INSY 7300 Course Documentation
Prerequisite: STAT 3610, Credit Hours: 3

S. Maghsoodloo

Fall 2008 meets MWF at 1:00 PM in Ramsey 304

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Text: "Design and Analysis of Experiments" by D. C. Montgomery, 6th ed., John Wiley & Sons, INC. (ISBN: 0- 471-48735-X)

Course Objectives

1. Review of Statistical Inference (Chapter 2) Suggested Exercises: 2-1 through 2-21 Week 1
2. The One Factor Experiment (Chapter 3, The CRD) Suggested Exercises: 3-1, 3-2, 3-3, 3-4, 3-9, 3-13, 3-14, 3-17, 3-25. Week 2
3. The Randomized Block Designs (Chapter 4; omit section 4-4.3) Suggested Exercises: 4-3, 4-5, 4-6, 4-9, 4-11, 4-15, 4-16, 4-17, 4-18, 4-21. Weeks 3 & 4

Test 1 (Shelby if a room is available, else Ramsey 304, 100 Points)

4. Design of Experiments involving Multiple Factors (Chapter 5) Suggested Exercises: 5-1, 5-5, 5-7, 5-11, 5-14, 5-15, 5-17, 5-18, 5-22, 5-23. Weeks 5 & 6
5. Base-2 Factorial Designs (Chapter 6) Suggested Exercises: 6-1, 6-3, 6-5, 6-7, 6-8, 6-15, 6-16, 6-17, 6-26, 6-27. Weeks 7 & 8

Test 2 (Shelby Center if a room is available; 100 Points)

6. Block Confounding For Base-2 Designs (Chapter 7) Suggested Exercises: Suggested Exercises: 7-1, 7-3, 7-6, 7-7, 7-8, 7-9, 7-12, 7-13, 7-14, 7-15, 7-16. Week 9
7. Fractional Factorials in Base-2 Designs (Chapter 8) Suggested Exercises: 8-1, 8-3, 8-4, 8-10, 8-11, 8-14, 8-15, 8-17, 8-19,

8-20, 8-23, 8-26, 8-27.

Week 10

Test 3 (Shelby Center if a room is available; 100 Points)

8. Design of Factorial Experiments in Base-3 (Chapter 9)

Suggested Exercises: 9-1, 9-3, 9-4, 9-6, 9-7, 9-9, 9-10, 9-11, 9-19.

Week 11

9. Factorial Experiments with Random Factors (Chapter 13; omit sections 13-7.2 & 13-7.3).

Omit sections 12-7.2 and 12-7.3. Suggested Exercises: 13-1, 13-2, 13-4, 13-5, 13-6, 13-10, 13-14, 13-15, 12-21.

Weeks 12 & 13

10. Nested and Split-Plot Designs (Chapter 14)

Suggested Exercises: 14-1, 14-2, 14-3, 14-4, 14-5, 14-13, 14-14, 14-15, 14-16, 14-19, 14-20, 14-22.

Weeks 15 & 16

Final Exam (Wednesday December 10, 2008, 12:00 noon –2:30 PM, 150 Points)

Grading policy:

Assignments:	Roughly	18.2%
Tests :		54.5%
Final Exam:	Roughly	27.3%

Grading Scale: D = [60.5, 70.5%), C = [70.5, 80.5), B = [80.5, 90.5), A = [90.5, 100%].

For the off-campus students, the best times to call the instructor are MWF within the interval 11:00 am to 12:30 am. All students are strongly encouraged to study the text very carefully and intensely. Some chapters have minor errors in them but that should not detract from learning a lot from a very good text.

All students are strongly encouraged to have at least the student-version of Minitab. My preference, if you can afford it, is to buy the professional version (Release 15 at <http://www.minitab.com>). For all your home-works, it is best to check your answers via Minitab before submitting.