

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Dhahran, Saudi Arabia

MATH 560: APPLIED REGRESSION AND EXPERIMENTAL DESIGN

Instructor: Muhammad Riaz, Room: 5-332, Phone: 860 7622,

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Office Hours: UT. 10:00 am – 12:00 noon, or by appointment

Text: Montgomery, D.C. (2012). Design and Analysis of Experiments. 8th edition, Wiley, New York.

Aim: Preparing students to design experiments, and to use statistical techniques therein that help make objective decisions in the face of uncertainty.

Assessment:

Activity	Weight
<i>Class Work (including Attendance, Class Responses, Home works and Quizzes)</i>	15%
<i>Mid Term Exam (8th Week)</i>	30%
<i>Project</i>	15%
<i>Final Exam (Comprehensive)</i>	40%

Syllabus:

Week	Topic	Chapter
1	Designs of Experiments + Basic Statistical Methods	1 2
2	Designs of Experiments + Basic Statistical Methods	1&2
3	Analysis of Variance	3
4-5	Experiments with blocking Factors	4
6	Factorial Experiments	5
7-8	Two Level Factorial Designs	6
9	Blocking and Confounding for Two Level Factorial Designs	7
10	Two level Fractional Factorial Designs	8
11-12	Other Topics on Experimental Designs	9
13-14	Regression Modeling	10
15	Random Effects Model	10
16	Projects Discussions	