

King Fahd University of Petroleum and Minerals.
 Department of Mathematics & Statistics
 Syllabus of Math 131 (Finite Mathematics)
 (Semester: 092: February 20, 2010 – June 23, 2010)
Coordinator: Dr. Raja Mohammad Latif

Instructor:

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Office Hours:

Textbook: *Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences*, by Ernest F. Haeussler, Jr., Richard S. Paul, & Richard J. Wood, 12th Ed. (2008).

(Supplementary Notes: *Mathematics with Applications*, by Margaret L. Lial, Thomas W.

Hungerford, and John P. Holcomb, Jr., Addison Wesley, Ninth Edition, 2007).

MATH 131 Finite Mathematics (3-0-3)

Description: Linear equations and inequalities. Systems of linear equations. Basic material on matrices. Elementary introduction to linear programming. Counting techniques. Permutations and combinations. Probability for finite sample space. Basic concepts in statistics. Topics in the mathematics of finance.

Prerequisite: One year preparatory mathematics or its equivalent

Week	Dates	Section	Material	Homework
1	Feb. 20 –	1.1	Applications of Equations	4,12,16,20,25,28,33,36,40,43
	Feb. 24,	1.3	Applications of Inequalities	1, 2, 3, 4, 5, 6, 7, 9, 10, 12
	2010	3.1	Lines (Review)	12,32,58, 64, 66, 67, 69,71,72
2	Feb. 27 –	3.2	Applications and Linear Functions	16,17,18, 20, 24, 25, 26, 27,31
	March 03,	3.3	Quadratic Functions	27,29,30,31,32,34,36,37,39,40
	2010	3.4	Systems of Linear Equations	26,28,29,30,34,37,38,39,40,41
3	March 06 –	3.5	Nonlinear Systems	4, 6, 7, 9, 11,12, 13, 14, 15, 16
	March 10,2010	3.6	Applications of Systems of Eqns.	7,8,15,16,17,18,19,20,21,22,25
4	March 13 –	7.1	Linear Inequalities in Two Var.	16,18, 20,21, 22, 24, 27,28, 29
	March 17,	7.2	Linear Programming	4, 10, 13, 14, 15, 16, 17, 18,19
	2010	7.3	Multiple Optimum Solutions	1, 2, 3, 4
5	March 20 –	6.4	Reduction in Matrix Algebra	17,23,25,27,28,29,30,31,32,33
	March 24,	6.5	Reduction in Matrix Algebra	2, 4,6,8,9,10, 12, 19, 21,23, 24
	2010	7.4	The Simplex Method	5, 8,12,13,14,15,16,17, 18, 19
E1	March 28,2010	Sunday	Exam I:8:00 – 10:00 PM. B-54	Material(Chs:1,3 & 7)1.1 – 7.3

6	March 27 – March 31, 2010	7.8 5.1 5.2	The dual (^ Exclude Example 3) Compound Interest Present Value	3,4,5, 6,7,8, 9,10,13,14,15,17 8,10,11,13,18,19,21,23,24,25,26 8,10,11,14,16,17,18,19,21,22,24
7	April 03 – April 07, 2010	5.3 5.4	Interest Compounded Continuously Annuities	3,7,9,10,12,14,15,16,18,19, 20 15,17,22,24,26,27,28,29,30,34
8	April 10 – April 14, 2010	8.1 8.1	Basic Counting Principle & Perm. Basic Count.Princ.&Permutations	3 ,4, 6,7, 8,10,19,22,25, 26,27, 28,29,30,32,35,36,37,38,40,42
M V	April 17 – April 21, 2010	Midterm Break	MIDTERM VACATION April 14, 2010: Last day of calsses	Saturday, April 24, 2010: Calsses Resume after Vacation
9	April 24 – April 28, 2010	8.2 8.2 8.3	Comb. and Other Count.Principles Comb. and Other Count. Principles Sample Spaces and Events	10,11,14,15,18,20,23,24,25,26 27,28,29,30,31,32,33,34,37,38 3,6,9,14,22,26,27, 28,29,31,32
E2	May 02, 2010	Sunday	Exam II:8:15 – 10:15 PM. B-54	Material(Ch:5,6,7&8)6.4 – 8.2
10	May 01 – May 05, 2010	8.4 8.4 8.5	Probability Probability (Cntd.) Conditional Probability	4, 6, 10, 12, 15, 16, 18, 19, 21, 23, 24, 26,27,29,31, 32, 33, 34 2,9,11,12,13,14,16,17,23,24, 26,
11	May 08 – May 12, 2010	8.5 8.6 8.6	Conditional Probability (Cntd.) Independent Events Independent Events	36,37,39,40,41,42,44,48, 49,50,51 2, 4, 7, 8,9,13,14,20,23, 24,25, 27, 28,29,30,31, 32, 33, 35, 36
12	May 15 – May 19, 2010	9.1 9.2	Dis. Rand. Var. & Exp. Value The Binomial Distribution	3,4,5,6,9,11,12,13,15,16,18,20 4, 5, 11, 12, 13, 16, 17, 19,
13	May 22 – May 26, 2010	9.2 16.2	The Binomial Distribution (Cntd.) The Normal Distribution	20, 21, 22, 23, 24, 25, 26 2,10,14,16,17,18,19,20,21,22
14	May 29 – June 02, 2010	Sup. 10.1 Sup. 10.1	(P.571 – 586) Frequency Distributions; Measures of Central Tendency	1, 3, 5, 6, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 31, 35,37,39,41
15	June 05 – June 09, 2010	Sup. 10.2	Measures of Variation, P.586 – 595. REVIEW & CATCH UP	5,8,10,12,13,23,24,25,26,27,33 Comprehensive Review

Important Dates and Academic Calender : <http://regweb.kfupm.edu.sa/cal/cal092.htm>

KFUPM policy regarding attendance/DN grade will be strictly enforced for implementation.

Major Exam I : 22 % (Ch.: 1.1 ,1.3, Ch.: 3.1 – 3.6, Ch.: 7.1 – 7.3.); Sunday, March 28, 2010.

Major Exam II: 22 % (Ch.:7.4, 7.8, Ch.:6.4 – 6.5, Ch.:5.1 – 5.4, Ch.:8.1 – 8.2); Sunday, May 02, 2010. Class Work (20 %): Class Tests/Quizzes: 15 %; Home Work & Attendance, etc.: 05 %

Final Exam : 36 % (Comprehensive) Saturday, June 12, 2010. (Time: 07:30 A.M.–10:30 A.M.).