

King Fahd University of Petroleum and Minerals.
 Department of Mathematics & Statistics
 Syllabus of Math 131 (Finite Mathematics)
 (Semester: 122)
Coordinator: Dr. Nasser-eddine Tatar

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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.

Week	Dates	Section	Material	Homework
1	January 26-30	1.1	Applications of Equations	4,12,16,20,25,28,33,36,40,43
		1.3	Applications of Inequalities	1, 2, 3, 4, 5, 6, 7, 9, 10, 12
		3.1	Lines (Review)	12,32,58, 64, 66, 67, 69,71,72
2	February 02-06	3.2	Applications and Linear Functions	16,17,18, 20, 24, 25, 26, 27,31
		3.3	Quadratic Functions	27,29,30,31,32,34,36,37,39,40
		3.4	Systems of Linear Equations	26,28,29,30,34,37,38,39,40,41
3	February 09-13	3.5	Nonlinear Systems	4, 6, 7, 9, 11,12, 13, 14, 15, 16
		3.6	Applications of Systems of Eqns.	7,8,15,16,17,18,19,20,21,22,25
4	February 16-20	7.1	Linear Inequalities in Two Var.	16,18, 20,21, 22, 24, 27,28, 29
		7.2	Linear Programming	4, 10, 13, 14, 15, 16, 17, 18,19
		7.3	Multiple Optimum Solutions	1, 2, 3, 4
5	February 23-27	6.4	Reduction in Matrix Algebra	17,23,25,27,28,29,30,31,32,33
		6.5	Reduction in Matrix Algebra	2, 4,6,8,9,10, 12, 19, 21,23, 24
		7.4	The Simplex Method	5, 8,12,13,14,15,16,17, 18, 19
E1		Sunday	Exam I:	Material(Chs:1,3 & 7)1.1 – 7.3
	March 02-06	7.8	The dual (^ Exclude Example 3)	3,4,5, 6,7,8, 9,10,13,14,15,17

6		5.1	Compound Interest	8,10,11,13,18,19,21,23,24,25,26
		5.2	Present Value	8,10,11,14,16,17,18,19,21,22,24
7	March 09-13	5.3	Interest Compounded Continuously	3,7,9,10,12,14,15,16,18,19, 20
		5.4	Annuities	15,17,22,24,26,27,28,29,30,34
8	March 16-20	8.1	Basic Counting Principle & Perm.	3 ,4, 6,7, 8,10,19,22,25, 26,27,
		8.1	Basic Count.Princ.&Permutations	28,29,30,32,35,36,37,38,40,42
M V	March 21-29	Midterm Break	MIDTERM VACATION March 20, 2013: Last day of classes	Saturday, April 23, 2013: Classes Resume after Vacation
9	Mar 30-Apr 03	8.2	Comb. and Other Count.Principles	10,11,14,15,18,20,23,24,25,26
		8.2	Comb. and Other Count. Principles	27,28,29,30,31,32,33,34,37,38
		8.3	Sample Spaces and Events	3,6,9,14,22,26,27, 28,29,31,32
E2			Exam II:	Material(Ch:5,6,7&8)6.4 – 8.1
10	Apr 06-10	8.4	Probability	4, 6, 10, 12, 15, 16, 18, 19, 21,
		8.4	Probability (Cntd.)	23, 24, 26,27,29,31, 32, 33, 34
		8.5	Conditional Probability	2,9,11,12,13,14,16,17,23,24, 26,
11	Apr 13-17	8.5	Conditional Probability (Cntd.)	36,37,39,40,41,42,44,48, 49,50,51
		8.6	Independent Events	2, 4, 7, 8,9,13,14,20,23, 24,25,
		8.6	Independent Events	27, 28,29,30,31, 32, 33, 35, 36
12	Apr 20-24	9.1	Dis. Rand. Var. & Exp. Value	3,4,5,6,9,11,12,13,15,16,18,20
		9.2	The Binomial Distribution	4, 5, 11, 12, 13, 16, 17, 19,
13	Apr-27-May 01	9.2	The Binomial Distribution (Cntd.)	20, 21, 22, 23, 24, 25, 26
		16.2	The Normal Distribution	2,10,14,16,17,18,19,20,21,22
14	May 04-08	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	May 11-15	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 Calendar : <http://regweb.kfupm.edu.sa/cal/cal122.htm>

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

Major Exam I : 25 % (Ch.: 1.1 ,1.3, Ch.: 3.1 – 3.6, Ch.: 7.1 – 7.3.);

Major Exam II: 25 % (Ch.:7.4, 7.8, Ch.:6.4 – 6.5, Ch.:5.1 – 5.4, Ch.:8.1);

Class Work (20 %): Class Tests/Quizzes: 10 %; Home Work & Attendance, etc.: 10 %

Final Exam : 30 % (Comprehensive) Sunday, May 26, 2013. (Time: 07:00 P.M.–10:00 P.M.).