

KFUPM - Department of Mathematics & Statistics
Math 131 Finite Mathematics (111)

General Information:

Coordinator: Dr. Stephen Binns

Instructor:

Dr Ahmet Emin Tatar

Office: 5-322

atatar@kfupm.edu.sa.

Office Phone: 7631

Office Hours: SMW 9:30am-11:00am

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

Supplementary Notes: Mathematics with Applications, by Lial & Hungerford, 7th Edition.

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.

Evaluation:

Quizzes/Homework & Attendance: 10%

Major Exam I: 25%

Time: 11/10/2011 6pm-8pm

Place: Bldg 54

Material: Up to and including Ch 7.3

Major Exam II: 25%

Time: 22/11/2011 6pm-8pm

Place: Bldg 54

Material: From Ch 6.4 up to and including Ch 8.3

Final Exam: 40%

Time: TBA

Place: TBA

Material: Comprehensive

SYLLABUS

Week	Date	Section	Topic	Homework
1	Sept 10-14	1.1	Applications of Equations	4, 12, 16, 20, 25, 28, 33, 36, 43
		1.3	Applications of Inequalities	1, 2, 4, 5, 6, 7, 9, 10, 12
		3.1	Lines (review)	12, 32, 58, 64, 66, 67, 69, 71
2	Sept 17-21	3.2	Applications and Linear Functions	16, 17, 18, 20, 24, 25, 26, 31
		3.3	Quadratic Functions	27, 29, 30, 31, 34, 36, 39, 40
		3.4	Systems of Linear Equations	26, 28, 29, 34, 37, 38, 39, 41
3	Sept 26-28 National Day	3.5	Nonlinear Systems	4, 6, 7, 9, 12, 13, 14, 15, 16
		3.6	Applications of Systems of Equations	7,8,15,16,17,18,19,20,21,25
4	Oct 1-5	7.1	Linear Inequalities in Two variables	16,18, 20,21, 22, 24, 28, 29
		7.2	Linear Programming	4, 10, 13, 14, 15, 16, 17, 18
		7.3	Multiple Optimum Solutions	1, 2, 3, 4
5	Oct 8-12	6.4	Reduction in Matrix Algebra	17, 23, 25, 27, 28, 29, 30, 31, 32
		6.5	Reduction in Matrix Algebra	4, 6, 8, 10, 12, 19, 21, 24
		7.4	The Simplex Method	5, 8, 12, 14, 16, 17, 18, 19
	Tuesday	Oct 11	First Exam	
6	Oct 15-19	7.8	The Dual (exclude Example 3)	4, 6, 10, 12, 13, 14, 15, 17
		5.1	Compound Interest	8, 10, 12, 18, 19, 23, 24, 26
		5.2	Present Value	8, 10, 11, 14, 16, 17, 18, 19, 21, 22, 24
7	Oct 22-26	5.3	Interest Compounded Continuously	5, 10, 12, 14, 16, 19, 20
		5.4	Annuities	16, 18, 22, 24, 26, 28, 29, 30
8	Oct 29- 31	8.1	Counting Principles & Permutations	4, 6, 8, 10, 19, 22, 25, 26, 28, 29, 30, 32
		8.1	Counting Principles & Permutations	35, 36, 37, 38, 40
	Nov 1-11		Id al-Adha Vacation	
9	Nov 12-16	8.2	Combinations & Counting Principles	10, 11, 14, 15, 18, 23, 25, 26
		8.2	Combinations & Counting Principles	27, 28, 29, 30, 31, 33, 34, 38
		8.3	Sample Spaces and Events	3,6,9, 14, 22, 26, 27, 28, 29, 31
10	Nov 19-23	8.4	Probability	4, 10, 16, 19, 21, 23, 24, 27, 29, 31, 32
		8.5	Conditional Probability	2, 9, 11, 12, 14, 16, 17, 23, 24
	Tuesday	Nov 22	Second Exam	
11	Nov 26-30	8.5	Conditional Probability	26,36,37, 39, 40, 42, 49, 50, 51
		8.6	Independent Events	2, 4, 7, 8, 13, 14, 20, 23, 25
		8.6	Independent Events	27, 28, 29, 31, 32, 33, 35, 36
12	Dec 3-7	9.1	Dis. Rand. Vars. & Exp. Value	3, 4,5, 6, 9, 11, 12, 13, 15,16, 18, 20
		9.2	The Binomial Distribution	4, 5, 10, 12, 13, 16, 17, 19
13	Dec 10-14	9.2	The Binomial Distribution	20, 21, 22, 23, 24, 25, 26
		16.2	The Normal Distribution	2, 10, 14, 16, 17, 18, 19, 20, 21, 22
14	Dec 17-21	11.1	Frequency Distributions (sup)	2, 4, 9, 11, 13, 15, 20, 22
		11.1	Measures of Central Tendency (sup)	23, 25, 27, 35, 37, 39, 43, 44
15	Dec 24-28	11.2	Measures of Variation (sup)	5, 8, 10, 12, 13, 24, 25, 26, 33, 36
16	Jan 2		Review	