

Syllabus of Math 131 Finite Mathematics(3-0-3)

(Semester: 102: February 12, 2011 – June 15, 2011) Coordinator: Dr. Suliman Al-Homidan

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. (2008).

(Supplementary notes: Mathematics with Applications, by Lial & Hungerford, 7th Edition, 1999).

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. 12 – Feb. 16	1.1 1.3 3.1	Applications of Equations Applications of Inequalities Lines (Review)	4,12,16,20,25,28,33,36,43 1, 2, 4, 5, 6, 7, 9, 10, 12 12, 32, 58, 64, 66, 67, 69, 71
2	Feb. 19 – Feb. 23	3.2 3.3 3.4	Applications and Linear Functions Quadratic Functions Systems of Linear Equations	16, 17, 18, 20, 24, 25, 26, 31 27, 29, 30, 31, 34, 36, 39, 40 26, 28, 29, 34, 37, 38, 39, 41
3	Oct. 26 – March 2	3.5 3.6	Nonlinear Systems Applications of Systems of Equations	4, 6, 7, 9, 12, 13, 14, 15, 16 7,8,15,16,17,18,19,20,21,25
4	March 5 – March 9	7.1 7.2 7.3	Linear Inequalities in Two Variables Linear Programming Multiple Optimum Solutions	16,18, 20,21, 22, 24, 28, 29 4, 10, 13, 14, 15, 16, 17, 18 1, 2, 3, 4
5	March 12 – March 16	6.4 6.5 7.4	Reduction in Matrix Algebra Reduction in Matrix Algebra The Simplex Method	17,23,25,27,28,29,30,31,32 4, 6, 8, 10, 12, 19, 21, 24 5, 8, 12, 14, 16, 17, 18, 19
6	March 19 – March 23	7.8 5.1 5.2	The dual (^ Exclude Example 3) Compound Interest Present Value	4, 6, 10, 12, 13, 14, 15, 17 8, 10, 12, 18, 19, 23. 24, 26 8,10,11,14,16,17,18,19,21,22,24
7	March 26 – March 30	5.3 5.4	Interest Compounded Continuously Annuities Major Exam I 26/03/2011	5, 10, 12, 14, 16, 19, 20 16, 18, 22, 24, 26, 28, 29, 30
8	April 2 – April 6	8.1 8.1	Basic Counting Principle & Permutations Basic Counting Principle & Permutations	6,4, 6, 8, 10, 19, 22, 25, 26, 28,29, 30, 32, 35, 36, 37, 38, 40
April 9 – April 13			Midterm Vacation	
9	April 16 – April 20	8.2 8.2 8.3	Combinations and Other Count. Principles Combinations and Other Count. Principles Sample Spaces and Events	10, 11, 14, 15, 18, 23, 25, 26 27, 28, 29, 30, 31, 33, 34, 38 3,6,9, 14, 22, 26, 27, 28,29,31
10	April 23 – April 27	8.4 8.5	Probability Conditional Probability	4,10,16,19,21,23,24,27,29,31,32 2, 9, 11, 12, 14, 16, 17, 23, 24,
11	April 30 – May 4	8.5 8.6 8.6	Conditional Probability (Cntd.) Independent Events Independent Events	26,36,37, 39, 40, 42, 49, 50, 51 2, 4, 7, 8, 13, 14, 20, 23, 25, 27, 28, 29, 31, 32, 33, 35, 36
12	May 7 – May 11	9.1 9.2	Dis. Rand. Var. & Exp. Value The Binomial Distribution Major Exam II 8/05/2011	3,4,5,6,9,11,12,13,15,16,18,20 4, 5, 10, 12, 13, 16, 17, 19,
13	May 14 – May 18	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 21 – May 25	Sup. 11.1 Sup. 11.1	(P.506-516) Frequency Distributions; Measures of Central Tendency	2, 4, 9, 11, 13, 15, 20, 22, 23, 25, 27, 35, 37, 39, 43, 44
15	May 28 – June 1	Sup. 11.2	Measures of Variation (P.516-525). REVIEW & CATCH UP	5, 8, 10, 12, 13, 24, 25, 26, 33, 36.

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

Major Exam I 26/03/2011: 22 % (Ch.: 1.1, 1.3, Ch.: 3.1 – 3.6, Ch.: 7.1 – 7.3,6.4,6.5,7.4,7.8); **A common multiple choice exam**

Major Exam II 8/05/2011: 22% (Ch.:6.4 – 6.5, Ch.:7.4, 7.8, Ch.:5.1 – 5.4, Ch.:8.1 – 8.4); **A common written exam**

Class Tests/Quizzes/ Home Work & Attendance, etc. 20 %,

Final Exam: 36% (Comprehensive) June 7, 2011 (Time: 07:30 A.M.–10:30 A.M.) **A common multiple choice exam**