

King Fahd University of Petroleum & Minerals
 Department of Mathematical Sciences
 Math 131 Syllabus (162)
 (Instructor: Dr. Rajai Alassar, 5-311)
<http://faculty.kfupm.edu.sa/math/alassar/>)

Course Descriptions: 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 mathematics of finance.

Textbook: Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences, by Ernest F. Haeussler, Jr. Richard S. Paul, & R. J. Wood, 13th Ed. (2014).

Week	Date	Sec.	Material	HW
1	Feb 05-09	1.1 1.3 3.1	Applications of Equations Applications of Inequalities Lines (Review)	4,12,16,20, 28, 33, 36, 43 2, 4, 6, 7, 9, 10, 12 12, 32, 58, 64, 69, 71
2	Feb 12-16	3.2 3.3 3.4	Applications & Linear Func Quadratic Functions (Rev.) Systems of Linear Equations	16, 17, 18, 20, 24, 26, 31 27, 29, 31, 34, 36, 39, 40 26, 28, 29, 34, 37, 39, 41
3	Feb 19-23	3.5 3.6	Nonlinear Systems Applicat.of Systems of Eqns.	6, 9, 12, 14, 15, 16 8, 15, 17, 18, 19, 20, 25
4	Feb 26- March 2	6.4 6.5	Solving Systems by Reduc Solving Systems Continued	17, 23, 27, 29, 30, 31, 32 6, 8, 10, 12, 19, 21, 24
5	March 05-09	7.1 7.2	Linear Inequalit. in Two Var. Linear Programming	16, 18, 20, 22, 24, 28, 29 10, 13, 14, 15, 16, 17, 18
6	March 12-16	7.3 7.4	Multiple Optimum Solutions The Simplex Method	1, 2, 3, 4 5, 8, 12, 16, 17, 18, 19
7	March 19- 23	7.8 5.1	The dual(Exclude Example 3) Compound Interest	4, 10, 12, 13, 14, 15, 17 8,10, 12, 18, 19, 23. 24, 26
8	March 26-30	5.2 5.3	Present Value Interest Compound. Contin.	4, 8, 10, 11, 14, 16, 21 5, 10, 12, 14, 16, 19, 20
April 2-6, Midterm Break				
9	April 9- 13	5.4 8.1	Annuities Basic Counting Principle	16, 18, 22, 24, 26, 28, 29 6, 8, 10, 22, 25, 26, 29, 32, 35, 36, 38, 40
10	April 16-20	8.2 8.3	Comb and Other Count Prin. Sample Spaces and Events	10,14, 18, 23, 25,26, 30,33, 38 3, 6, 3, 6,9,14,22,26,28,29
11	April 23- 27	8.4 8.5	Probability Conditional Probability	4,10,16,19,21,23,24,27, 31 2, 9, 12, 14, 16,17, 23, 24, 26, 36, 37, 39, 41, 49, 51
12	April 30- May 4	8.6 Suppl.	Independent Event Frequency Distribution	2,7,13,20,23,25,27,29,31,35,36 2, 4, 9, 11, 13, 15, 20, 22
13	May 7-11	Suppl.	Measurs of Central Tendency Measurs of Variations	23, 25, 27, 35, 37, 39, 43, 44 5, 8, 10,12,13,24, 25, 26,33,36
14	May 14- 18	9.1 9.2	Discr. Rand Var.& Exp.Value The Binomial Distribution.	3, 4, 5, 9, 11, 15, 16, 18, 20 4, 5, 10, 12, 17, 19, 20, 23, 25, 26
15	May 21- 25	16.2	The Normal Distribution	2, 10, 14, 17, 19, 20, 21

Exams I, II, and III 64%

Classwork 6%

Final Exam 30%

Important Dates and Academic Calendar: <http://regweb.kfupm.edu.sa>, KFUPM Attendance Policy will be enforced.