KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
DEPARTMENT OF MATHEMATICS & STATISTICS
(Term 161)
Math 131: FINITE MATHEMATICS

Instructor: Prof. Bilal Chanane
Office: Building 5, Room 4 31 Phone: 2741 **Email**: chanane@kfupm.edu.sa
Office Hours: UTR 12:15 pm 13:30 pm in Room 225 and by Appointment

Textbook: E. Haeussler, R. Paul, & R. Wood, *Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences* (13 Ed.), Pearson, 2014.

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.
Assessment for this course is described in the following table

Activity	**Weight**
5 quizzes	10%
First Major Exam	25%
Second Major Exam	25%
Final Exam (Comprehensive)	35%
Paper based and Online HW	5%

Grade Assignment

Score	87-100	80-87	75-80	70-75	65-70	60-65	55-60	50-55	50-
Grade	A+	A	B+	B	C+	C	D+	D	F

COVERAGE

Week #	Sections	Topics	Homework Problems
Week 1 (Sep 18-21)	**1.1** **1.3**	**Applications of Equations** **Applications of Inequalities**	4,12,16,20, 28, 33, 36, 43 2, 4, 6, 7, 9, 10, 12
Sep 22		National Day	
Week 2 (Sep 25-29)	**3.1** **3.2** **3.3**	**Lines (Review)** **Applications and Linear Functions** **Quadratic Functions**	12, 32, 58, 64, 69, 71. 16, 17, 18, 20, 24, 26, 31. 27, 29, 31, 34, 36, 39, 40.
Week 3 (Oct 2-6)	**3.4** **3.5** **3.6**	**Systems of Linear Equations** **Nonlinear Systems** **Applications of Systems of Equations**	26, 28, 29, 34, 37, 39, 41. 6, 9, 12, 14, 15, 16. 8, 15, 17, 18, 19, 20, 25.
Week 4 (Oct 9-13)	**6.4** **6.5**	**Solving Systems by Reductions** **Solving Systems by Reductions (continued)**	17, 23, 27, 29, 30, 31, 32. 6, 8, 10, 12, 19, 21, 24.
Week 5 (Oct 16-20)	**7.1** **7.2**	**Linear Inequalities in Two Variables** **Linear Programming**	16, 18, 20, 22, 24, 28, 29. 10, 13, 14, 15, 16, 17, 18.
Week 6 (Oct 23-27)	**7.3** **7.4**	**Multiple Optimum Solutions** **The Simplex Method**	1, 2, 3, 4. 5, 8, 12, 16, 17, 18, 19.
Week 7 (Oct 30-Nov 3)	**7.8**	**The Dual (Exclude Example 3)**	4, 10, 12, 13, 14, 15, 17.
Week 8 (Nov 6-10)	**5.1** **5.2**	**Compound Interest** **Present Value**	8, 10, 12, 18, 19, 23. 24, 26. 4, 8, 10, 11, 14, 16, 21.
Nov 13-17		Mid Term Break	
Week 9 (Nov 20-24)	**5.3** **5.4**	**Interest Compounded Continuously** **Annuities**	5, 10, 12, 14, 16, 19, 20. 16, 18, 22, 24, 26, 28, 29.
Week 10 (Nov 27-Dec 1)	**8.1** **8.2**	**Basic Counting Principle and Permutations** **Combinations and Other Counting Principles**	6, 8, 10, 22, 25, 26, 29, 32, 35, 36, 38, 40. 10, 14, 18, 23, 25, 26, 30, 33,
Week 11 (Dec 4-8)	**8.3** **8.4**	**Sample Spaces and Events** **Probability**	3, 6, 3, 6, 9, 14, 22, 26, 28, 29. 4, 10, 16, 19, 21, 23, 24, 27, 31.
Week 12 (Dec 11-15)	**8.5** **8.6**	**Conditional Probability** **Independent Events**	2, 10, 14, 17, 23, 26, 37, 41, 47. 1, 6, 20, 23, 25, 27, 31, 32, 35,
Week 13 (Dec 18-22)	**9.1** **9.2**	**Discrete Random Variables and Expected Value** **The Binomial Distribution**	2, 5, 9, 11, 15, 16, 18, 21. 4, 5, 10, 11, 17, 23, 25, 26.
Week 14 (Dec 25-29)	**16.2**	**The Normal Distribution**	2, 5, 8, 10, 14, 17, 19, 20.
Week 15 (Jan 1-5)	**Suppl. Material**	**Frequency Distributions** **Measures of Central Tendency** **Measures of Variation**	
Week 16 (Jan 8)	**Normal Thursday classes & last day of the classes for the term: Review**		
Final Exam (as posted on Registrar Website)			