KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
DEPARTMENT OF MATHEMATICS & STATISTICS

MATH 105: FINITE MATHEMATICS *(182)*

Instructor:
Office: Building: Room: **Phone:** **Email**:
Office Hours:

Check Blackboard regularly for announcements

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 based on **class activities (attendance & homework)**, ***three major exams*** and a ***comprehensive final exam***, as described in the following table:

Assessment

Activity	Weight
Class Work	5%
*First Major Exam.(***Sections: 1.1, 1.3, 3.1 - 3.6, 6.4 - 6.5***)* *Wednesday February 6, 2019*	20%
*Second Major Exam (***Sections: 5.1 - 5.4, 7.1 - 7.4, 7.8)** *Wednesday March 13, 2019*	25%
*Third Major Exam(***Sections: 8.1-8.6**)* *Wednesday April 3, 2019*	20%
Final Exam (Comprehensive) As posted on the Registrar Website	30%

Grade Assignment

Score	87 – 100	80 – 86	75 – 79	70 – 74	65 – 69	60 – 64	55 – 59	50 – 54
Grade	A+	A	B+	B	C+	C	D+	D

For ***Important Dates*** and ***Academic Calendar***, check the Registrar's site: **http://regweb.kfupm.edu.sa**

Syllabus – A rough weekly guideline

Week # (Dates)	Sections	Topics	Homework Problems
Week 1 (Jan 6 – 10)	**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.
Week 2 (Jan 13 – 17)	**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 (Jan 20 – 24)	**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 (Jan 27 – 31)	**6.4** **6.5**	**Solving Systems by Reductions** **Solving Systems by Reductions (cont.)**	17, 23, 27, 29, 30, 31, 32. 6, 8, 10, 12, 19, 21, 24.
Week 5 (Feb 3 – 7)	**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 (Feb 10 – 14)	**7.3** **7.4**	**Multiple Optimum Solutions** **The Simplex Method**	1, 2, 3, 4. 5, 8, 12, 16, 17, 19.
Week 7 (Feb 17 – 21)	**7.8**	**The Dual (Exclude Example 3)**	4, 10, 12, 13, 14, 15, 17.
Week 8 (Feb 24 – 28)	**5.1** **5.2**	**Compound Interest** **Present Value**	8, 10, 12, 18, 19, 23. 24, 26. 4, 8, 10, 11, 14, 16, 21.
Week 9 (Mar 3 – 7)	**5.3** **5.4**	**Interest Compounded Continuously** **Annuities**	5, 10, 12, 14, 16, 19, 20. 16, 18, 22, 24, 26, 28, 29.
Week 10 (Mar 10 – 14)	**8.1** **8.2**	**Basic Counting Principle and Permutations** **Combinations and Other Counting Principles**	6, 8, 10, 22, 25, 29, 32, 36, 38. 10, 14, 18, 23, 25, 26, 30, 33, 38.
Week 11 (Mar 17 – 21)	**8.3** **8.4**	**Sample Spaces and Events** **Probability**	3, 6, 9, 14, 22, 26, 28, 29. 4,10,16,19, 21, 23, 24, 27, 31.
Week 12 (Mar 24 – 28)	**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 (Mar31–Apr4)	**9.1** **9.2**	**Discrete Random Variables and Expected Value** **The Binomial Distribution**	3, 4, 5, 9, 11, 15, 16, 18, 20. 4, 5, 10, 12, 17, 19, 20, 23, 25, 26.
Week 14 (Apr 7 – 11)	**16.2**	**The Normal Distribution**	2, 10, 14, 17, 19, 20, 21.
Week 15 (Apr 14 – 18)	**Suppl. Material**	**Frequency Distributions** **Measures of Central Tendency** **Measures of Variation**	
Final Exam (Comprehensive): As posted on the Registrar Website			