King Fahd University of Petroleum & Minerals
Department of Mathematics and Statistics

Math 105 – Finite Mathematics (Term 183)

SYLLABUS AND POLICY

Textbook: Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences, by Ernest F. Haeussler, Richard S. Paul, and Richard J. Wood, 13th Edition, Pearson.

Week	Date	Sec	Material	Selected Problems
1	09/6 – 13/6	1.1 1.3 3.1 3.2 3.3	Applications of Equations Applications of Inequalities Lines (Review) Applications and Linear Functions Quadratic Functions (Review)	1,4,12,16,20,25,33,36,43 1,2,4,5,6,7,9,10,11,12 12,14,32,56,58,64,66,67,69,71,72 16,17,18,20,24,25,26,31 18,25,26,27,28,2930,31,33, 34,36,39,40
2	16/6 – 20/6	3.4 3.5 3.6 7.1 7.2	Systems of Linear Equations Nonlinear Systems Applications of Systems of Eqns. Linear Inequalities in Two Var. Linear Programming	10,16,25,26,28,29,34,37,38,39,41 4,6,7,9,10,12,13,14,15,16 5,7,8,15,16,17,18,19,20,21,25 2,4,10,16,18,20,21,22,24,28,29 3,4,6,10,12,13,14,15,16,17,18
3	23/6 – 27/6	7.3 6.4 6.5 7.4 7.8	Multiple Optimum Solutions Solving Systems by Reduction Solving Systems by Reduction The Simplex Method The dual (Example 3 excluded)	1,2,3,4 17,23,25,27,28,29,30,31,32 4,6,8,10,12,19,21,22,24 4,5,8,12,14,16,17,18,19 4,6,9,10,12,13,14,15,17
4	30/6 – 04/7	5.1 5.2 5.3 5.4	Compound Interest Present Value Interest Compounded Continuously Annuities	2,8,10,12,18,19,20,23,24,26 2,4,6,8,10,11,14,16,17,18,19,21,22,24 2,5,6,10,12,14,16,19,20 8,10,14,16,18,20,23,24,25
Exam 1: Wednesday, July 03 at 7:30 p.m. Building 57 – Room 06 (1.1 → 7.8)				
5	07/7 – 11/7	8.1 8.2 8.3	Basic Counting Principle and Perm. Combinations. Other Count. Princip. Sample Spaces and Events	4,6,8,10,14,20,21,22,23,29,30,31,32,,36,,39,41 2,5,10,11,14,15,17,18,23,27,28,30,31,33,34,35 2,3,6,7,8,9,14,22,26,27,28,29,30
6	14/7 – 18/7	8.4 8.5 8.6	Probability Cond. Prob. and Stoc. Proc. Independent Event	4,10,16,18,19,21,23,24,27,29,31,32 2,9,11,12,14,16,17,23,24,26,36,37,38,39,49,51 2,4,7,8,13,14,15,20,23,25,27,28,29,31,32,35,36
7	21/7 –25/7	11.1 11.2 9.1	Freq. Dist. Measures (Suppl. Notes) Meas. of Variations (Suppl. Notes) Discrete Rand. Var. and Exp. Value	1,2,4,9,11,13,15,20,22,23,25,35,36,37,39,43,45 2,5,7,8,10,12,13,24,26,33,36 3,4,5,6,9,11,12,13,15,16,18,20
Exam 2: Wednesday, July 24 at 7:30 p.m. Building 57 – Room 06 (5.1 → 8.6)				
8	28/7 – 29/7	9.2 16.2	The Binomial Distribution The Normal Distribution	4,5,10,12,13,15,16,17,19,20,21,22,23,24,25,26 2,8,9,10,14,16,17,18,19,20,21,22
Final Exam: Tuesday, July 30 at 7:00 p.m. – Location: tba (Comprehensive)				

Learning Outcomes:

Upon completion of this course, students should be able to

- Formulate and solve business related problems using equations and inequalities.
- Solve systems of linear equations using matrices.
- Solve linear programming problems graphically and by the simplex method.
- Solve financial problems involving compound interest, present and future values, and annuities.
- Demonstrate ability to count, and use descriptive statistics and basic probability concepts.
- Recognize and apply the binomial and normal distributions and their applications in business.

Grading Policy:

Class Work : 15% (60 points) | Essay type | The section average (out of 60) will be in the interval [42, 45]
Common Exam 1 : 25% (100 points) | Essay type | 90 minutes
Common Exam 2 : 25% (100 points) | Essay type | 90 minutes
Common Final : 35% (140 points) | MCQ type | 150 minutes

Passing Grade:

No student will pass this course if he collects an overall total of less than 200 (out of 400).

Upgrade Policy:

The upgrade policy is applied when 4 points out of 400 are needed to get the next higher grade. For instance, the passing grade (D) starts at 200/400. If a student gets 199/400 or 198/400, then his grade will be automatically upgraded to D. However, if he gets 197/400 or 196/400, his grade will be upgraded to D if his final exam score is greater than or equal to 200/400 (i.e., 70/140).

Exam Questions:

The questions of the common exams are based on the examples and exercises handled in class, homework, and similar exercises from the textbook.

Missing Exam 1 or Exam 2:

No makeup exam will be given, for Exam 1 or Exam 2, under any circumstance. When a student misses Exam 1 or Exam 2 for a legitimate reason (such as medical emergency), his grade for this exam will be determined based on an existing formula, which depends on his performance in the non-missed exam and the final exam.

Missing the Final Exam:

If a student misses the final exam for a legitimate reason (such as medical emergency), he will be given a make-up final exam.

Attendance:

Attendance is a University requirement. A DN grade will be awarded to any student who accumulates 9 unexcused absences.

Academic Integrity:

All KFUPM policies regarding ethics apply to this course.

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