Course Code and Name: Math 105, Finite Mathematics

Course Credit Hours: 3-0-3

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

Learning outcomes: Upon completion of this course, students should be able to

1. Formulate and solve business related problems using equations and inequalities.
2. Solve system of linear equations using matrices.
3. Solve linear programing problems graphically and by the simplex method.
4. Solve financial problems involving compound interest, present and future values, and annuities.
5. Demonstrate ability to count and use descriptive statistics and basic probability concepts.
6. Recognize the Binomial and Normal distributions and their applications in business.
7. Apply the Binomial and Normal distributions and their applications in business.

Grading Policy:

	Date	Time	Place	Materials	Percentage
Exam I (20 MCQs)	TBA	TBA	TBA	1.1- 7.2	25% (100 pts)
Exam II (20 MCQs)	TBA	TBA	TBA	7.3 – 8.2	25% (100 pts)
Final Exam (28 MCQs)	TBA	TBA	TBA	Comprehensive	35% (140 pts)
Homework					5% (20 pts)
Class Work	▪ It is based on quizzes, class tests or other class activities determined by the instructor. ▪ Any quiz or test should be of a written type and not of a multiple- choice type. ▪ The average (out of 40) of the class work of each section should be in the interval [28, 30].				10% (40 pts)

Letter Grades: The letter grades will follow a grading curve, which depends on the average of all students in the course.

Exam Policy:
➢ Student is not allowed to enter the exam hall without either KFUPM ID or Saudi/Iqama ID.
➢ Students are not allowed to carry **mobile phones and smart watches** to the exam halls.

Exam Questions: The questions of the exams are based on the examples, homework problems, and exercises in the textbook.

Cheating in Exams: Cheating or any attempt of cheating by use of illegal activities, techniques and forms of fraud will result in a grade of **DN** in the course along with reporting the incident to the higher university administration. Cheating in exams includes (but is not limited to)
➢ Looking at the papers of other students
➢ Talking to other students

➤ Using mobiles or any other electronic devices **including Smart Watch**

Missing an Exam: In case a student misses an exam (Exam I, Exam II, or the Final Exam) for a legitimate reason (such as medical emergencies), she/he must bring an official excuse from Students Affairs. Otherwise, she/he will get zero in the missed exam.

Attendance: Students are expected to attend all lecture and recitation classes.

➤ If a student misses a class, she/he is responsible for any announcement made in that class.
➤ A DN grade will be awarded to the eligible student after their instructors have warned them twice and who accumulates
  ○ 9 unexcused absences in lecture classes.
  ○ 15 excused and unexcused absences in lecture classes.

The Usage of Mobiles in Class: Students are not allowed to use mobiles for any purpose during class time. Students who want to use electronic devices to take notes must take permission from their instructor. Violations of these rules will result in a penalty decided by the instructor.

Academic Integrity: All KFUPM policies regarding ethics apply to this course. See the Undergraduate Bulletin on the Webpage of the Registrar.

Tips on How to Enhance Your Problem-Solving Skills:
❖ Make sure you understand the concepts and techniques of each section.
❖ Take notes during classes and study your notes, textbook, and, if available, lecture slides before your next class.
❖ Review the lecture to consolidate your learning and locate any missed points.
❖ Try always to solve the problems on your own first before reading the solution or asking for help.
❖ If you find it difficult to solve a certain type of problems, you should try more problems of that type.
❖ Try to make good use of the office hours of your instructor.
❖ Solve old exams as part of your preparation for the major exams and Final Exams.
❖ Last, but not least, consult your instructor whenever you feel you need help understanding a concept or solving a problem

Syllabus – A rough weekly guideline

Week #	Date	Section	Material	Suggested Problems
1	Jan.15	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.
2	Jan. 22	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.
3	Jan. 29	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.
4	Feb. 05	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.
5	Feb. 12	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.
6	Feb. 19	7.3 7.4	Multiple Optimum Solutions The Simplex Method	1, 2, 3, 4. 5, 8, 12, 16, 17, 19.
Saudi Founding Day (February 22 & 23, 2023)				
7	Feb. 26	7.8	The Dual (Exclude Example 3)	4, 10, 12, 13, 14, 15, 17.
8	Mar. 05	5.1 5.2	Compound Interest Present Value	8, 10, 12, 18, 19, 23. 24, 26. 4, 8, 10, 11, 14, 16, 2
9	Mar. 12	5.3 5.4	Interest Compounded Continuously Annuities	5, 10, 12, 14, 16, 19, 20. 16, 18, 22, 24, 26, 28, 29.
10	Mar. 19	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.
11	Mar. 26	8.3 8.4	Sample Spaces and Events Probability	3, 6, 9, 14, 22, 26, 28, 4,10,16,19, 21, 23, 24, 27, 31
12	Apr. 02	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.
13	Apr. 09	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
Ramadhan break & Eid Al-Fitr Holidays (April 14-27)				
14	Apr. 30	16.2	The Normal Distribution	2, 10, 14, 17, 19, 20, 21.
15	May 07	Suppl. Material	Frequency Distributions Measures of Central Tendency Measures of Variation	
16	May. 14 - 15	Review/ Catching up	Normal Thursday Class	
		Final Exam (Comprehensive): As posted on the Registrar Website		