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

Math 131 – Syllabus

2012-2013 (121)

Title: Finite Mathematics
Credit: 3-0-3
Textbook: Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences, by Ernest F. Haeussler, Jr. Richard S. Paul, & R. J. Wood, 12th Edition.
Description: Linear equations and inequalities. Systems of linear equations. Basic material on matrices. Elementary introduction to linear programming. Counting techniques. Permutations and combinations. Probability for sample space. Basic concepts in statistics.

Instructor: Prof. Bilal Chanane
Office # 5-415
Phone # 2741
Office hours:

Grading Policy:

1. Exam I: 25% (100 points), Date: Wednesday, Oct. 03, 2012
   Material: **1.1-7.3**. Place: , Time:
2. Exam II: 25% (100 points), Date: Tuesday, Nov. 20, 2012
   Material6.4- 8.3. Place: , Time:.
3. Quizzes/Homework & Attendance: 10%: 15% (60 points). It is based on quizzes (around 5 quizzes), homework, or other class activities. Any quiz or test under class activity should be of written type, not in the format of MCQ.
4. Final Exam: 35% (140 points), [comprehensive exam.] Date: To be announced (final exam week)

Class Work Average: The average (x out of 60) of the Class Work of the sections taught by the same instructor should be in the interval [36, 45].

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

Missing Exam I or Exam II: No makeup exam will be given under any circumstance. When a student misses Exam I or Exam II for a legitimate reason (such as medical emergencies), his grade for this exam will be determined based on the Department policy. Further, the student must provide an official excuse within one week of the missed exam.

Attendance: Attendance is a University Requirement (see p. 38 of the Undergraduate Bulletin 2006-2009.) 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. The students are advised to discuss their grievances/problems with course instructor in a respectful manner.

The course instructor has the right to report a student's misconduct in the class, instructor's office or at the exam site to the chairman's office. The complaint will be forwarded to the Dean of Sciences & the Dean, Student Affairs for appropriate investigation.

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Note: The pace of coverage given in the syllabus is tentative and may be adjusted by each instructor as per need.

Week	Date	Sec.	Topics (29 sections)
1	Sep. 1-5, 2012	1.1 1.3 3.1	Applications of Equations Applications of Inequalities Lines (review)
2	Sep. 8-12	3.2 3.3 3.4	Applications and Linear Functions Quadratic Functions Systems of Linear Equations
3	Sep. 15-19	3.5 3.6	Nonlinear Systems Applications of Systems of Equations
Sunday, Sep. 23, 2012: National Day (Holiday)			
4	Sep. 22-26	7.1 7.2 7.3	Linear Inequalities in Two variables Linear Programming Multiple Optimum Solutions
5	Sep. 29- Oct 3	6.4 6.5 7.4	Reduction in Matrix Algebra Reduction in Matrix Algebra The Simplex Method
Exam I: Wednesday, Oct. 03, 2012; Material: [1.1-7.3]			
6	Oct. 6-10	7.8 5.1 5.2	The Dual (exclude Example 3) Compound Interest Present Value
7	Oct. 13-17	5.3 5.4	Interest Compounded Continuously Annuities
Id al-Adha Vacation: Oct. 18-Nov. 2, 2012			
8	Nov. 3-7	8.1	Counting Principles & Permutations Counting Principles & Permutations
9	Nov. 10-14	8.2 8.3	Combinations & Counting Principles Combinations & Counting Principles Sample spaces and Events
10	Nov. 17-21	8.4 8.5	Probability Conditional Probability
Exam II: Tuesday, Nov. 20, 2012; Material: [6.4-8.3]			
11	Nov. 24-28	8.5	Conditional Probability

		8.6	Independent Events
12	Dec. 1-5	9.1 9.2	Dis. Rand. Vars. & Exp. Value The Binomial Distribution
13	Dec. 8-12	9.2 16.2	The Binomial Distribution The Normal Distribution
14	Dec. 15-19	11.1	Frequency Distributions (sup) Measures of Central Tendency (sup)
15	Dec. 22-26	11.2	Measures of Variation (sup)
16	Dec. 29 Dec. 30-31		A Normal Sunday Class **(Last day of classes)** **Final Exam Preparation Break**
Final Exam: To be announced (exam week)			

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Homework and Recitation Problems

Section	Homework Problems
1.1 1.3 3.1	4, 12, 16, 20, 25, 28, 33, 36, 43 1, 2, 4, 5, 6, 7, 9, 10, 12 , 32, 58, 64, 66, 67, 69, 71
3.2 3.3 3.4	16, 17, 18, 20, 24, 25, 26, 31 27, 29, 30, 31, 34, 36, 39, 40 26, 28, 29, 34, 37, 38, 39, 41
3.5 3.6	4, 6, 7, 9, 12, 13, 14, 15, 16 7,8,15,16,17,18,19,20,21,25
7.1 7.2 7.3	16,18, 20,21, 22, 24, 28, 29 4, 10, 13, 14, 15, 16, 17, 18
6.4 6.5 7.4	17, 23, 25, 27, 28, 29, 30, 31, 32 4, 6, 8, 10, 12, 19, 21, 24 5, 8, 12, 14, 16, 17, 18,
7.8 5.1 5.2	4, 6, 10, 12, 13, 14, 15, 17 8, 10, 12, 18, 19, 23. 24, 26 8, 10, 11, 14, 16, 17, 18, 19, 21, 22, 24
5.3 5.4	5, 10, 12, 14, 16, 19, 20 16, 18, 22, 24, 26, 28, 29, 30
8.1	4, 6, 8, 10, 19, 22, 25, 26, 28, 29, 30, 32 35, 36, 37, 38, 40
8.2 8.3	10, 11, 14, 15, 18, 23, 25, 26 27, 28, 29, 30, 31, 33, 34, 38 3,6,9, 14, 22, 26, 27,28, 29, 31
8.4 8.5	4, 10, 16, 19, 21, 23, 24, 27, 29, 31, 32 2, 9, 11, 12, 14, 16, 17, 23, 24
8.5 8.6	26,36,37, 39, 40, 42, 49, 50, 51 2, 4, 7, 8, 13, 14, 20, 23, 25 27, 28, 29, 31, 32, 33, 35, 36
9.1 9.2	3, 4,5, 6, 9, 11, 12, 13, 15,16, 18, 20 4, 5, 10, 12, 13, 16, 17, 19
9.2 16.2	20, 21, 22, 23, 24, 25, 26 2, 10, 14, 16, 17, 18, 19, 20, 21, 22
11.1	2, 4, 9, 11, 13, 15, 20, 22 23, 25, 27, 35, 37, 39, 43, 44
11.2	5, 8, 10, 12, 13, 24, 25, 26, 33, 36

Note: Students are encouraged to do Word & CAS problems which may require the use of a technology tool (e.g., graphing calculators or a computer). These problems enhance understanding of the concepts involved.

Tips on how to enhance your problem-solving abilities :

1. Please do all the homework assignments on time.
2. You are urged to practice (but not memorize) more problems than the above lists.
3. You should always try to solve a problem on your own before reading the solution or asking for help.
4. If you find it difficult to handle a certain type of problems, you should try more problems of that type.
5. You should try some problems before coming to class.
6. You are encouraged to solve some of the review problems at the end of each chapter.
7. The practice you get doing homework and reviewing the class lectures will make exam problems easier to tackle.
8. Try to make good use of the office hours of your instructor.