

Syllabus for Math 131 (Finite Mathematics)

Semester 101 (September 25, 2010 – January 31, 2011)

Coordinator: Dr. Uwe Schauz

Instructor: ...
Office: ... Phone: ... Email: ...
Office Hours: ...

Time/Location: ...

Textbook: *Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences* by E. F. Haeussler, R. S. Paul, R. J. Wood, Person International 12th Ed. (2008).

Supplementary Notes: *Mathematics with Applications* by M. L. Lial, T. W. Hungerford, J. P. Holcomb, Addison Wesley 9th Ed. (2007). (Copies will be provided on WebCT.)

Course 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 finite sample space. Basic concepts in statistics. Topics in the mathematics of finance. (Credit 3-0-3)

Prerequisites: One year preparatory mathematics or its equivalent.

Week	Date	Chapter	Material	Homework
1	Sep 25 – 29	1.1	Applications of Equations	4,16,20,28,33,36,43
		1.3	Applications of Inequalities	2,4,5,6,7,10,12
		3.1	Lines	11,30,59,64,66,69,72
2	Oct 2 – 6	3.2	Applications and Linear Functions	16,18,20,24,31
		3.3	Quadratic Functions	27,30,31,32,34,37,39,41
		3.4	Systems of Linear Equations	26,28,30,34,39,41
3	Oct 9 – 13	3.5	Nonlinear Systems	3,6,9,12,13,14,15,16
		3.6	Applications of Systems of Equations	7,8,15,17,19,20,21,25
4	Oct 16 – 20	7.1	Linear Inequalities in Two Variables	14,18,20,21,23,27,29
		7.2	Linear Programming	6,11,14,15,16,18,19
		7.3	Multiple Optimum Solutions	1,2,3,4
5	Oct 23 – 27	5.1	Compound Interest	8,10,12,18,20,21,25
		5.2	Present Value	9,11,14,17,18,21
		5.3	Interest Compounded Continuously	4,6,10
E1	Nov 2, Tuesday	Exam I	Partially Multiple Choice, 5:30 - 7:30 PM, B54	Material: up to and including 7.3

6	Oct 30 – Nov 3	5.3	Interest Compounded Continuously (Cntd.)	12,14,17,18,19
		5.4	Annuities	14,17,21,24,27,29,30,34
		8.1	Basic Counting Principle	3,4,6,7,9,10
7	Nov 6 – 10	8.1	Basic Counting Principle and Permutations	19,25,29,32,35,36,37,38,42
		8.2	Combinations and Other Counting Principles	11,14,18,20,23,25,29,30,33,37
	Nov 11 – 21	Break	EID Al-Adha Vacation	
8	Nov 22 – 24	8.3	Sample Spaces and Events	3,6,9,14,22,26,27,28,29,31,32
9	April 27 – Dec 1	8.4	Probability	6,12,15,19,21,24,26,27,32,33,34
		8.5	Conditional Probability	2,9,12,13,16,17,23,24
E2	Dec 7, Tuesday	Exam II	Partially Multiple Choice, 8:00 - 10:00 PM, B54	Material: 5.1-5.4 & 8.1-8.5
10	Dec 4 – 8	8.5	Conditional Probability (Cntd.)	36,37,39,40,41,44,49,51
		8.6	Independent Events	2,4,9,13,20,23,28,29,30,32,35
11	Dec 11 – 15	9.1	Discrete Random Variables and Expected Value	4,6,9,11,13,15,18,21
		9.2	The Binomial Distribution	3,10,12,13,16,17
12	Dec 18 – 22	9.2	The Binomial Distribution (Cntd.)	20,22,23,24,25,26
		16.2	The Normal Distribution	1,9,16,18,19,21,22
13	Dec 25 – 29	16.3	The Normal Approximation to the Binomial Distribution	3,4,6,9
		Sup. 10.1	Frequency Distributions, Measures of Central Tendency	1,12,14,17,19,22,25,28,35,37,39,43
14	Jan 1 – 5	Sup. 10.2	Measures of Variation	6,10,11,23,24,26,27,33
		6.4	Solving Systems by Reducing Matrices	18,24,27,29,31,32
		6.5	Solving Systems by Reducing Matrices (continued)	2,4,7,10,13,19,21,22
15	Jan 8 – 12	7.4	The Simplex Method	5,8,12,13,16,18,19
		7.8	The Dual (Excluding Example 3)	5,7,10,14,15
16	Jan 15		Review and Catch up	Bring the homework from week 15
F	Jan 23, Sunday	F. Exam	Multiple Choice, 7:30 - 10:30 AM, B54	Material: Comprehensive

Grading Policy:	Home Work & Attendance:	5 %
	Class Tests/Quizzes:	15 %
	Major Exam I:	22 %
	Major Exam II:	22 %
	Final Exam:	36 %

Homework: Each week do the homework in the right column and submit it during the next week. Your instructor will help you if you are facing problems!

Practicing: Redo exercises and examples, but read the solutions only after you have tried it yourself.

Old Exams/Quizzes: <http://www.kfupm.edu.sa/math> >> Teaching Resources: Course files/exams 032-Today >> MATH131

Attendance: A DN-grade will be awarded to any student who accumulates 12 unexcused absences!

Missing one of the Two Common Major Exams I or II: No makeup exam will be given under any circumstance. When a student misses Exam I or Exam II with an official excuse from the “Deanship of Student Affairs” his grade for this exam will be determined based on the existing formula which depends on his performance in the non-missing exam and in the final exam.