

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
College of Sciences, Prep-Year Math Program
SYLLABUS
MATH 002 (052)

Pre-Requisite	MATH 001
Textbook	College Algebra with Trigonometry by Aufmann/Barker/Nation, 5 th Edition, Houghton Mifflin, (2005)
Objectives	The students are expected to develop the comprehension of the course material in English, improve their computational skills and demonstrate writing ability of solutions with logical steps. An emphasis will be given to the understanding of the statement of problem and the mathematical terminology. The medium of instruction will be strictly English from the first day of classes. The course primarily aims at the development of critical thinking among the students through the mathematical concepts studied at the <u>High School level</u> . Word problems will be an important part of the course. MATH 001 will be regarded as a base of this course.

Week#	Date	Text Sections	Topic	Homework Problems
1	Feb. 12 -16	4.2	Exponential Functions and Their Applications	5,18,23,34,35,36,66
		4.3	Logarithmic Functions and Their Applications	9,16,29,31,45,48,49,55,62,68,70,79
16 February is Normal Saturday Classes				
2	Feb. 18 - 22	4.4	Logarithms and Logarithmic Scales	8,11,31,36,39,42
		4.5	Exponential and Logarithmic Equations	5,17,24,30,32,38,46
3	Feb. 25-Mar.1	5.1	Angles and Arcs	6,16,17,22,25,38,48,56,61,65,70
		5.2	Trigonometric Functions of Acute Angles	4,16,18,22,32,34,42,76
4	Mar. 4-8	5.3	Trigonometric Functions of Any Angle	4,10,20,24,27,32,36,43,46,62,66,69
		5.4	Trigonometric Functions of Real Numbers	7,22,34,43,46,48,67,70,76,90,94
First Exam: March 11, 2006 [4.2-5.4]				
5	Mar. 11-15	5.5	Graphs of the Sine and the Cosine Functions	4,14,18,41,54,58,62,78,82
6	Mar. 18-22	5.6	Graphs of the Other Trigonometric Functions	1,4,12,14,34,40,43,46,50,54,64
		5.7	Graphing Techniques	6,8,10,14,18,21,28,38,60,62,90
7	Mar. 25-29	6.1	Verification of Trigonometric Identities	4,8,12,14,20,26,30,50,52,59,76
		6.2	Sum, Difference and Co-function Identities	8,12,14,18,23,32,36,40,54,60,76
Midterm Exam: March 28, 2006 [4.2-6.2]				
Midterm break (1-2 April)				
8	Apr. 3- 5	6.3	Double and Half Angle Identities	6,14,22,24,29,44,56,62,70,82
		6.4*	Only Functions of the form $f(x) = a \sin x + b \cos x$	49,57,66,67
9	Apr. 8-12	6.5	Inverse Trigonometric Functions	4,6,22,26,40,43,50,56,58,66,74
		6.6	Trigonometric Equations	2,6,9,12,16,20,30,41,44,68,78
10	Apr. 15-19	7.3	Vectors	2,10,18,22,28,34,48,55,66
		8.1	Parabolas	10,22,27,32,34
11	Apr. 22-26	8.2	Ellipses	2,10,24,34,38,40,46,52,72
Second Exam: April 27, 2006 [6.2-8.2]				
12	Apr. 29-May 3	8.3	Hyperbolas	8,12,24,34,36,38,46,50,60,64,76
		9.1	Systems of Linear Equations in Two Variables	4,8,17,25,36,38,51,54,64,68
13	May 6-10	9.3	Nonlinear Systems of Equations	2,4,13,18,32,33,36,49,52
		10.1	Gaussian Elimination Method	2,5,16,17,28,38,42,48,56
14	May 13-17	10.2	The Algebra of Matrices	4,8,12,14,20,28,30,34
		10.3	The Inverse of a Matrix	4,7,16,22,42,44
15	May 20-24	10.4	Determinants	4,12,22,28,30,35,49,50
16	May 27-28	Review		
	May 28	Last Day of Classes		

Evaluation Policy	Exam 1(Written): 15 points	Midterm Exam (MCQ): 25 points	Exam 2(Written) : 15 points	Final Exam (Comprehensive & MCQ): 35 points
	Class Work: (quizzes, CAL Activity, Homework, Class Attendance, etc): 10 points			
CAL	The syllabus of the weekly CAL Classes is on the back of this sheet. CAL Questions may be asked in the Exams.			
Note # 1: A student will be awarded the GRADE "DN" after missing EIGHT classes without an OFFICIAL excuse. It is the responsibility of the student to keep the record of his absences. Students will have ONLY 6 days to submit their excuses to the prep-year affairs (1st warning: 3 absences; 2nd warning: 6 absences; "DN": 8 absences)				
Note # 2: To check your warnings (WEEKLY), Homework Solutions, Exam Locations, and other Math announcements, Please visit Portable 3, Math Bulletin Board (beside PR-108), or www.kfupm.edu.sa/mathprep.				
Note # 3: During the first week, exam week, and the final week, the CAL class will be Conducted as a regular class.				

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CAL Syllabus

MATH 002 (Term 052)

Textbook: College Algebra with Trigonometry by Aufmann/ Barker / Nation, 5th ed.
 Houghton Mifflin, (2005)

Sections in the Textbook	Section Exercises (in Larson's CD)	Tutorial Exercises (In Larson's CD)
4.2 Exponential Functions and Their Applications	5.1: 16,18,28,30	5.1: 4,5,8,9,10
4.3 Logarithmic Functions and Their Applications	5.2: 6,18,20,50	5.2: 1,2,6,11
4.4 Logarithms and Logarithmic Scales	5.3: 44,66,72,92	5.3: 3,5,8,10
4.5 Exponential and Logarithmic Equations	5.4: 16,18,52,64	5.4: 6,10,12
5.1 Angles and Arcs	6.1: 8,44,48,80	6.1: 1,6,15
5.2 Trigonometric Functions of Acute Angles	6.2: 2,10,48,60	6.2: 1,5,7
5.3 Trigonometric Functions of Any Angles		
5.4 Trigonometric Functions of Real Numbers	6.3: 2,12,16,40,52	6.3: 2,5,8,9,12
5.5 Graphs of the Sine and the Cosine Functions	6.4: 4,22,34,46,72	6.4: 2,5,7,9
5.6 Graphs of the Other Trigonometric Functions	6.5: 6,12,20,34	6.5: 1,3,5
5.7 Graphing Techniques	6.4: 12,52	6.4: 5,7
	6.5: 26,30	6.5: 2,4
6.1 Verification of Trigonometric Identities	7.2: 10,18,24,28,36,44	7.1: 7,9,14,16
6.2 Sum, Difference and Cofunction Identities	7.4: 2,22,26,38	7.4: 1,3,8,9
6.3 Double-and Half-Angle Identities	7.5: 6,26,40, 44,54	7.5: 5,11,12
6.5 Inverse Trigonometric Functions	6.6: 2,10,44,52,74	6.6: 2,4,5,9,12,13
6.6 Trigonometric Equations	7.3: 32,38,40	7.3: 3,5,6,9,10
	7.5: 12,16,60	7.5: 1,2
7.3 Vectors	8.3: 4,32,34,42,44,50 8.4 18,30	8.3: 1,3,5,9,11,12,13 8.4: 2,7
8.1 Parabolas	4.4: 10,24,28	4.4: 1,4
	4.5: 6,16,20	4.5: 5,7
8.2 Ellipses	4.4: 38,50	4.4: 6,8
	4.5: 34,42	4.5: 9,11
8.3 Hyperbolas	4.4: 72,82	4.4: 11,12
	4.5: 58,76	4.5: 2,14
9.1 Systems of Linear Equations in Two Variables	9.1: 12,68	9.1: 6,7
	9.2: 16,32	9.2: 1,2,7
9.3 Nonlinear Systems of Equations	9.1: 4,44	9.1: 8,10
10.1 Gaussian Elimination Method	10.1: 8,16,28,52,70	10.1: 3,5,8
10.2 The Algebra of Matrices	10.2: 4,18,28,36,44,50	10.2: 1,2,4,7
10.3 The Inverse of a Matrix	10.3: 2,16,24,38	10.3: 1,2,6,8
10.4 Determinants	10.4: 24,26,52,54,56,70	10.4: 1,4,7,10,13