

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
College of Sciences, Prep-Year Math Program
SYLLABUS
MATH 002 (042)

Pre-Requisite	MATH 001
Textbook	College Algebra with Trigonometry by Aufmann/Barker/Nation, 4 th Edition, Houghton Mifflin, (2002)
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 <u>first day of classes</u> . 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 Graph	34,35,37,40,47,82,87
		4.3	Logarithmic Functions and Their Graphs	8,14,25,36,46,48,57,74,77
2	Feb. 19-23	4.4	Properties of Logarithmic	10,14,28,49,72,78
		4.5	Exponential & Logarithmic Equations	7,20,24,32,37,42,84
3	Feb.26 - Mar.2	5.1	Angles and Arcs	6,12,16,36,47,56,61,69,84
		5.2	Trigonometric Functions of Acute Angles	4,15,22,32,40,69,70
4	Mar. 5-9	5.3	Trigonometric Functions of Any Angle	4,14,23,32,36,40,64,71,86
		5.4	Trigonometric Functions of Real Numbers	7,22,40,43,62,67,82,87,94
Exam I: Monday, March 7, 2005 [4.2-5.3]				
5	Mar.12-16	5.5	Graphs of Sine and Cosine Functions	5,16,27,36,48,54,60,62,68,82
		5.6	Graph of Other Trigonometric Functions	4,14,34,44,54,70
6	Mar.19-23	5.7	Graphing Techniques	6,16,18,28,31,50,63,88
		6.1	Verification of Trigonometric Identities	4,12,16,28,35,45,59,61,69,80
7	Mar.26-30	6.2	Sum, Difference and Co-function Identities	7,15,18,24,36,42,49,64,70,82
		6.3	Double and Half Angle Identities	
8	April 2-6	6.3	Double and Half Angle Identities	6,8,13,24,29,44,62,67,79,82
		6.4*	Only Functions of the form $f(x) = a \sin x + b \cos x$	52,54,72,80,95,102
Midterm Break				
9	April 16-20	6.5	Inverse Trigonometric Functions	3,13,22,27,29,37,51,55,65,70,73,75
		6.6	Trigonometric Equations	6,9,17,37,47,48,68,70,78
Suggested Time for Class Test				
10	April 23-27	7.3	Vectors	3,11,22,29,35,52,55,66,75
		8.1	Parabolas	12,15,24,29,32,34,54
Exam II: Sunday, May 1, 2005 [5.4, 8.1]				
11	April 30–May4	8.2	Ellipses	7,15,30,34,36,41,49,52,70
		8.3	Hyperbolas	12,24,36,42,44,46,51,66
12	May 7-11	9.1	Systems of Linear Equations in Two Variables	4,10,19,26,29,34,40,47,48,61
		9.3	Nonlinear systems of Equations	4,10,19,24,31,47,49
13	May 14-18	10.1	Gaussian Elimination Method	4,6,10,17,20,29,36,42,52,55
		10.2	The Algebra of Matrices	5,14,122,24,28,31,34,68
14	May 21-25	10.3	The Inverse of a Matrix	8,16,24,37,38
		10.4	Determinants Continued next week
15	May 28-31	10.4	Determinants	5,11,24,32,34,46,49
	June 1	Review	Last Day of Classes	

Evaluation Policy	Exam I (MCQ): 15 points	Exam II (MCQ): 20 points	Final Exam (Comprehensive & MCQ): 35 points
	Class Work: (at least 1 written CLASS TEST , at least 5 WRITTEN quizzes, CAL Activity , Homework , Class Attendance , etc): 30 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 affair. (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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College of Sciences, Prep-Year Math Program
CAL Syllabus
MATH 002 (Term 042)

Textbook: College Algebra with Trigonometry by Aufmann/ Barker / Nation, 4th ed., Houghton Mifflin, (2002).

Sections in the Textbook	Section Exercises (in Larson's CD)	Tutorial Exercises (In Larson's CD)
4.2 Exponential Functions and their Graphs	5.1: 16,18,28,30	5.1: 4,5,8,9,10
4.3 Logarithmic Functions and their Graphs	5.2: 6,18,20,50	5.2: 1,2,6,11
4.4 Properties of Logarithms	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 Sine and Cosine Functions	6.4: 4,22,34,46,72	6.4: 2,5,7,9
5.6 Graphs of other Trigonometric Functions	6.5: 6,12,20,34	6.5: 1,3,5
5.7 Graphing Techniques	6.4: 12,52 6.5: 26,30	6.4: 5,7 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 7.5: 12,16,60	7.3: 3,5,6,9,10 7.5: 1,2
7.3 Vectors (<i>Without Applications</i>)	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 4.5: 6,16,20	4.4: 1,4 4.5: 5,7
8.2 Ellipses	4.4: 38,50 4.5: 34,42	4.4 : 6,8 4.5 9,11
8.3 Hyperbolas	4.4: 72,82 4.5: 58,76	4.4: 11,12 4.5: 2,14
9.1 Systems of Linear Equations in Two Variables	9.1: 12,68 9.2: 16,32	9.1: 6,7 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