KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
College of Applied & Supporting Studies, Prep-Year Math Program
SYLLABUS
MATH 002 (163)

Week #	Date	Text Sections	Topic
1	July 9 - 13	4.1	Inverse Function
		4.2	Exponential Functions and Their Applications
		4.3	Logarithmic Functions and Their Applications
		4.4	Evaluating Logarithms and Change of Base
		4.5	Exponential and Logarithmic Equations
2	July 15 - 20	5.1	Angles
		5.2	Trigonometric Functions
		5.3	Evaluating Trigonometric Functions
		5.4	Solving Right Triangle
		6.1	Radian Measure (Exclude Area of a sector)
		6.2	Unit Circle and Circular Measure
Major Exam I To be announced later [4.1 – 6.2] : Suggested (SAT 22 JULY)			
3	July 23 – 27	6.3	Graphs of Sine and Cosine Functions
		6.4	Translation of Sine and Cosine Functions
		6.5	Graphs of the Tangent, Cotangent, Secant, and Cosecant Functions
		6.6	Graphs of the Secant, and Cosecant Functions
		7.1	Fundamental Identities
		7.2	Verification of Trigonometric Identities
4	July 30 - Aug 3	7.3	Sum and Difference Identities
		7.4	Double-Angle and Half-Angle Identities (Exclude pages 721 & 722)
			Reduction Identity
		7.5	Inverse Circular Functions
		7.6	Trigonometric Equations
Major Exam II To be announced later [6.3 – 7.6] : Suggested (SAT 5 AUG)			
5	Aug 6 - 10	7.7	Equations Involving Inverse Trigonometric Functions
		8.3	Vectors, Operations, and the Dot Product
		9.1	Systems of Linear Equations (Up to page 905)
		9.5	Nonlinear Systems of Equations
		9.7	Properties of Matrices
		9.2	Matrix Solution of Linear Systems
6	Aug 13 - 17	9.3	Determinant Solution of Linear Systems (Exclude Cramer's Rule)
		9.8	The Inverse of a Matrix
		10.1	Parabolas
		10.2	Ellipses
		10.3	Hyperbolas
7	Aug 20	REVIEW	
Final Exam To be announced later [4.1-10.3]			

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Pre-Requisite: Math 001

Textbook: College Algebra & Trigonometry by Lial. Hornsby, and Schneider, 5th Edition, Pearson, (2013)

Objectives:
Upon completion of Prep year Math 002 course a student should be able to:

(1) Apply the concept of exponential, logarithmic, and the trigonometric functions, as well as graphs and the properties of these functions to solve related equations and identities.
(2) Be able to solve systems of linear and non-linear equations using various algebraic approaches.
(3) Perform operations with vectors analytically and geometrically.
(4) Determine conic equations and state their properties.
(5) Formulate and analyze mathematical models for a variety of real-world phenomena and use mathematical and technological tools to determine veracity.

Note: The medium of instruction will be strictly ENGLISH from the first day of classes.

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Grading Policy:
1. Exam I: 20% a common multiple choice exam.
2. Exam II: 20% a common multiple choice exam.
3. Final Exam: 36% a comprehensive common multiple choice exam.
4. Class Work: 24% based on a minimum of 5 quizzes (10%), 1 class tests (8%) and online homework (6%). **Any quiz or test under class activity should be of written type and not of a multiple choice type.**
5. **Unexcused Absences**: Starting from the 4th absence, ½ point will be deducted from your total grade for each absence onward.
6. **Late to Absent:** If you are late for 5 times, it will be recorded as 1 absent.

Exam Questions: All exam questions are similar to the textbook exercises, recitation, and online homework problems.

Missing an Exam: 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's policy. Furthermore, the student must provide an official excuse within one week of the missed exam.

Attendance:
A student will be awarded the GRADE "DN" after missing 12% of 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.
Website: http://www.kfupm.edu.sa/sites/pypmath/