

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
College of Applied & Supporting Studies
Prep-Year Mathematics Program
SYLLABUS
MATH002 – TERM 172

Week #	Date	Text Sec.	Topic	Suggested Review Exercises
1	Jan. 21 – 25	2.8	One-to-One Functions and Their Inverses <i>(Exclude: Example 11)</i>	7,8,9,10,11,12,15,16,20,25,60,62,70
		4.1	Exponential Functions <i>(Exclude: Pages 370 & 371)</i>	2,10,16,20,22,24,38
2	Jan. 28-Feb. 01	4.2	The Natural Exponential Function <i>(Exclude: Pages 376 and 377)</i>	10,15,16
		4.3	Logarithmic Functions	4,12,16,22,23,28,32,37,42,71,72,54,56
3	Feb. 04 – 08	4.4	Laws of Logarithms	10,11,16,22,39,44,47,48,52,53,65,66
		4.5	Exponential and Logarithmic Equations <i>(Exclude: Pages 402 and 403)</i>	10,36,37,43,48,52,54,66,78,84,85
4	Feb. 11 – 15	5.1	Angle Measure <i>(Exclude: Area of a sector)</i>	7,16,25,28,30,32,36,38,42,45,58,60
		5.2	Trigonometry of Right Triangles	8,10,16,18,34,42,47,48,49
5	Feb. 18 – 22	5.3	Trigonometric Functions of Angles <i>(Exclude: Areas of Triangles)</i>	6,10,11,22,28,38,40,41,44,50,53,55,56
		6.2	Trigonometric Functions of Real Numbers	5,12,18,34,47,49,52,53,59,65,70,75,76,78
MAJOR EXAM I: TUESDAY, 27TH FEBRUARY 2018 [2.8, 4.1 – 6.2]				
6	Feb. 25-Mar. 01	6.3	Trigonometric Graphs <i>(Exclude: Pages 528-530)</i>	15,17,23,31,41,44,47,48,49,50,51,52,
		6.4	More Trigonometric Graphs	3,5,8,9,14,16,18,26,28,32,33,51,54,56
7	Mar. 04 – 08	6.5 5.4	Inverse Trigonometric Functions and Their Graphs	4,5,7,10,23,24,25,31,34,40,44,45,48
		7.1	Trigonometric Identities	3,7,11,12,14,15,20,23,26,27,34,41,42,65,71,74,75,83
8	Mar. 11 – 15	7.2	Addition and Subtraction Formulas	6,8,12,15,17,18,19,20,25,33,34,40
		7.3	Double-Angle, Half-Angle <i>(Exclude: 1-Product to sum formulas, 2-Sum to product formulas)</i>	3,8,11,15,19,22,29,30,33,34,39,41,43,46,51,53,54,69,72
9	Mar. 18 – 22	7.4	Basic Trigonometric Equations	27,33,37,43,45,51,54,55,56
		7.5	More Trigonometric Equations	3,11,14,17,21,24,26,31,33,39,42,43,44
10	Mar. 25 – 29	9.1	Vectors in Two Dimensions <i>(Exclude: Pages 671 and 672)</i>	7,11,16,22,28,33,39,46,51,52
		9.2	The Dot Product <i>(Up to Example 3)</i>	7,10,17,20,21,23,39,42
MAJOR EXAM II: WEDNESDAY, 04TH APRIL 2018 [6.3 – 9.2]				
11	Apr. 01 – 05	10.1	Systems of Linear Equations in Two Variables	7,12,13,17,35,40,50,55
		10.4	Systems of Nonlinear Equations	3,8,14,26,29,32
12	Apr. 08 – 12	11.1	Matrices and System of Linear Equations <i>(Exclude: Example 8)</i>	12,17,20,23,26,33,38,39,56
		11.2	The Algebra of Matrices <i>(Exclude: Pages 787 & 788)</i>	12,14,15,22,33,36,45,46,50
13	Apr. 15 – 19	11.3	Inverses of Matrices and Matrix Equations <i>(Exclude: Example 7)</i>	
		11.4	Determinants+ Determinants Properties <i>(Exclude: 1- Cramer's Rule, 2-Area of triangles using det. page 810)</i>	10,12,15,19,23,28,37,63
14	Apr. 22 – 26	12.1	Parabolas with shifts <i>(Exclude: Page 831)</i>	5,6,7,8,9,10,35,38,43,46,47,48,50,56
		12.2	Ellipses with shifts	5-8,9,16,20,27,30,33
15	Apr. 29-May 03	12.3	Hyperbolas with shifts	5,6,7,8,16,18,21,27,28,31,37,40,43,45,49
		12.4	Shifted Conics	5,7,8,11,12,13,17,20,21,22,23,28
FINAL EXAM: SATURDAY, 12TH MAY 2018 [2.8, 4.1 – 12.4]				

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College of Applied & Supporting Studies
Prep-Year Math Program
SYLLABUS
MATH 002 – TERM 172
Pre-Requisite: Math 001

Textbook: Algebra Trigonometry, Stewart, Redlin and Watson, Fourth edition.

Objectives:

Upon completion of Prep-Year Math002 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.

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: 18% based on a minimum of 5 quizzes (10%), 1 class tests (8%);
Any quiz or test under class activity should be of written type and not of a multiple-choice type.
5. Online homework (6%).

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 8 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)

Blackboard Link: Math Prep-Year Program

Website: <http://www.kfupm.edu.sa/sites/pypmath/>