

**KING FAHD UNIVERSITY OF PETROLEUM & MINERALS**  
**College of General Studies**  
**Prep-Year Math Program**  
**SYLLABUS**  
**MATH002 – TERM 242**

Week	Date	Sec.	Topic	Suggested Review Exercises
1	Jan. 12 Jan. 16	2.8	One-to-One Functions and Their Inverses	7,8,9,10,11,12,15,16,20,25,60,62
		4.1	4.1: Exponential Functions	4.1: 2,10,16,20,22,24,38
		4.2	4.2: Natural Exponential Function	4.2: 10,15,16
2	Jan. 19 Jan. 23	4.3	Logarithmic Functions	4,12,16,22,23,28,32,37,42,71,72
		4.4	Laws of Logarithms	10,11,16,22,39,44,47,48,52,53,65,66
3	Jan. 26 Jan. 30	4.5	Exponential and Logarithmic Equations	10,36,37,43,48,52,54,66,78,84,85
		5.1	Angle Measure	7,16,25,28,30,32,36,38,45,58,60
4	Feb. 02 Feb. 06	5.1	Angle Measure (Continue...)	7,16,25,28,30,32,36,42,45,58,60
		5.2	Trigonometry of Right Triangles *	4,12,16,22,23,28,32,37,42,71,72
5	Feb. 09 Feb. 13	5.3	Trigonometric Functions of Angles	8,10,16,18,34,42,47,48,49
		6.2	Trigonometric Functions of Real Numbers	6,10,11,22,28,38,40,41,44,50,53,55,56
6	Feb. 16 Feb. 20	6.3	Trigonometric Graphs	5,12,18,34,47,49,52,53,59,65,70
		6.4	More Trigonometric Graphs	15,17,23,31,41,44,47,48,49,50,51,52
<b>SAUDI FOUNDATION DAY: 23<sup>RD</sup> FEBRUARY 2025</b>				
7	Feb. 24 Feb. 27	6.4	More Trigonometric Graphs Measure (Continue...)	15,17,23,31,41,44,47,48,49,50,51,52
		5.4 6.5	Inverse Trigonometric Functions and their Graphs	4,5,7,10,23,24,25,31,34,40,44,45,48
8	Mar. 02 Mar. 06	7.1	Trigonometric Identities	3,7,11,12,14,15,20,23,26,27,34,41,42,6 5,71,74,75,83
		7.2	Addition and Subtraction Formulas	6,8,12,15,17,18,19,20,25,33,34,40
9	Mar. 09 Mar. 13	7.2	Addition and Subtraction Formulas (Continue...)	6,8,12,15,17,18,19,20,25,33,34,40
		7.3	Double-Angle, Half-Angle	3,8,11,15,19,22,29,30,33,34,39,41,43,4 6,51,53,54,69,72
10	Mar. 16 Mar. 20	7.4	Basic Trigonometric Equations	27,33,37,43,45,51,54,55,56
		7.5	More Trigonometric Equations	3,11,14,17,21,24,26,31,333,39,42,43
<b>EID – FITR VACATION: 23<sup>TH</sup> MARCH – 3<sup>RD</sup> APRIL 2025</b>				
11	Apr. 06 Apr. 10	9.1	9.1: Vectors in Two Dimensions	9.1: 7,11,16,22,28,33,39,46,51,52
		9.2	9.2: The Dot Product	9.2: 7,10,17,20,21,23,39,42
		10.1	Systems of Linear Equations in Two Variables	7,12,13,17,35,40,50,55
12	Apr. 13 Apr. 17	10.4	Systems of Nonlinear Equations	3,8,14,26,29,32
		11.1	Matrices and System of Linear Equations	12,17,20,23,26,33,38,39,56
13	Apr. 20 Apr. 24	11.2	The Algebra of Matrices	12,14,15,22,33,36,45,46,50
		11.3	Inverses of Matrices and Matrix Equations	6,14,23,42,45,46
14	Apr. 27 May 01	11.4	Determinants + Properties of Determinants **	10,12,15,19,23,28,37,63
		12.1	Parabolas (with shifted Parabolas)	5-10,35,38,43,46,47,48,50,56
15	May 04 May 08	12.2	Ellipses (with shifted Ellipses)	5-8,9,16,20,27,30,33
		12.3	Hyperbolas (with shifted Hyperbolas)	5-8,16,18,21,27,28,31,37,40,43,45,49
16	May 11	12.4	Shifted Conics	5,7,8,11,12,13,17,20, 21,22,23,28
		Rev	Review for Final Exam	

**Exclude the following:** (Examples and their related concepts)

1. Sec. 2.8: Example 11.
2. Sec. 4.5: Examples 12, 13 & 14.
3. Sec. 5.1: Examples 5, 6 & 7.
4. Sec. 5.3: Example 8.
5. Sec. 6.3: Examples 6 - 10.
6. Sec. 5.4 & 6.5: The graphs of  $\sec^{-1}x$ ,  $\csc^{-1}x$  and  $\cot^{-1}x$ .
7. Sec. 7.3: Example 9, 10 & 11.
8. Sec. 9.1: Examples 6, 7 & 8.
9. Sec. 9.2: Examples 4 - 8. 2
10. Sec. 11.1: Example 8.
11. Sec. 11.2: Example 7.
12. Sec. 11.3: Example 7.
13. Sec. 11.4: Examples 6, 7 & 8.
14. Sec. 12.1: Examples 6.

*\* The cofunction identities from section 7.1 page 574 should be covered.*

*\*\* Properties of Determinants should be covered*