

**KING FAHD UNIVERSITY OF PETROLEUM & MINERALS**  
**College of General Studies, Prep-Year Math Program**  
**SYLLABUS: MATH012 – TERM 251**

Week	Date	Sec.	Topic
1	Aug 24 - Aug. 28	MATH 001	1. Factoring and Simplifying Rational Expressions 2. Solving Equations: <i>linear and quadratic.</i>
2	Aug. 31 - Sep. 04		1. Solving Equations: <i>absolute value, and other types of equations.</i> 2. Solving inequalities: <i>linear, quadratic, rational, and other types.</i>
3	Sep. 07 - Sep. 11		Functions: <i>graphs, combining functions, and transformation of functions</i>
4	Sep. 14 - Sep. 18		1. Polynomial functions: <i>polynomial division, graphs, and complex zeros</i> 2. Rational functions
5	Sep. 21 - Sep. 25	2.8	One-to-One Functions and Their Inverses
		4.1, 4.2	Exponential Functions and The Natural Exponential
		SAUDI NATIONAL HOLIDAY: 23 <sup>RD</sup> SEPTEMBER 2024	
6	Sep. 28 - Oct. 02	4.3	Logarithmic Functions
		4.4	Laws of Logarithms
		4.5	Exponential and Logarithmic Equations
7	Oct. 05 - Oct. 09	4.5	Exponential and Logarithmic Equations ( <i>Continue...</i> )
		5.1	Angle Measure
		5.2	Trigonometry of Right Triangles
MAJOR EXAM I: THURSDAY, 09 <sup>TH</sup> OCTOBER 2025 [Math001 + 2.8 – 5.2]			
8	Oct. 12 - Oct. 16	5.3	Trigonometric Functions of Angles
		6.2	Trigonometric Functions of Real Numbers
		6.3	Trigonometric Graphs
9	Oct. 19 - Oct. 23	6.3	Trigonometric Graphs ( <i>Continue...</i> )
		6.4	More Trigonometric Graphs
		5.4, 6.5	Inverse Trigonometric Functions and their Graphs
MID – TERM V A C A T I O N : 26 <sup>TH</sup> – 30 <sup>TH</sup> OCTOBER 2025			
10	Nov. 02 - Nov. 06	7.1	Trigonometric Identities
		7.2	Addition and Subtraction Formulas
		7.3	Double-Angle, Half-Angle
MAJOR EXAM II: SUNDAY, 09 <sup>TH</sup> NOVEMBER 2025 [5.3 – 7.3]			
11	Nov. 09 - Nov. 13	7.4	Basic Trigonometric Equations
		7.5	More Trigonometric Equations
		9.1, 9.2	Vectors in Two Dimensions & The Dot Product
12	Nov. 16 - Nov. 20	10.1	Systems of Linear Equations in Two Variables
		10.4	Systems of Nonlinear Equations
		11.1	Matrices and Systems of Linear Equations
13	Nov. 23 - Nov. 27	11.2	The Algebra of Matrices
		11.3	Inverses of Matrices and Matrix Equations
		11.4	Determinants + Properties of Determinants
14	Nov. 30 - Dec. 04	11.4	Determinants + Properties of Determinants ( <i>Continue...</i> )
		12.1	Parabolas ( <i>with shifted Parabolas</i> )
		12.2	Ellipses ( <i>with shifted Ellipses</i> )
15	Dec. 07 - Dec. 11	12.3	Hyperbolas ( <i>with shifted Hyperbolas</i> )
		Rev	Final Exam Review
16	Dec. 14	Rev	Final Exam Review
FINAL EXAM: TO BE ANNOUNCED [2.8 – 12.4]			