

College of Engineering at Alkharj King Saud University

Course : Math 105 3(3,1,0)

Level : 2 (Engineering)

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Week	Chapter and details
1	Chapter0: Real numbers
	1-1 Classification of numbers
	1-2 Real number line
	1-3 Inequality
	1-4 Intervals
	1-5 Absolute Value
	1-6 Solving inequality
2	Chapter1 : Coordinate Planes and Graphs
	1-1 Rectangular coordinate systems
	1-2 Coordinates of point in the Cartesian Plane
	1-3 Distance between two points
	1-4 Slope of a Line
	1-5 Graphs
	1-6 Examples
3	Chapter2: Functions
	2-1 Definition
	2-2 Polynomial function
	2-3 Rational function
	2-4 Combining function
	2-5 Composite function
	2-6 Trigonometric functions
4	Chapter2: Functions
	2-7 Exponential and logarithmic functions
	2-8 Examples
5	Chapter3:Limits and Continuity
	3-1 Introduction of limits
	3-2 One-sided limit
	3-3 Theorems on limit
6	Chapter3:Limits and Continuity
	3-3 Theorems on limit
	3-4 Limits involving infinity.
7	Chapter3:Limits and Continuity
	3-5 Limits involving Trigonometric Functions
	3-6 Continuity
8	Chapter4: Derivative
	4-1 Rate of change of function
	4-2 Derivative of function
	4-3 Rules of differentiation

	Chapter4: Derivative
9	4-4 Derivative of trigonometric functions 3-5 Chain Rule 3-6 Higher order Derivative 3-7 Implicit Differentiation
	Chapter4: Derivative
10	3-8 Related Rates 3-9 Increment and Differentials 3-10 Linear approximations
	Chapter5: Applications of the Derivative
11 + 12	4-1 Roll's Theorem and mean value Theorem 4-2 Local Extreme of functions 4-3 First derivative test 4-4 Second derivative test, concavity 4-5 Applications of extreme values
	Chapter6: Inverse Functions
13	6-1 One-One function 6-2 Inverse Trigonometric Function 6-3 Derivative of Inverse Trigonometric function
	Chapter7: Conic Sections
14	7-1 Parabola 7-2 Ellipse 7-3 Hyperbola 7-4 Classification of second degree equation 7-5 Rotation of Axis