

OFFICIAL SYLLABUS
MATH 125
 Effective Fall 2017

PRE-CALCULUS MATHEMATICS WITH
 TRIGONOMETRY

Catalog Description: Brief Review of Algebra, exponential and logarithmic functions, trigonometric functions and their applications, inverse trigonometric functions, trigonometric identities and equations, laws of sines and cosines.

Prerequisite: Math 120 with a C or better, ACT Math score of 26 or higher, or satisfactory placement test score.

Textbook: PRECALCULUS MATHEMATICS FOR CALCULUS, 7th Edition, by Stewart, Redlin, and Watson. ISBN-13: 978-1-305-11527-9

	Title	Assignment (No Graphing Calculator)
(W1) 1.4	Rational Expressions REVIEW (Add more problems if you have difficulty.)	4, 5, 7, 9, 11, 12, 21, 33, 35-40, 43-49 (odd), 55-61 (odd), 67, 73-76, 79-85 (odd), 89, 94, 95
(W1) 1.5	Equations REVIEW (Add more problems if you have difficulty.)	1, 5, 6, 25, 27, 28, 30, 33-35, 37, 41, 43, 55, 57, 59, 67, 69, 71, 75, 81, 82, 87, 90, 97, 99, 103, 107, 113, 116, 129, 130, 138, 141
(W1) 1.8	Inequalities REVIEW	1 – 3, 23, 25, 31, 33, 35, 39, 43, 45, 49, 51, 55-63 (odd), 67, 71, 79-85 (odd), 89, 101, 103, 105, 106, 111, 115, 117, 125
	Chapter 1 Review	Concept Check: 3, 7, 9, 12, 18-22, 28, 29, 31-35, 37 Exercises: 25-37 (odd), 41, 42, 44-50, 58, 59, 62, 63, 66-69, 84, 86-93 (odd), 95, 100-105, 107, 109, 111, 112, 125, 129-132, 147, 148
(W2) 2.1	Function Brief REVIEW	1, 2, 3, 7, 9, 19, 25, 31, 33, 35-38, 43-65 (odd), 68, 69, 83, 86, 87
(W2) 2.8	One-to-One Functions and Their Inverses Brief REVIEW	2, 3, 7, 9, 13-19 (odd), 20, 23, 25, 27, 28, 39, 43, 45-47, 49-57 (odd), 61, 67-73 (odd), 85-91 (odd), 95, 96

Section	Title	Assignment (No graphing calculator)
(W2) 5.1	The Unit Circle	1 – 3, 7, 9, 10, 14, 15, 17, 18, 21, 22, 23-35 (odd), 41, 43 47, 49, 59
(W2+W3) 5.2	Trigonometric Functions of Real Numbers	1, 2, 5, 7-21 (odd), 23 – 26, 27, 29, 36-38, 41, 45-57 (odd) 63, 64, 67, 71, 72, 73, 74
(W3) 5.3	Trigonometric Graphs (Need graph paper!)	1, 3, 5, 7, 11-15 (odd), 17, 21-27 (odd), 31-35 (odd), 39, 41, 47, 49, 51, 53
(W3) 5.4	More Trigonometric Graphs	1-3 (odd), 35, 37
(W4) 5.5	Inverse Trigonometric Functions and Their Graphs (Skip inverse secant, cosecant and cotangent)	1 – 3, 5, 7, 9, 23-47 (odd)
	Chapter 5 Review	Concept Check: 1 – 7, 10 Exercises: 1, 3, 5, 7, 11, 13, 17-23 (odd)
(W5) 6.1	Angle Measure	1-3, 5, 9, 11, 16, 17-21 (odd), 31-33, 35, 37, 41, 45, 47, 48 51, 53-55, 61, 63
(W5) 6.2	Trigonometry of Right Triangles	1, 2, 3-9 (odd), 15, 17, 21 -33 (odd), 37, 41, 47, 49, 53, 54 57, 61, 62, 66, 67
(W6) 6.3	Trigonometry Function of Angles	1, 2, 3-17 (odd), 25, 27,29, 31-47 (odd), 51, 53
(W6) 6.4	Inverse Trigonometric Functions and Right Triangles	1-4, 5-11 (odd), 17, 21, 23, 29, 30, 32, 35, 36, 39, 42, 43
(W7) 6.5	Law of Sines	1, 3, 5, 9, 13, 17, 19, 21, 23, 29, 30-33, 35
(W7) 6.6	Law of Cosines	1, 3, 7, 13, 15, 21-27 (odd), 39, 41, 48, 51
	Chapter 6 Review	Concept Check: 1-9, 11 Exercises: 1, 3, 5, 11, 17, 21, 23, 28, 32, 33-43, 45, 53, 55 59, 61, 63, 67, 69, 71, 77, 80, 81

Section	Title	Assignment (No graphing calculator)
(W8) 7.1	Trigonometric Identities	1, 2, 3-13 (odd), 23, 27, 31, 33, 37, 39, 40, 45, 53, 55, 61, 65, 71, 73, 77, 89, 90, 91, 115
(W9) 7.2	Addition and Subtraction Identities	1, 2, 3, 5, 9-13, 15, 17, 25, 26, 29, 32, 35, 36, 55, 57, 65
(W9) 7.3	Double--Angle, Half-Angle Product--Sum Formulas (optional)(*)	1, 3, 5, 11-33 (odd), 37, 39, 51, 53, 73, 75, 77, 79, 82
(W10) 7.4	Basic Trigonometric Equations	2, 3-9 (odd), 13, 17, 19, 25, 27, 31, 33, 37, 41, 43, 45, 47, 51, 53, 56
(W11) 7.5	More Trigonometric Equations	1, 2, 3, 5, 7, 11, 17, 19
	Chapter 7 Review	Exercises: 4-7, 9-12, 29-33, 35, 39, 49, 50, 52, 53, 55, 59, 60, 62
(W12) 4.1	Exponential Functions (Need graph paper!)	1-3, 5, 7, 9, 11, 13, 17, 21, 23, 25, 26, 27, 29, 31, 33, 51
(W11) 4.2	The Natural Exponential Function	1, 3, 6, 7-13, 17-a, 18-a, 24, 27; Also from #17 and #18, show that $[\cosh(x)]^2 - [\sinh(x)]^2 = 1$
(W13) 4.3	Logarithmic Functions	1-7, 15-17, 21, 23, 25, 27, 31-33, 35, 37, 41, 45, 49, 50, 53-59 (Also find the inverse function), 61, 65, 67, 73, 75, 77, 85, 87, 95, 97
(W14) 4.4	Laws of Logarithms	1-9, 11, 17, 23, 29, 31, 35, 37, 47-53 (odd), 59, 61, 76
(W15) 4.5	Exponential and Logarithmic Equations	1-3, 8, 13, 18, 21, 22, 29, 33, 37, 39, 44, 49, 53, 61, 63, 65, 83, 85, 96, 97
	Chapter 4 Review	Concept Check: 1-10 Exercises: 5-19 (odd), 20, 21-27 (odd), 29-69 (odd), 72, 74, 84, 85

NOTE: Suggested problems may be adjusted accordingly by the instructor. (*)

Suggested problems do not contain exercises for optional sessions