

DEPARTMENT: MATHEMATICS	COURSE TITLE: PRECALCULUS: TRIGONOMETRY (HONORS) COURSE NUMBER: 334
GRADE(S): 11, 12	PRE-REQUISITES (IF ANY): C- OR BETTER IN REAL & COMPLEX VARIABLES , OR B+ OR BETTER IN ALGEBRA II: FUNCTIONS AS WELL AS B- OR BETTER IN GEOMETRY, OR CONFERENCE WITH DEPARTMENT HEAD

UNIT	LENGTH	CONTENT	SKILLS	METHODS OF ASSESSMENT	FRAMEWORK STRAND(S) & STANDARD(S)
Angle Measurement	5 days	<ul style="list-style-type: none"> Directed angles Radian measure Polar coordinates Sectors Apparent size 	<ul style="list-style-type: none"> Understand angles as objects of rotation Gain thorough understanding of radian measure Graph polar coordinates, Find area and arc length of sectors Apply topics learned to real life situations 	<ul style="list-style-type: none"> Homework Quiz Test 	
Trigonometric Functions	6-8 days	<ul style="list-style-type: none"> Unit circle Six trigonometric functions Reference angles Graphs of the trig functions Simple trig equations 	<ul style="list-style-type: none"> Understand domain and range of the trig functions Evaluate trig functions for all angles Use calculator to evaluate expressions and solve equations Gain familiarity with the graphs of the trig functions Find angle of inclination using tangent function. Apply topics learned to real life situations 	<ul style="list-style-type: none"> Homework Short essay Quiz Test 	
Modeling Trigonometric Functions	5 days	<ul style="list-style-type: none"> Amplitude, period, and shifts of the graphs of the trig functions Modeling real life situations with trig functions 	<ul style="list-style-type: none"> Draw accurate graphs of trig functions Find equation of function given graph Recognize when a situation can be modeled by a trig function and determine an equation(s) that can model the situation. 	<ul style="list-style-type: none"> Homework Quiz Test Project 	
Trigonometric Equations	6-7 days	<ul style="list-style-type: none"> Reciprocal relationships Negative relationships Cofunctions Pythagorean relationships 	<ul style="list-style-type: none"> Use trig relationships to simplify expressions, prove identities, and solve equations. 	<ul style="list-style-type: none"> Homework Quiz Test Graded assignment 	

		<ul style="list-style-type: none"> • Trig identities • Trig equations 			
Triangle Trigonometry	6-8 days	<ul style="list-style-type: none"> • Right triangle trig • Area of a triangle • Law of sines • Law of cosines • Applications 	<ul style="list-style-type: none"> • Solving triangles, recognize when there are multiple or no solutions, determine when to use each law • Emphasis on applying concepts to real life situations. 	<ul style="list-style-type: none"> • Homework • Test • Graded assignment 	
Trigonometric Formulas	6-8 days	<ul style="list-style-type: none"> • Addition and difference formulas • Double angle formulas • Half angle formulas • Trig identities • Trig equations 	<ul style="list-style-type: none"> • Gain familiarity with the formulas and why they are necessary • Determine when to use a specific formula • Use formulas to simplify expressions, prove identities, and solve equations. 	<ul style="list-style-type: none"> • Homework • Quiz • Test 	
Polar Equations and Graphs	6-8 days	<ul style="list-style-type: none"> • Polar equations • Polar graphs 	<ul style="list-style-type: none"> • Graph polar equations by hand • Use graphing calculator or computer to analyze families of polar equations 	<ul style="list-style-type: none"> • Analysis project/paper 	