TRIGONOMETRY
GRADE LEVELS 11 & 12

#	Lesson	Lesson Content
1	Angles	Angles, angle terminology, radians, reference angles.
2	Sine Cosine and Tangent	The unit circle, finding values from endpoint, definition of sine, cosine, and tangent
3	Values of Sin Cos and Tan	Values of sine, cosine, and tangent of various angles, using the calculator to find values
4	Reciprocal Functions	Definition and value of secant, cosecant, and cotangent
5	The Pythagorean Theorem	They Pythagorean Theorem, calculating sides of right triangles
6	Review 1	
7	Inverse Functions	Definition and value of inverse trig functions
8	Solving Right Triangles	Using trig functions and the Pythagorean Theorem to solve right triangles
9	Trigonometry Applications	Using trig to solve real world problems
10	Law of Sines 1	Definition of law of sines and applications
11	Law of Sines 2	Further application of the Law of Sines; determining the number of triangles, and solving triangles
12	Law of Cosines	Definition of law of cosines and solving triangles
13	Solving Triangles	Using trig functions and the Laws of Sines and Cosines to solve triangles
14	Triangle Applications	Solving triangles in word problems
15	Areas of Triangles	Formulas for area of triangles
16	Review 2	
17	Trigonometric Identities	Definition of identity, reciprocal identities, quotient identities, Pythagorean identities, symmetry identities
18	Verifying Trig Identities	Verifying trigonometric identities and manipulating identities for verification
19	Sum Difference Identities	Sum and difference for sin, cosine, and tangent; using cofunction identities
20	Graphing Trig Functions 1	Graphs of sine, cosine, tangent and reciprocal functions; finding values from graphs
21	Graphing Trig Functions 2	Analyzing amplitude, period, and phase shift; graphing functions and compound functions
22	Graphing Trig Functions 3	Graphs of inverse functions; finding values using graphs
23	Review 3	
24	Double and Half Angles	Double-angle and half-angle identities
25	Solving Trig Equations	Solving equations involving trig functions; principal values, solving for principal and all values
26	Central Angle Application	Applications of central angles; arclength, linear and angular velocity, area of circular sectors
27	Simple Harmonic Motion	Writing equations for simple harmonic motion; using equations for information; frequency
28	Review 4	
29	Comprehensive Exam	Comprehensive exam of course content