MATH 1060 (Trigonometry) Syllabus

Unit 1

Topic	Objectives	Timing
Equations Review	• Linear, quadratic • Other forms as time allows	1 day
Angle Measure	• Degrees and radians • Angles in coordinate plane • Coterminal angles • Arc length, sector area	1 day
Right Triangle Trigonometry	• Right triangle ratios • Reciprocal identities • Special right triangles • Solving right triangles	2 days
Law of Sines & Law of Cosines	• Law of Sines & applications • Law of Cosines & applications	2 days
Trigonometric Functions of Angles	• Trig in coordinate plane • Algebraic signs of trig functions • Reference angles and reference right triangles • Evaluate trig in the coordinate plane	1 day
Unit Circle (basic)	• Build up from special right triangles and reference angles • Evaluate common trig functions using the unit circle	2 days
Unit Circle (other trig)	• Use unit circle to evaluate tangent, cotangent, secant, cosecant • Use even and odd identities to evaluate trig functions with negative angles	1 day
Graphing sine and cosine	• Emphasis on using transformation techniques • Amplitude, period, phase shift • Describe domain, range	1.5 days
Graphing other trig	• Emphasis on transformations • Describe domain, range	1.5 days
Inverse Trig Functions	• Evaluate inverse trig (pay special attention to ranges and notation)	1 day
Review		1 day
Exam		1 day

Unit 2: Identities

Topic	Objectives	Timing
Basic Identities	• Even/odd • Quotient • Reciprocal • Pythagorean • Cofunction • Simplify using identities • Verify identities	1 day
Sum and Difference Identities	• Sum and difference identities • Evaluate trig functions using sum/difference identities	2 days
Double and Half Angle Identities	• Double and half angle identities • Reduction identities • Evaluate trig functions using double/half	2 days
Product to Sum and Sum to Product Identities	• Product to sum • Sum to product	1 day
Solving basic trig equations	• Form $\sin(x) =$ number • Form $\sin(ax) =$ number • Use basic factoring to solve	2 days
Solving advanced trig equations	• Apply identities first, then solve	1 day
Buffer Trig day		1 day
Review		1 day
Exam		1 day