

### Instructional Flow – Unit 2 – Trigonometric Functions

**4.1 Angles and Their Measure**

- angle measurement in degrees and radians
- arc length
- *angular and linear motion*



**4.2 Trigonometric Functions of Acute Angles**

- definition of the six trigonometric functions in a right triangle
- exact values of the trigonometric functions for  $30^\circ$ ,  $45^\circ$ ,  $60^\circ$
- applications



**4.3 Trigonometry Extended: The Circular Functions**

- standard position of angles in the coordinate plane
- coterminal angles
- trigonometric function values of any angle
- functions based on the unit circle
- periodicity



**4.4 Graphs of Sine and Cosine: Sinusoids**

- analysis of the sine and cosine function
- transformations of sinusoids
- applications



**4.5 Graphs of Tangent, Cotangent, Secant, and Cosecant**

- analysis of the tangent, cotangent, secant, and cosecant functions
- solutions of simple trigonometric equations algebraically and graphically



**4.6 *Graphs of Composite Trigonometric Functions (Optional)***

- *combination of trigonometric and algebraic functions*
- *sums and differences of sinusoids*
- *applications*



**4.7 Inverse Trigonometric Functions**

- definition of inverse sine, cosine, and tangent functions
- analysis of inverse trigonometric functions
- applications



**4.8 Solving Problems with Trigonometry**

- solution of problems using right triangle trigonometry
- *simple harmonic motion*