

MAT 155 Trigonometry

I. Functions

- A. Distance
- B. Midpoint
- C. Standard Equation of a Circle
- D. Graphs
- E. Domain
- F. Notation

II. Angles

- A. Definition and Geometry
- B. Measure and Conversion
 - 1. Degrees
 - 2. Radians
- C. Arc Length
- D. Sector Area

III. Trigonometric Functions

- A. Unit Circle Definitions
- B. Ratio Definitions
- C. Triangle Definitions

IV. Graphs of Trigonometric Functions

- A. Basic Functions
- B. Stretching
 - 1. Amplitude
 - 2. Period
- C. Shifting
 - 1. Phase Shifts
 - 2. Vertical Shifts

V. Applications

- A. Triangles Solutions
- B. Physical Problems

VI. Trigonometric Identities

- A. Verification
- B. Use of Addition and Subtraction Formulas
- C. Use of Multiple Angle Formulas (optional)

VII. Trigonometric Equations

- A. Solutions on Intervals
- B. All Solutions

VIII. Inverse Trigonometric Functions

IX. Law of Sines

X. Law of Cosines