

# MATH 15400 ALGEBRA & TRIGONOMETRY II

## List of Course Topics

**TEXTBOOK:** Swokowski & Cole, *Algebra & Trigonometry with Analytic Geometry*, Classic 12th Edition

**Chapter 11: Topics From Analytic Geometry**

- 11.1 Parabolas
- 11.2 Ellipses (omit eccentricity)
- 11.3 Hyperbolas

**Chapter 9: Systems of Equations and Inequalities**

- 9.1 Systems of Equations
- 9.2 Systems of Linear Equations in Two Variables

**Chapter 6: The Trigonometric Functions**

- 6.1 Angles
- 6.2 Trigonometric Functions of Angles
- 6.3 Trigonometric Functions of Real Numbers
- 6.4 Values of the Trigonometric Functions
- 6.5 Trigonometric Graphs
- 6.7 Applied Problems (omit harmonic motion problems)

**Chapter 7: Analytic Trigonometry**

- 7.1 Verifying Trigonometric Identities
- 7.2 Trigonometric Equations
- 7.3 The Addition and Subtraction Formulas
- 7.4 Multiple-Angle Formulas
- 7.6 The Inverse Trigonometric Functions (omit graphs of  $y = \cot^{-1} x$ ,  $y = \sec^{-1} x$ ,  $y = \csc^{-1} x$ )

**Chapter 8: Applications of Trigonometry**

- 8.1 The Law of Sines
- 8.2 The Law of Cosines