Hunter College of The City University of New York

MATH 125 Precalculus 4 hrs, 4 cr

Textbook: Precalculus (custom edition for Hunter College, with student's solution manual) by Robert Blitzer, Pearson Custom Publishing

Chapter 1 Functions and Their Graphs

- 1.1 Graphs and Graphing Utilities
- 1.2 Basics of Functions and Their Graphs
- 1.3 More on Functions and Their Graphs
- 1.4 Linear Functions and Slope
- 1.5 More on Slope
- 1.6 Transformations of Functions
- 1.7 Combinations of Functions; Composite Functions
- 1.8 Inverse Functions
- 1.9 Distance and Midpoint Formulas; Circles
- 1.10 Modeling With Functions

Chapter 2 Polynomial and Rational Functions

- 2.1 Complex Numbers
- 2.2 Quadratic Functions
- 2.3 Polynomial Functions and Their Graphs
- 2.4 Dividing Polynomials; Remainder and Factor Theorems
- 2.5 Zeros of Polynomial Functions
- 2.6 Rational Functions and Their Graphs
- 2.7 Polynomial and Rational Inequalities

Chapter 3 Exponential and Logarithmic Functions

- 3.1 Exponential Functions
- 3.2 Logarithmic Functions
- 3.3 Properties of Logarithms
- 3.4 Exponential and Logarithmic Equations
- 3.5 Exponential Growth and Decay; Modeling Data

Chapter 4 Trigonometric Functions

- 4.1 Angles and Radian Measure
- 4.2 Trigonometric Functions: The Unit Circle
- 4.3 Right Triangle Trigonometry
- 4.4 Trigonometric Functions of Any Angle
- 4.5 Graphs of Sine and Cosine Functions

- 4.6 Graphs of Other Trigonometric Functions
- 4.7 Inverse Trigonometric Functions
- 4.8 Applications of Trigonometric Functions

Chapter 5 Analytic Trigonometry

- 5.1 Verifying Trigonometric Identities
- 5.2 Sum and Difference Formulas
- 5.3 Double-Angle and Half-Angle Formulas
- 5.5 Trigonometric Equations

Chapter 6 Additional Topics in Trigonometry

- 6.1 The Law of Sines
- 6.2 The Law of Cosines

Chapter 7 Systems of Equations and Inequalities

- 7.1 Systems of Linear Equations in Two Variables
- 7.4 Systems of Nonlinear Equations in Two Variables