MATH 15300 COLLEGE ALGEBRA - List of Course Topics

**IU -eTEXT:** Swokowski & Cole, *Algebra & Trigonometry with Analytic Geometry*, Classic 12th Edition

## Chapter 1: Fundamental Concepts of Algebra

1.1 Real Numbers

1.2 Exponents and Radicals

1.3 Algebraic Expressions

1.4 Fractional Expressions

## Chapter 2: Equations and Inequalities

2.1 Equations

2.2 Applied Problems

2.3 Quadratic Equations

2.4 Complex Numbers

2.5 Other Types of Equations

2.6 Inequalities

2.7 More on Inequalities

## Chapter 3: Functions and Graphs

3.1 Rectangular Coordinate Systems

3.2 Graphs of Equations

3.3 Lines

3.4 Definition of Function

3.5 Graphs of Functions

3.6 Quadratic Functions

3.7 Operations on Functions

## Chapter 4: Polynomial and Rational Functions

4.1 Polynomial Functions of Degree Greater Than 2

4.2 Properties of Division

## Chapter 5: Exponential and Logarithmic Functions

5.1 Inverse Functions

5.2 Exponential Functions

5.3 The Natural Exponential Function

5.4 Logarithmic Functions

5.5 Properties of Logarithms

5.6 Exponential and Logarithmic Equations