Intermediate Algebra Syllabus

Algebraic expressions and sets of numbers
Operations on Real numbers
Properties of real numbers

Linear Equations in One Variable
An Introduction to Problem Solving
Formulas and Problem Solving
Linear Inequalities and Problem Solving
Compound Inequalities
Absolute Value Equations
Absolute value Inequalities

Graphing Equations
Introduction to Functions
Graphing Linear Functions
The Slope of a Line
Equations of Lines
Graphing Linear Inequalities

Solving Systems of Linear Equations in Two Variables
Solving Systems of Linear Equations in Three Variables
Systems of Linear Equations and Problem Solving
Solving Systems of Equations by Matrices
Solving Systems of Equations by Determinants

Exponents and Scientific Notation
More Work with Exponents and Scientific Notation
Polynomials and Polynomial Functions
Multiplying Polynomials
The Greatest Common Factor and Factoring by Grouping
Factoring Trinomials
Factoring Special Products
Solving Equations by Factoring and Problem Solving

Solving Quadratic Equations by Completing the Square
Solving Quadratic Equations by the Quadratic Formula
Solving Equations by using Quadratic Methods
Non Linear Inequalities in One Variable

Rational Functions and Multiplying and Dividing Rational Expressions
Adding and Subtracting Rational Expressions
Simplifying Complex Fractions
Dividing Polynomials
Synthetic Division and the Remainder Theorem
Solving Equations containing Rational Expressions
Rational Equations and Problem Solving
Variation and Problem Solving

Radicals and Radical Functions
Rational Exponents
Simplifying Radical Expressions
Adding, Subtracting, and Multiplying Radical Expressions

Rationalizing Denominators and Numerators of Radical Expressions
Radical Equations and Problem Solving

Sample Textbook: Intermediate Algebra, by K Elayn Martin-Gay, 4th Ed.
Prentice Hall 2004