

**University Of Houston**  
**Department of Mathematics**  
**Math 1300 Fundamentals of Mathematics**

**Course Description:** A survey of pre-college algebra. Topics include signed numbers, operations with algebraic expressions, first degree equations and inequalities in one variable, factoring, the Cartesian coordinate system, systems of first degree equations in two variables solved by graphical and algebraic means, exponents and radicals, an introduction to quadratic equations, and stated problems. This course may not be used to satisfy any degree requirements.

**Textbook:** [Available Online](#)

[Course Policies](#) ([pdf version](#))

## Course Syllabus

### Introductory Information and Review

- 1.1 [Numbers](#)
- 1.2 [Integers](#)
- 1.3 [Fractions](#)
- 1.4 [Exponents and Radicals](#)
- 1.5 [Order of Operations](#)
- 1.6 [Solving Linear Equations](#)
- 1.7 [Interval Notation and Linear Inequalities](#)
- 1.8 [Absolute Value and Equations](#)

### Points, Lines, and Functions

- 2.1 [An Introduction to the Coordinate Plane](#)
- 2.2 [The Distance and Midpoint Formulas](#)
- 2.3 [Slope and Intercepts of Lines](#)
- 2.4 [Equations of Lines](#)
- 2.5 [Parallel and Perpendicular Lines](#)
- 2.6 [An Introduction to Functions](#)
- 2.7 [Functions and Graphs](#)

### Polynomials

- 3.1 [An Introduction to Polynomial Functions](#)
- 3.2 [Adding, Subtracting, and Multiplying Polynomials](#)

3.3 [Dividing Polynomials](#)

3.4 [Quadratic Functions](#)

## **Factoring**

4.1 [Greatest Common Factor and Factoring by Grouping](#)

4.2 [Factoring Special Binomials and Trinomials](#)

4.3 [Factoring Polynomials](#)

4.4 [Using Factoring to Solve Equations](#)

## **Rational Expressions, Equations, and Functions**

5.1 Simplifying Rational Expressions

5.2 Multiplying and Dividing Rational Expressions

5.3 Adding and Subtracting Rational Expressions

5.4 Complex Fractions

5.5 Solving Rational Equations

5.6 Rational Functions