Math 107 Syllabus

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Textbook: Elementary and Intermediate Algebra 5ed., **Tussy** and **Gustafson**
MATH 107. Algebra for Pre-Calculus. 2 cr. Factoring and simplifying rational expressions, using interval notation, solving absolute value equations, solving and graphing linear equations and inequalities, applying rules of exponents, and using logarithms, solving exponential equations, using functional notation, evaluation of functions and graphs

Prerequisite: M95 or suitable placement test score.

Note. The order of the sections listed below is not necessarily the order in which they are covered. However, the following order is recommended.

CHAPTER 5 EXPONENTS

5.1 Rules for Exponents
5.2 Zero and Negative Exponents

CHAPTER 9 RATIONAL EXPONENTS

9.2 Rational Exponents

CHAPTER 6 FACTORING

6.1 The Greatest Common Factor; Factoring by Grouping
6.2 Factoring Trinomials of the Form $x^2 + bx + c$
6.3 Factoring Trinomials of the Form $ax^2 + bx + c$
6.4 Factoring Perfect-Square Trinomials and Differences of Two Squares
6.5 Factoring the Sum and Difference of Two Cubes
6.6 A Factoring Strategy
6.7 Solving Quadratic Equations by Factoring

CHAPTER 8 REVIEW OF FACTORING METHODS

8.6 Review of Factoring Methods: GCF, Grouping, Trinomials
8.7 Review of Factoring Methods: The Difference of Two Squares; the Sum and Difference of Two Cubes

CHAPTER 7 RATIONAL EXPRESSIONS AND EQUATIONS

7.1 Simplifying Rational Expressions
7.2 Multiplying and Dividing Rational Expressions
7.3 Adding and Subtracting Rational Expressions with Like Denominators; LCD
7.4 Adding and Silh/racting Rational Expressions with Unlike Denominators
7.5 Simplifying complex fractions
7.6 Solving Rational equations

CHAPTER 8 (CHAPTER 3)

8.1 Review of Solving Linear Equations, Formulas and Linear Inequalities (one variable)
8.2 Functions
8.3 Graphs of function
8.4 Solving Compound Inequalities
8.5 Solving Absolute Value Equations and Inequalities

CHAPTER 11

11.1 Algebra and Composition of Functions
11.2 Inverse functions
11.3 Exponential Functions
11.4 Logarithmic Functions
11.5 Base-e Exponential and Logarithmic Functions
11.6 Properties of Logarithms
11.7 Exponential and Logarithmic Equations