**Hill College**

**112 Lamar Drive**

**Hillsboro, TX 76645**

**COURSE SYLLABUS**

**Course Prefix and Number Course Title**

MATH 0304 Section: Semester: Intermediate Algebra

**Instructor:**

**Contact:** Phone: E-mail:

**ACGM Description**:

A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.

**Catalog Description**:

MATH 0304

This course is designed for students who have had one year of high school Algebra to prepare the students for success in college math courses. Topics covered include factoring, rational expressions and equations, linear and quadratic graphs, radical expressions and equations, complex numbers, and quadratic and absolute value equations and inequalities. This course will not meet the requirements for math credit for graduation with the Associate Degree.

Prerequisites: A grade of C or better in Math 0302 or assignment by appropriate test.

Introduction and Purpose:

This course provides study for students who have previously mastered basic algebraic concepts and skills. The material covered is necessary for success in Math 1314.

Instructional Materials:

Textbooks: Beginning & Intermediate Algebra, Fifth Edition; Elayn Martin-Gay; Pearson, Prentice Hall and/or Student Access Kit for MyMathLab

Supplies: Pencils, paper and calculator.

Objectives/Student Learning Outcomes:

At the completion of this course, the student should be able to:

1. Simplify rational expressions.

2. Perform arithmetic operations with rational expressions.

3. Solve equations containing rational expressions.

4. Simplify radical expressions

5. Perform arithmetic operations with radical expressions.

8. Rationalize the denominators of radicals.

9. Solve radical equations.

10. Solve quadratic equations by graphing, factoring, and completing the square.

11. Solve quadratic equations using the Quadratic Formula.

12. Write quadratic equations in various forms.

13. Analyze equations and graphs of quadratic functions.

14. Graph quadratic equations.

The students' success in completing these objectives will be measured using a set of examinations and assignments described, in detail under the section of this syllabus headed “Method of Evaluation”.

Method of Instruction

Instruction for this course will be delivered using traditional lecture, technology, and audio visual materials where appropriate and/or computer based technology depending on whether the class is face to face or online and the discretion of the instructor.

Method of Evaluation

The grade for the course will be determined based on a combination of homework grades, major test grades, and the Final Exam.

Students must earn a grade of C or better to advance to the next course. A grade of D or F will require the student to repeat the course or advance through the TSI exam.

Letter grades for the course will be based on the following percentages:

90-100% A

80-89% B

70-79% C

Below 70% D or F Based on attendance and participation.

Course Outline:

Class policies:

Regular attendance at all class meetings is required. Students will be expected to bring the required materials for all class meetings.

Topic Outline

1. Ch 7 Rational Expressions

Simplify Rational Expressions

Perform Operations with Rational Expressions

Solve Equations with Rational Expressions

Solve Problems with Rational Expressions

Simplify complex Fractions

1. Ch 8 Functions and Graphs

Graph and Write Linear Functions

Graph Non Linear Functions

Graph Piecewise-Defined Functions

Direct, Inverse, and Joint Variation

1. Ch 9 Inequalities and Absolute Value

Solve Compound Inequalities

Solve Absolute Value Equations and Inequalities

Graph Linear Inequalities

Graph Systems of Linear Inequalities

1. Ch 10 Rational Exponents and Radicals

Radicals and Radical Functions

Rational Exponents

Simplify Radical Expressions

Perform Operations with Radical Expressions

Rationalize Denominators

Solve Radical Equations and Problems

Complex Numbers

1. Ch 11 Quadratic Equations and Functions

Solve Quadratic Equations by Completing the Square

Solve by the Quadratic Formula

Solve Using Quadratic Methods

Nonlinear Inequalities in One Variable

Quadratic Functions and Their Graphs

**Disabilities/ADA**

Reports of discrimination based on disability may be directed to the ADA/Section 504 coordinator. The College District designates the following person to coordinate its efforts to comply with Title II of the Americans with Disabilities Act of 1990, as amended, which incorporates and expands the requirements of Section 504 of the Rehabilitation Act of 1973, as amended:

Name: Dr. Heather Kissack

Position: Executive Director of Human Resources

Address: 112 Lamar Drive, Hillsboro, TX 76645

Telephone: (254) 659-7731

Students with qualified and documented disabilities may request accommodations which will enable them to participate in and benefit from educational programs and activities. **Students should contact the Academic Advising and Student Success Center for more details at: 254 659 7650 for Hillsboro, 817 760 5650 for Cleburne, or 817 295-7392 for Burleson.**

**EEO Statement**

Hill College is committed to the principle of equal opportunity in education and employment. The college does not discriminate against individuals on the basis of age, race, color, religion, sex, national origin, disability, genetic information, or veteran status in the administration of its educational programs, activities, or employment policies.

**Hill College Mission Statement**

Hill College will provide high quality comprehensive educational programs and services. The college enhances the educational, cultural, and economic development of its service area and assists both individuals and the community to prepare for a more productive life.

Instructor’s class content: