INSTRUCTOR:  
DAY(S):  
TIME:  
ROOM NUMBER:  

TEXT:  Prealgebra, 5th Edition; Bittinger/Ellenbogen/Johnson

The Mathematics Department requires that a grade of “C” or better be earned before taking MATH 0310

ADA Compliance:  This college will adhere to all applicable federal, state, and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the policy of ACC to provide reasonable accommodations for qualified individuals who are students with disabilities. It is the student’s responsibility to contact the Counseling Center in a timely manner to arrange for appropriate accommodations.

Course Description
This course offers instruction and practice in the basic arithmetic operations, geometry, and statistics.

Objectives
This course is designed to develop the basic skills of arithmetic on an individual basis. There are two types of students who shall benefit from the course: Those who need an original presentation of the material, and those who need a review. The student who successfully completes the course should be ready for the material which is presented in Math 0310. During the semester, the student must demonstrate an understanding of the material presented through testing.

Course Outline -- Approximate number of hours of class needed to complete the work is indicated.

A. Whole Numbers – 4 hours
   1. Standard Notation
   2. Addition
   3. Subtraction
   4. Rounding and Estimating; Order
   5. Multiplication and Area
   6. Division
   7. Solving Equations
   8. Applications and Problem Solving
   9. Exponential Notation and Order of Operations

B. Introduction to Integers and Algebraic Expressions – 4 hours
   1. Integers and the Number Line
   2. Addition of Integers
   3. Subtraction of Integers
   4. Multiplication of Integers
   5. Division of Integers and Order of Operations
   6. Introduction to Algebra and Expressions
   7. Like Terms and Perimeter
   8. Solving Equations
C. Fraction Notation: Multiplication and Division – 5 hours
   1. Multiples and Divisibility
   2. Factorizations
   3. Fractions and Fraction Notation
   4. Multiplication of Fractions
   5. Simplifying
   6. Multiplying, Simplifying, and More with Area
   7. Reciprocals and Division
   8. Solving Equations: The Multiplication Principle

D. Fraction Notation: Addition, Subtraction, and Mixed Numerals – 5 hours
   1. Least Common Multiples
   2. Addition, Order, and Applications
   3. Subtraction, Equations, and Applications
   4. Solving Equations: Using the Principles Together
   5. Mixed Numerals
   6. Addition and Subtraction of Mixed Numerals; Applications
   7. Multiplication and Division of Mixed Numerals; Applications

E. Decimal Notation – 5 hours
   1. Decimal Notation
   2. Addition and Subtraction of Decimals
   3. Multiplication of Decimals
   4. Division of Decimals
   5. More with Fraction Notation and Decimal Notation
   6. Estimating
   7. Solving Equations
   8. Applications and Problem Solving

F. Introduction to Graphing and Statistics – 4 hours
   1. Tables and Pictographs
   2. Bar Graphs and Line Graphs
   3. Ordered Pairs and Equations in Two Variables
   4. Graphing Linear Equations
   5. Means, Medians, and Modes
   6. Predictions and Probability

G. Ratio and Proportion/Percent – 6 hours
   1. Introduction to Ratios
   2. Percent Notation
   3. Solving Percent Problems Using Percent Equations
   4. Solving Percent Problems Using Proportions
   5. Applications of Percent
   6. Sales Tax, Commission, and Discount
   7. Simple and Compound Interest
   8. Interest Rates on Credit Cards and Loans (optional)

H. Geometry and Measurement – 6 hours
   1. Systems of Linear Measurement
   2. Converting Units of Area
   3. More with Perimeter and Area
   4. Volume and Capacity
   5. Angles and Triangles
   6. Square Roots and the Pythagorean Theorem
   7. Weight, Mass, and Temperature
   8. Medical Applications
**Review for the Final Exam**
A review for the final will be available.

**Grading:**

A. Methods of Evaluation
1. Homework
2. Quizzes
3. Hour Exams
4. Lab assignments/out of class homework/projects **(Mandatory – must count the equivalent of an hour exam)**
5. Comprehensive Final Exam **(Mandatory – must count at least 25% of the semester grade)**

B. Grading System:

<table>
<thead>
<tr>
<th>Course Average</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
</tr>
<tr>
<td>70-79</td>
<td>C</td>
</tr>
<tr>
<td>Below 70</td>
<td>W, I, F, or R</td>
</tr>
</tbody>
</table>

**I** Incomplete
An incomplete may be awarded when the instructor determines that minimal work on the part of the student and the instructor will complete the course requirements. An incomplete grade not changed by the instructor to a grade of completion (A, B, C, or F) by the end of the following semester will automatically be changed to an F.

**R** Re-enroll
The re-enroll grade is used when the student is making satisfactory progress toward course objectives and needs additional time and instruction to master the material. **The grade of re-enroll may be earned a maximum of two times in this course.**

**W** Withdrawal
Students who file withdrawal requests by the published deadline will receive a grade of W.

**Attendance**
Students who are enrolled in this class due to a TSI requirement must remember that both enrollment and participation are required. Participation, at a minimum, means regular attendance. Missing more than 8 hours of this class could result in your being dropped from this course, being withdrawn from college, or receiving a grade of F in the course.

**Classroom Behavior**
It is expected that students will behave in a mature and courteous manner. Disruptive behavior during class will not be tolerated. Students are expected to be attentive, take notes, ask pertinent questions, arrive on time, and not leave until the class is dismissed. Conflicts which arise between the scheduled class time and the student’s personal schedule must be resolved by the student.

**ACADEMIC HONESTY IS ASSUMED.** A student found guilty of scholastic dishonesty is subject to disciplinary action. Violations such as plagiarism, cheating on tests, and collusion are described in the ACC Student Handbook. Consequences are at the discretion of the instructor and range from receiving a 0 on the assignment/test to failing the course to expulsion from the College.

Camcorders and any other video recording devices are prohibited in the classroom. Audio recording may be allowed **ONLY WITH THE PERMISSION OF THE INSTRUCTOR.**

**CELL PHONES** are not to be used and are not to ring during class. Cell phones are not to be out during tests. IF there are special circumstances, arrangements must be made with the instructor.
TEXAS HIGHER EDUCATION ASSESSMENT
MATHEMATICS

The mathematics section of the THEA test includes skills related to fundamental mathematics, algebra, and geometry. All the skills eligible for testing are described below.

THEA MATHEMATICS SKILLS
FUNDAMENTAL MATHEMATICS

1. Solve word problems involving integers, fractions, decimals, and units of measurement.
   1.1 Solve word problems involving integers.
   1.2 Solve word problems involving fractions.
   1.3 Solve word problems involving decimals (including percents).
   1.4 Solve word problems involving ratio and proportions.
   1.5 Solve word problems involving units of measurement and conversions (including scientific notation).

2. Solve problems involving data interpretation and analysis.
   2.1 Interpret information from line graphs, bar graphs, pictographs, and pie charts.
   2.2 Interpret data from tables.
   2.3 Recognize appropriate graphic representations of various data.
   2.4 Analyze and interpret data using measures of central tendency (mean, median, and mode.).
   2.5 Analyze and interpret data using the concept of variability.

ALGEBRA

3. Graph numbers or number relationships.
   3.1 Identify the graph of a given equation.
   3.2 Identify the graph of a given inequality.
   3.3 Find the slope and/or intercepts of a given line.
   3.4 Find the equation of a line.
   3.5 Recognize and interpret information from the graph of a function (including direct and inverse variation).

   4.1 Find the value of the unknown in a given one-variable equation.
   4.2 Express one variable in terms of a second variable in two-variable equations.
   4.3 Solve systems of two equations in two variables (including graphical solutions).

5. Solve word problems involving one and two variables.
   5.1 Identify the algebraic equivalent of a stated relationship.
   5.2 Solve word problems involving one and two unknowns.

6. Understand operations with algebraic expressions and functional notation.
   6.1 Factor quadratics and polynomials.
   6.2 Perform operations on and simplify polynomial expressions.
   6.3 Perform operations on and simplify rational expressions.
   6.4 Perform operations on and simplify radical expressions.
   6.5 Apply principles of functions and functional notation.

7. Solve problems involving quadratic equations.
   7.1 Graph quadratic functions.
   7.2 Graph quadratic inequalities.
   7.3 Solve quadratic equations using factoring, completing the square, or the quadratic formula.
   7.4 Solve problems involving quadratic models.

GEOMETRY
8. Solve problems involving geometric figures.
   8.1 Solve problems involving two-dimensional geometric figures (e.g., perimeter and area problems).
   8.2 Solve problems involving three-dimensional geometric figures (e.g., volume and surface area problems).
   8.3 Solve problems using the Pythagorean Theorem.

9. Solve problems involving geometric concepts.
   9.1 Solve problems using principles of similarity and congruence.
   9.2 Solve problems using principles of parallelism and perpendicularity.

**PROBLEM SOLVING**

10. Apply reasoning skills.
    10.1 Draw conclusions using inductive reasoning.
    10.2 Draw conclusions using deductive reasoning.

11. Solve applied problems involving a combination of mathematical skills.
    11.1 Apply combinations of mathematical skills to solve problems.
    11.2 Apply combinations of mathematical skills to solve a series of related problems.