MTH 099  
Beginning Algebra  
4 credits

I. Bulletin Description: Topics will include but not limited to: real numbers, variable expressions, linear equations and inequalities, applications, functions, operations with polynomials, and factoring. This course is designed to help students reach college-level skills and does not count toward a degree.

II. Prerequisite: Grade of “C” or better in MTH 095 or placement test.

III. Rationale for Course Level: MTH 099 is a developmental course designed to provide the basic algebra skills for success in college mathematics courses.


V. Other Requirements and/or Materials for the Course:  
A graphing calculator without a Computer Algebra System (CAS) is highly recommended (e.g. TI-83 or TI-84).

VI. Student Learning Objectives:

Institutional Learning Goals:  
Students will demonstrate:  
• Competency in reading, writing, oral communication, and numerical literacy.  
• The ability to gather, analyze, interpret, evaluate, and apply information.  
• Applied knowledge of the physical world.

Student Learning Course Objectives  
After successful completion of this course, the student will be able to:

1. Represent mathematical concepts (primarily related to linear equations) using multiple perspectives; symbolically, numerically, graphically, and verbally.
2. Solve linear equations and inequalities in one unknown.
3. Graph linear equations and inequalities using tables, canonical linear formulas, the coordinates of two points, or a point and a given slope.
4. Solve systems of equations using the techniques of graphing, substitution, and elimination.
5. Use the rules for exponents to simplify exponential expressions.
6. Apply algebraic concepts, such as addition, subtraction, multiplication, division, factoring, and solving, to polynomial expressions and equations.
VII. Suggested Course Outline:

- MTH 095 Review (The Real Number System): 1 week
- Solving Equations and Inequalities: 3 weeks
  - Exam 1
- Graphing Linear Equations and Inequalities in 2 variables: 2 weeks
- Solving Systems of Linear Equations: 1 week
- Applications of Linear Equations in 2-variables: 1 week
  - Exam 2
- Exponents and Polynomial Operations: 2 weeks
- Factoring Polynomials: 2 weeks
  - Exam 3
- Rational Expressions and Applications: 1 week
- Roots and Radical Expressions: 1 week
- Final Exam

VIII. Suggested Course Evaluation:

- Homework Notebook
- In-class assignments
- Quizzes
- Three in-class exams
- A cumulative final exam

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<th>Assignment Type</th>
<th># of assignments</th>
<th>Max points each</th>
<th>Total</th>
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<tr>
<td>1. Exams</td>
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<tr>
<td>2. Quizzes</td>
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<td>3. Homework Notebook</td>
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<td>4. Cumulative final exam</td>
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Maximum Total Points: 1000

IX. Bibliography:


Syllabus Prepared By:

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Earle M Crosswait III

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Date