Salem Community College MAT093 Course Syllabus

MAT093 Elementary Algebra: Credits 4:0:4 (Credits do not apply toward graduation requirements.)

Prerequisite: College Placement Test or MAT092

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**Course Description**: This course is designed to enable students to become very proficient in the manipulative skills of traditional algebra. Students investigate algebra at the very basic level. Topics include functions, linear equations and inequalities, properties of lines, systems of equations, exponents and polynomials, factoring, rational expressions, radical expressions and quadratic equations. The concepts and skills of MAT093 are introduced utilizing computerized and programmed materials then reinforced through individual and small group instruction.

**Course Performance Objectives:**

Course Performance Objective #1: The student will perform calculations using real numbers and analyze basic algebraic expressions.

Course Performance Objective #2: The student will solve basic equations and inequalities.

Course Performance Objective #3: The student will understand the graphs of linear equations.

Course Performance Objective #4: The student will manipulate polynomials.

Course Performance Objective #5: The student will factor polynomials and solve quadratic equations.

Course Performance Objective #6: The student will solve systems of linear equations.

**Course Activities:** Students will use computer based assessments to develop a customized individual instructional plan. This individual content will be delivered by computer, supplemented by the instructor.

**Course Requirements and Means of Evaluation:** Please refer to the instructor’s syllabus addendum (to be distributed in class) for specific information regarding the course requirements and means of evaluation.

**Grading Scale:** 93 – 100 = A, 90 – 92 = A-, 88 – 89 = B+, 83 – 87 = B, 80 – 82 = B-, 78 – 79 = C+, 73 – 77 = C,

70 – 72 = C-, 68 – 69 = D+, 60 – 67 = D, 59 – below = F, Failure due to attendance = FA

**Required Text(s):** MyMathLab Standalone Access Card (contains ebook version of Bittinger, Marvin L., Introductory Algebra, 11th Ed (2011), Addison Wesley) ISBN: 9780321698735

OR

Bittinger, Marvin L., Introductory Algebra, 11th Ed (2011), Addison Wesley, ISBN: 9780321624406 (includes MyMathLab Student Access Code Card)

**Materials / Supplies*:*** Personal headphones are required to access audio content.

**Additional Costs:** Students are required to access the internet outside of class time to complete assigned homework or assesments. This may be done at the computer labs at the college, or by using private computer equipment. Any charges incurred by using equipment outside of the college are the student’s responsibility.

**ADA Statement:** If you have a 504 Accommodation Plan, please discuss it with your instructor. If you have any disability but have not documented it with the Disability Support coordinator at Salem Community college, you must do so to be eligible for accommodations. To contact the Disability Support Coordinator, call 856-351-2773, visit DON108, or email disabilitysupport@salemcc.edu to set up an appointment. To find out more information about disability support services at Salem Community College, visit www.salemcc.edu/students/student-success-programs/disability-support.

**Attendance Policy:** Regular and prompt attendance in all classes is expected of students. Students absent from class for any reason are responsible for making up any missed work. Faculty members establish an attendance policy for each course and it is the student’s responsibility to honor and comply with that policy.

**Course Content Outline:**

1. Real Numbers and Algebraic Expressions
   1. Addition
   2. Subtraction
   3. Multiplication
   4. Division
   5. Properties
   6. Simplifying Expressions
   7. Order of Operations
2. Equations and Inequalities
   1. Addition Principle
   2. Multiplication Principle
   3. Combining Addition and Multiplication Principles to Solve Equations
   4. Formulas
   5. Solving Inequalities
3. Graphs of Linear Equations
   1. Applications of Graphs of Linear Equations
   2. Intercepts
   3. Slope
   4. y-Intercept
   5. Equations of Lines
   6. Parallel Lines
   7. Perpendicular Lines
   8. Graphing Inequalities
4. Polynomial Operations
   1. Integer Exponents
   2. Scientific Notation
   3. Addition
   4. Subtraction
   5. Multiplication
   6. Special Products
   7. Polynomials in Several Variables
   8. Division
5. Factoring Polynomials
   1. Trinomials
   2. FOIL Method
   3. ac-Method
   4. Squares and Differences of Squares
   5. Factoring Strategy
   6. Solving Quadratic Equations
6. Systems of Equations
   1. Equations in Two Variables
   2. Substitution Method
   3. Elimination Method