Massasoit Community College
Introductory Algebra MATH011-XX
Spring XX/Fall XX

INSTRUCTOR:

PHONE: **EMAIL**:

OFFICE: **OFFICE HOURS**

CLASS TIME & LOCATION:

FINAL EXAM:

REQUIRED TEXT: Introductory Algebra: An Applied Approach, Aufmann and Lockwood, 9th edition.

REQUIRED MATERIALS: Scientific calculator
Notebook or 3-ring binder
Graph paper (optional)

COURSE DESCRIPTION:
This course is designed to provide the fundamental concepts of algebra and examine some simple applications of these concepts, i.e. word problems. Topics include signed numbers, algebraic expressions, linear equations and inequalities in one variable, the Cartesian coordinate system, linear equations and inequalities in two variables, systems of equations, and descriptive statistics (e.g. mean, median, mode, and reading graphs).
Note: Credits earned in this course cannot be applied toward graduation.
Prerequisite: C- or higher in Fundamentals of Mathematics (MATH010) or waiver by placement testing results or Departmental Approval.

ATTENDANCE:
Attendance will be taken each class. Regular class attendance is absolutely essential. If you are absent, it is your responsibility to get class notes and make up any missed assignments. **No make up tests (or quizzes) will be given unless made up before the tests are handed back – BEFORE the next class meeting (or unless other arrangements have been made).** That means you must attend class on test days or *call me* or *email me* to make other arrangements in extreme circumstances.

GRADING POLICY:
Seven tests will be given throughout the semester (*specific dates will be announced at the beginning of each chapter on the chapter outline*). Your lowest test grade can be dropped. The test grades will be averaged and will account for 70% of your semester grade. The final exam will account for 20% of your grade and selected homework assignments will account for 10% of your semester grade.

Your final grade will be based on the following:

	A = 94 – 100%	*A- = 90 – 93%*
B+ = 87 – 89%	*B = 84 – 86%*	*B- = 80 – 83%*
C+ = 77 – 79%	*C = 74 – 76%*	*C- = 70 – 73%*
D+ = 67 – 69%	*D = 64 – 66%*	*D- = 60 – 63%*
F = below 60%		

ASSIGNMENTS:
Homework assignments are listed on WebAssign. You should:
- Do each problem.
- If you get it wrong, try again.
- Make use of on line support (videos, step by step solutions, etc) to help if you cannot figure out what you did wrong.
- If you still do not understand, make use of the free tutoring in the ARC.
- Ask any lingering questions at the beginning of the next class.
- All homework must be completed by test day to get full credit.

OR do the assigned problems in the book:
- Do each problem and check the answer in the back of the book. You must show any necessary work on the homework or you WILL NOT RECEIVE CREDIT.
- If you get it wrong, try again – and make a note of what you did wrong the first time.
- If you still do not understand, make use of the free tutoring in the ARC.
- Ask any lingering questions at the beginning of the next class.
- Pass in homework on test day.

TEACHING PROCEDURE:
Each class will begin with a discussion of the previous class assignment. The new material will then be presented.

ACCOMODATIONS STATEMENT:
Massasoit's Disability Services office provides accommodations to students who qualify for services based on a documented disability. Students interested in accessing classroom or testing accommodations must contact Disability Services directly. In an effort to avoid any lapse in services, new and returning students are encouraged to contact Disability Services at the beginning of each semester to receive an Accommodation Letter for the current semester. Students on all campuses can contact Disability Services at 508-588-9100 X 2132 or by e-mail at DisabilityServices@massasoit.edu for further information or questions.

TITLE IX STATEMENT:
Massasoit Community College is committed to providing a safe learning and work environment for all. If you believe you have experienced discrimination, sexual harassment, sexual assault, domestic/dating violence, stalking, or retaliation, we encourage you to report it to *Yolanda Dennis, Chief Diversity Officer and Title IX Coordinator, Office of Diversity and Inclusion, at 508-588-9100, x1309 or* ODI@massasoit.edu. While you may talk to a faculty member, understand that as a "responsible employee" of the College, the faculty member must report what you share to the College's Title IX Coordinator. On and off campus resources and interim measures are available to assist you. Information about both of these policies can be found at www.massasoit.edu/title-ix and www.massasoit.edu/eeo. We are here to support you.

RECOMMENDED STUDY APPROACH:
- Attend all classes and take thorough notes during class.
- During the week, read over notes and examples to be sure you understand what was done in class.
- Do all homework problems before the class meets again. As you are working on the homework, periodically check the answers in the back of the book. If you have the correct answer, highlight the answer. If your answer is incorrect, try to redo the problem and make a note of what you did wrong the first time. If you cannot possibly get the correct answer leave a space on your paper to fill in the problem when you find out how to do it correctly.
- If you have one or two homework problems that you cannot do correctly ask about them at the beginning of the next class. If you have a lot of problems wrong, or if you are confused on any of the topics, seek help in the **ARC** before the class meets again.

TECHNOLOGY DEVICES IN THE CLASSROOM:

The use of technology that is not course related will not be allowed in the classroom. This includes IPods, cell phones and any other devices that are not being used in relation to the course content. A scientific calculator is required and you will not be allowed to use the calculator on your cell phone during class or on tests.

Tentative Course Outline

WEEK	TOPIC
1	1.1 Introduction to Integers 1.2 Addition and Subtraction of Integers 1.6 Addition and Subtraction of Rational Numbers
2	1.3 Multiplication and Division of Integers 1.7 Multiplication and Division of Rational Numbers 1.4 Exponents and Order of Operation
3	CHAPTER 1 TEST 2.1 Evaluating Variable Expressions 2.2 Simplifying Variable Expressions (Objective A)
4	2.2 Simplifying Variable Expressions (Objective B,C,D) 2.3 Translating Verbal Expressions into Variable Expressions
5	CHAPTER 2 TEST 3.1 Introduction to Equations 3.3 General Equations – Part I (Objective A)
6	3.4 General Equations – Part II (Objective A and B) 6.6 Ratio and Proportion (Objective A)
7	EQUATION TEST 3.2 The Basic Percent Equation (Objective A) 3.5 Translating Sentences into Equations 6.6 Ratio and Proportion (Objective A cont'd) 6.7 Literal Equations
8	3.3 (Objective B) Using Formulas to Solve Problems 3.4 (Objective C) Using Formulas to Solve Problems 9.1 Sets (Inequality Notation) 9.2 Addition and Multiplication Properties of Inequalities 9.3 General Inequalities
9	APPLICATIONS and INEQUALITIES TEST 7.1 Rectangular Coordinate System 7.2 Linear Equations in Two Variables
10	7.3 Intercepts and Slopes of Straight Lines 9.4 Graphing Linear Inequalities
11	GRAPHING TEST 7.4 Equations of Straight Lines *Writing Equations of Parallel and Perpendicular Lines
12	LINEAR EQUATIONS TEST 8.1 Solving Systems of Linear Equations by Graphing 8.2 Solving Systems of Linear Equations by the Substitution Method
13	8.3 Solving Systems of Linear Equations by the Addition Method Application Problems in Two Variables
14	LINEAR SYSTEMS TEST *Statistics Packet *Final Exam Review

COURSE OBJECTIVES:

COURSE OUTCOMES	OUTCOMES ACTIVITIES
At the end of this course, students will be able to	
Apply the rules of signed numbers, the order of operations agreement, and the rules for simplifying algebraic expressions in order to have the basic skills necessary for successful completion of the other topics in this course and related topics in other courses.	1. Add, subtract, multiply and divide signed rational numbers. (W,R,CT,QS) 2. Simplify numeric expressions according to the order of operations. (emphasis on integers) (W,R,CT,QS) 3. Evaluate variable expressions. (W,R,CT,QS) 4. Simplify algebraic expressions using the distributive law. (W,R,CT,QS) 5. Combine like terms. (W,R,CT,QS)
Solve first degree equations and inequalities in one variable in order to solve problems that can be modeled by these types of relationships.	1. Determine whether a given number is a solution of an equation/inequality. (W,R,CT,QS) 2. Solve equations/inequalities of the form $ax = b, x + a = b, ax + b = c, ax + b = cx + d.$ (W,R,CT,QS) 3. Solve equations/inequalities containing fractions and parentheses. (W,R,CT,QS) 4. Solve literal equations. (W,R,CT,QS) 5. Solve proportions. (W,R,CT,QS) 6. Translate and solve number problems, percent problems, ratio and proportion problems. (W,R,CT,QS)
Plot points and graph linear equations and inequalities on the Cartesian coordinate system in order to use these skills to solve related problems in this and related courses.	1. Plot points and find the coordinates of a given point. (W,R,CT,QS) 2. Graph an equation/inequality by plotting points, by finding the x-, and y-intercepts, and by using the slope-intercept method. (W,R,CT,QS) 3. Graph an equation/inequality of the form $y = mx + b, Ax + By = C, y = b, x = a.$ (W,R,CT,QS)
Determine an equation of a given line in order to solve application problems in this and related courses.	1. Find the slope of a line given two points or given an equation of the line. (W,R,CT,QS) 2. Write an equation of a line given a point and the slope, two points, or information about parallel and perpendicular lines. (W,R,CT,QS) 3. Determine when two lines are parallel, perpendicular or neither.(W,R,CT,QS)
Solve systems of linear equations in order to solve applications problems in this and related courses.	1. Solve a system of linear equations in two variables by graphing, the substitution method, and the addition method. (W,R,CT,QS) 2. Determine if a system of linear equations is inconsistent or dependent. (CT,QS,W,R) 3. OPTIONAL: Solve a system of linear equations using Cramer's Rule. (W,R,CT,QS) 4. Solve mixture, current, distance, and number word problems. (W,R,CT,QS)
Solve simple descriptive statistics problems in order to analyze and interpret data in real word situations.	1. Read and interpret bar graphs, pie graphs, and line graphs. (W,R,CT,QS) 2. Calculate the mean, the median, and the mode for a given set of data. (W,R,CT,QT)
Strengthen Core Competencies** in order to increase success in this and other courses and in the workplace.	Reference above

**Indicate the Core Competencies that apply to the outcomes activities and assessment tools: Critical Thinking (CT); Technology Skills (TS); Oral Communications (OC); Quantitative Skills (QS); Reading (R); Writing (W).