Massasoit Community College

Instructor:
Office:
Email:
Phone:
Office Hours:

Course: Contemporary Mathematics
Course Number: MATH115-XX
Semester:
Classroom:
Day and Time:

Course Description: In this course, students develop problem-solving skills while covering topics which include number sense and estimation, proportions, unit conversions, metric system, statistics and probability, percents, the mathematics of finance, and mathematical modeling of contemporary problems. Additional topics are tailored to meet the needs of students in specific programs. Prerequisite: MATH002 Preparation for College Math II or MATH011 Introductory Algebra; waiver by placement testing results; or departmental approval.

Required Text and Materials:

1. Larson, *Math and You*, 1st edition, Larson Texts. ISBN: 9781608406029. Note: this textbook can be accessed free online at www.math.andyou.com.
2. You will need a calculator for this course. A scientific calculator, such as the TI30X-IIS should be able to handle all of the calculations needed for the course. A graphing calculator, such as the TI-84 Plus should work as well. You may not use any other technologies such as a cell phone, iPod, tablet, laptop, etc. as a calculator on assessments.

Course Topics:

Unit 1: The Mathematics of Calculation
      1.2   Rounding & Calculators
      1.3   Using Percent
      1.4   Units & Conversions

Unit 2: The Mathematics of Consumption
      2.1   Unit Prices
      2.2   Markup & Discount
      4.2   Inflation & the Consumer Price Index

Unit 3: The Mathematics of Borrowing and Saving

Teaching Procedures: This course will be taught in a lecture/discussion format with ample opportunity for student questions. Generally, class will begin with a question and answer session on the most recent homework assignment. New material will then be presented in a lecture format and homework be assigned to reinforce the topics covered in class.

Instructional Objectives:

COURSE OUTCOMES	OUTCOMES ACTIVITIES
Application problems will be chosen to reflect the career interests of the class population.	
At the end of this course, students will be able to	
Demonstrate an understanding of the concepts of numbers and estimation.	1. Review the concept of place value. (QS) 2. Develop estimation skills. (R,QS,CT) 3. Apply estimation skills to problem solving. (R,QS,W,CT)
Apply the concepts of ratio and proportion to solve applied problems.	1. Find rates and unit rates. (R,QS,CT,TS) 2. Solve proportions. (W,R,QS,CT,TS) 3. Solving application problems using proportions. (W,R,QS,CT,TS)
Use both the English and metric systems of measurements in order to use them appropriately.	1. Make conversions within each system and between systems. (QS,CT,TS) 2. Compute unit conversions as necessary for applied problems. (QS,CT,W,R,TS)
Solve descriptive statistics problems in order to analyze and interpret data in real word situations.	1. Read, interpret, and create bar graphs, pie graphs, and line graphs. (W,R,CT,QS) 2. Calculate the mean, the median, the mode, the range and the standard deviation for a given set of data. (W,R,CT,QS,TS)

Use the rules of basic probability in order to solve related problems.	1. Apply the basic concepts of probability including the addition and multiplication rules. (CT,QS,R,TS) 2. Solve problems involving the Fundamental Counting Principle, permutations, and combinations. (CT,QS,R,TS)
Solve problems involving the basic percent equation in order to develop techniques to solve applied problems.	1. Solve the basic three types of percent equations. (W,R,CT,QS,TS) 2. Solve real life application problems, such as simple interest and sales tax, percent increase and decrease, sales discount and commission. (W,R,CT,QS,TS) 3. Identify uses and abuses of percents. (W,R,CT,QS,TS)
Apply the concepts of consumer mathematics in order to solve problems involving the mathematics of finance.	1. Solve application problems involving simple and compound interest. (CT,QS,R,TS,W) 2. Solve problems involving annuities. (CT,QS,R,TS) (CT,QS,R 3. Calculate loan payments. (CT,QS,R,TS,W)

OPTIONAL:
Use the properties of the normal distribution in order to solve related problems.
	1. Find the mean and standard deviation of a normally distributed set of data. (CT,QS,R,TS)
	2. Solve problems involving the normal distribution: (CT,QS,R,TS)
	   a. find z-scores,
	   b. find probabilities,
	   c. find the data value for a given probability.

Strengthen Core Competencies** in order to increase success in this and other courses and in the workplace.	Referenced 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).

Basis for Student Grading: Grades for this course will be assigned as follows:

Grade	Average
A	93%-100%
A-	90%-92%
B+	87%-89%
B	83%-86%
B-	80%-82%
C+	77%-79%

Grade	Average
C	73%-76%
C-	70%-72%
D+	67%-69%
D	63%-66%
D-	60%-62%
F	0-59%

The grade you earn is the grade you will receive in this course. Grades are not negotiable. You will not be allowed to make up work, substitute alternative assignments, or submit extra assignments in order to improve your grade during the semester or after the semester ends.

Grades of incomplete are given only in situations when extenuating circumstances prevent a student from taking the final exam or fulfilling a specific requirement in the course. The grade of "I" cannot be used to give students additional time to complete course assignments in order to raise their grade.

Basis for Evaluating Student Performance: The grade for this course will be weighted based on the following categories:

- *Tests (15%)*: Five tests will be given. Your lowest test score will be dropped. Each remaining test will count for 15% of your semester grade. No make-up tests will be given.
- *Mini Projects (15%)*: Mini projects will be assigned throughout the semester. These will be averaged and count for 15% of your semester grade.
- *Homework (10%)*: Homework from the textbook will be collected at the dates specified on each unit outline. It will be averaged and count for 10% of your semester grade.
- *Final Project (15%)*: There will be a final project that will account for 15% of your semester grade.

There is no extra credit available for this course.

Tentative Test Schedule/Assignment(s) Schedule:

Assignment:	Tentative Date:
Test 1	
Test 2	
Test 3	
Test 4	
Final Exam	

Attendance: Attendance for this course is mandatory. After the third absence, students will lose two points per absence thereafter from their final average. I will take attendance at the beginning of every class, and students not present at that time will be marked absent for the class, even if they show up late. If you must miss a regular class, you are still responsible for the material that was presented in class. The average student needs to attend all class meetings in order to be successful in this course.

Accommodations 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.

Academic Integrity: Academic dishonesty will not be tolerated. Please see the following URL for more information on the college's policies on academic integrity:

http://www.massasoit.edu/academics/policies/academic-honesty/index