

Syllabus: Course Policies and Procedures

Contact Information

Instructor:

Office:

Email:

Phone:

Office Hours:

Course Information

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, percent's, the mathematics of finance, and mathematical modeling of contemporary problems. Additional topics are tailored to meet the needs of students in specific programs.

Required Text and Materials:

1. Larson, *Math and You*, 1st edition, Larson Texts. ISBN: 9781608406029. Note: this textbook can be accessed free online. Here is a link to the [e-text](#).
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

- 6.1 Introduction to Lending
- 6.2 Buying Now, Paying Later
- 6.3 Home Mortgages
- 6.4 Savings & Retirement Plans

Unit 4: The Mathematics of Likelihood

- 8.1 Assigning a Measure to Likelihood
- 8.2 Estimating Likelihood
- 8.3 Expected Value
- 8.4 Expecting the Unexpected

Unit 5: The Mathematics of Description

- 9.1 Information Design
- 9.2 Describing "Average"
- 9.3 Describing Dispersion

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/Student Learning Outcomes

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 Policy

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

The Office of Access & Disability Resources (ADR) is committed to ensuring that students with disabilities have equal, effective, and meaningful access to all academic programs, community events, goods, and services provided by the College in compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Students with disabilities interested in establishing eligibility for services and/or academic accommodations will need to voluntarily disclose their disability to ADR, submit qualifying documentation and complete an ADR Intake meeting. During the meeting reasonable and appropriate academic accommodations will be determined. Visit the [Office of Access and Disability Services website](#) for more information and to begin the process to establish eligibility.

ADR uses a platform called Accommodate to manage the accommodation process. To make an initial accommodation request, please [submit a request through Accommodate to ADR](#).

Returning students with accommodations previously approved can request updated Accommodation Letters by accessing the ADR card in the MyMassasoit student portal. Log into Accommodate and click on Semester Request.

Students are expected to check in with faculty regarding approved accommodations. Communication between students, faculty, and ADR is key to successful accommodation implementation.

Students can contact ADR at 508-588-9100 x1807 or by email at adr@massasoit.mass.edu.