

# Moberly Area Community College Common Syllabus

## MTH010 Fundamentals of Mathematics

### Current Term

**Instructor:**

**Office number:**

**Office hours:**

**Response Time:** I typically respond to student emails within 24 hours, Monday through Friday.

**Contact information:**

**Classroom number:**

**Class days and time:**

**Course Description:** MTH010 Fundamentals of Mathematics (3-0-3)

Fundamentals of Math is designed to review and/or establish basic skills with integers, fractions, decimals, ratios, and percents. Students are introduced to variables, basic linear equations, proportions, metric and U.S. customary unit conversions, geometry formulas, slope and slope-intercept form. (FA, SP, SU)

**Prerequisite/Corequisite:** None.

**Text:** The text is an eBook included with the class. There is no print option available in the MACC bookstore.

Text: *Prealgebra*  
Author: Lial, Hestwood  
Edition: 6<sup>th</sup> Edition  
Publisher: Pearson

**Other Required Materials:** scientific calculator (recommended TI-30XS Multiview)  
Department Recommendation: Three ring notebook, dividers, filler paper are strongly recommended to help students learn organization.

**Purpose of Course:**

The purpose of Fundamentals of Math is to enable the student to significantly improve his/her mathematical skills. This is accomplished through a demonstration of methods, homework, group work, computer work as well as formal and informal assessments. Through improved math skills, the student is better prepared to be successful in his/her subsequent courses.

It is also the purpose of all developmental classes to help each student become successful through the development of a variety of college study skills.

**Course Objectives (CO):**

Upon successful completion of this course, students will be able to understand and solve problems involving:

- |                             |   |
|-----------------------------|---|
| 1. Integers                 | 6. Ratios and proportions                       |
| 2. Solving linear equations | 7. Percents                                     |
| 3. Problem solving          | 8. Introduction to graphing                     |
| 4. Fractions                | 9. Unit conversions (Metric and U.S. customary) |
| 5. Decimals                 |   |

**Course Content:**

- Chapter 1: Introduction to Algebra: Integers
- Chapter 2: Understanding Variables and Solving Equations
- Chapter 3: Solving Application Problems
- Chapter 4: Rational Numbers: Positive and Negative Fractions
- Chapter 5: Rational Numbers: Positive and Negative Decimals
- Chapter 6: Ratio, Proportion, and Line/Angle/Triangle Relationships
- Chapter 7: Percent
- Chapter 8: Measurement
- Chapter 9: Graphs and Graphing

**Statement to Connect Course with Institutional Student Level Outcomes:**

In compliance with MACC’s Institutional Student Level Outcomes, the student who successfully completes this course will be able to meet the following institutional learning outcomes:

- **Higher Order Thinking:** Students will demonstrate the ability to distinguish among opinions, facts, and inferences; to identify underlying or implicit assumptions; to make informed judgments; to solve problems by applying evaluative standards; and to reflect upon and refine those problem-solving skills. This outcome involves creative thinking, critical thinking, and quantitative literacy.

**Assessment of Student Learning:**

Grades will be calculated in the Canvas gradebook where **70% mastery will be necessary for satisfactory completion of the course.** A grade of less than 70% will result in the student being required to repeat the course. Grades will be updated at least after each chapter test throughout the semester in the Canvas gradebook.

The grading scale will be structured as follows:

- A – 90-100%
- B – 80-89%
- C – 70-79%
- D – 60-69% (Students receiving a D will be required to repeat the course.)
- F – 0-59%

Points will be accumulated by:

Homework/Quizzes/Projects: 20%  
Chapter/Unit Tests: 60%  
Final Exam: 20%

In order to help students reach a 70% mastery of the subject matter, students scoring less than a 70% on a test will be allowed to retake the test one time only. The retake must be completed before the next chapter test. The retake score will be used for that chapter test, better or worse. If a student does not take a test when it was scheduled, it will be scored as a zero with the opportunity to replace the original grade of zero with the retake test grade.

**Make-up and late work:**

Per instructor's policy

**Schedule of Student Assignments/Activities:**

Instructors will identify a Student Assignment/Activities schedule. Instructors have the prerogative to construct the schedule by class periods or weeks in order to cover the entire curriculum. A sample schedule is attached.

**Instructor Policies:**

**Tardiness:**

Per instructor's policy in relationship to points given in the course and not in relationship to attendance.

**Collegewide Policies:**

All faculty and students need to be aware of collegewide policies and procedures. Statements on Academic Dishonesty, ADA, Attendance, Title IX, and other important collegewide policies can be accessed by clicking on the following: [Collegewide Policies in Student Resources](#).

**Sample Schedule for MTH010 – Fundamentals of Math**

Week 1	Course introduction 1.2 Introduction to Integers	1.8 Exponents & Order of Operations 2.1 Introduction to Variables
Week 2	2.2 Simplifying Expressions 2.3 Solving Equations Using Addition	2.4 Solving Equations Using Multiplication
Week 3	2.5 Solving Equations with Several Steps	Unit 1 Test
Week 4	3.1 Problem Solving: Perimeter 3.2 Problem Solving: Area	3.3 Solving Applications with One Unknown
Week 5	3.4 Solving Applications with Two Unknowns	4.1 Introduction to Signed Fractions 4.2 Writing Fractions in Lowest Terms
Week 6	4.6 Exponents, Order of Operations & Complex Fractions	4.7 Problem Solving with Fractions
Week 7	4.8: Geometry Applications: Area and Volume	Unit 2 Test
Week 8	5.1/5.2 Reading, Writing & Rounding Decimal 5.3/5.4/5.5 Add, Subtract, Multiply and Divide Signed Decimals	5.6 Fractions and Decimals
Week 9	5.9 Problem Solving with Decimals	6.1/6.2 Ratios and Rates
Week 10	6.3/6.4 Proportions and Problem Solving	Unit 3 Test
Week 11	7.1 The Basics of Percent 7.2 Percent Proportions	7.3 Percent Equations
Week 12	7.4 Problem Solving with Percent	8.1 Problem Solving with U.S. Measurement Units
Week 13	8.2 The Metric System - Length	8.3 The Metric System – Capacity and Weight (Mass)
Week 14	Unit 4 Test Review	Unit 4 Test
Week 15	9.4 The Rectangular Coordinate System 9.5 Introduction to Graphing Linear Equations	Final Exam Review
Final Exam Week		