

## Washtenaw Community College Comprehensive Report

### MTH 067 Foundations of Mathematics

**Effective Term: Winter 2024**

#### Course Cover

**College:** Math, Science and Engineering Tech

**Division:** Math, Science and Engineering Tech

**Department:** Math & Engineering Studies

**Discipline:** Mathematics

**Course Number:** 067

**Org Number:** 12200

**Full Course Title:** Foundations of Mathematics

**Transcript Title:** Foundations of Mathematics

**Is Consultation with other department(s) required:** No

**Publish in the Following:** College Catalog , Time Schedule , Web Page

**Reason for Submission:** Three Year Review / Assessment Report

**Change Information:**

**Other:**

**Rationale:** This is the three-year review for MTH 067. The course mentor is eliminating the Miller text and making the OER text the only text option for the course. This was discussed with the department and no harm will be done and it will be a significant cost savings for MTH 067 students.

**Proposed Start Semester:** Winter 2024

**Course Description:** In this developmental math course, students learn problem-solving and basic algebra skills. Topics for this course include applications involving integers, decimals and fractions, as well as applications of percents, proportions and consumer credit, algebraic expressions, algebraic properties, algebraic operations and multi-step equation-solving. The Rectangular Coordinate system and applications of algebra are also introduced. Students who successfully complete this course with a minimum grade of "C" will raise their Academic Math level to 2.

#### Course Credit Hours

**Variable hours:** No

**Credits:** 4

**Lecture Hours: Instructor:** 60 **Student:** 60

**Lab: Instructor:** 0 **Student:** 0

**Clinical: Instructor:** 0 **Student:** 0

**Total Contact Hours: Instructor:** 60 **Student:** 60

**Repeatable for Credit:** NO

**Grading Methods:** Letter Grades

Audit

**Are lectures, labs, or clinicals offered as separate sections?:** NO (same sections)

#### College-Level Reading and Writing

Reduced Reading/Writing Scores

#### College-Level Math

No Level Required

## **Requisites**

### **Prerequisite**

Academic Reading Level 5 or higher; no minimum writing level; Math level no higher than level 2

## **General Education**

### **Degree Attributes**

Below College Level Pre-Reqs

## **Request Course Transfer**

### **Proposed For:**

## **Student Learning Outcomes**

1. Solve application problems involving integers, fractions, decimals, percents and proportions.

### **Assessment 1**

Assessment Tool: Outcome-related common final exam questions

Assessment Date: Winter 2026

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: A random sample of approximately 30% of students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of all students assessed will achieve a mean score of 70% or higher for all questions on the common final exam related to this outcome.

Who will score and analyze the data: Course mentor

2. Solve algebraic equations that involve more than two steps.

### **Assessment 1**

Assessment Tool: Outcome-related common final exam questions

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Who will score and analyze the data: Course mentor

3. Graph coordinate pairs in the Cartesian coordinate plane.

### **Assessment 1**

Assessment Tool: Outcome-related common final exam questions

Assessment Date: Winter 2026

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: A random sample of approximately 30% of students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of all students assessed will achieve a mean score of 70% or higher for all questions on the common final exam related to this outcome.

Who will score and analyze the data: Course mentor

## **Course Objectives**

1. Graph an ordered pair of numbers in the Cartesian coordinate plane.

2. Solve application problems involving addition, subtraction, multiplication and division of integers with calculator support.
3. Solve application problems involving addition, subtraction, multiplication and division of fractions and mixed numbers with calculator support.
4. Solve application problems involving addition, subtraction, multiplication and division of decimals with calculator support.
5. Convert from percents to decimals to fractions.
6. Solve application problems involving percent, ratio and rate with calculator support, including applications of simple and compound interest.
7. Simplify algebraic expressions involving the distributive property and combining like terms.
8. Evaluate expressions for a given value of the unknown.
9. Solve one-step algebra equations.
10. Solve two-step algebra equations.
11. Solve algebraic equations requiring more than two-steps, including those involving the distributive property and combining like terms.

### New Resources for Course

#### Course Textbooks/Resources

##### Textbooks

College of the Redwoods (edited by Jason Davis)). *Prealgebra*, 2 ed. Department of Mathematics  
College of the Redwoods, 2009

##### Manuals

##### Periodicals

##### Software

#### Equipment/Facilities

Level III classroom

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
<b>Faculty Preparer:</b> <i>Jason Davis</i>	<i>Faculty Preparer</i>	<i>May 16, 2023</i>
<b>Department Chair/Area Director:</b> <i>Nichole Klemmer</i>	<i>Recommend Approval</i>	<i>Jun 07, 2023</i>
<b>Dean:</b> <i>Tracy Schwab</i>	<i>Recommend Approval</i>	<i>Jun 08, 2023</i>
<b>Curriculum Committee Chair:</b> <i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Sep 19, 2023</i>
<b>Assessment Committee Chair:</b> <i>Jessica Hale</i>	<i>Recommend Approval</i>	<i>Sep 19, 2023</i>
<b>Vice President for Instruction:</b> <i>Victor Vega</i>	<i>Approve</i>	<i>Sep 22, 2023</i>

## Washtenaw Community College Comprehensive Report

### MTH 067 Foundations of Mathematics

Effective Term: Fall 2021

#### Course Cover

**College:** Math, Science and Engineering Tech

**Division:** Math, Science and Engineering Tech

**Department:** Math & Engineering Studies

**Discipline:** Mathematics

**Course Number:** 067

**Org Number:** 12200

**Full Course Title:** Foundations of Mathematics

**Transcript Title:** Foundations of Mathematics

**Is Consultation with other department(s) required:** No

**Publish in the Following:** College Catalog , Time Schedule , Web Page

**Reason for Submission:** Three Year Review / Assessment Report

**Change Information:**

**Course description**

**Outcomes/Assessment**

**Other:**

**Rationale:** MTH 067 is currently meeting the goal of preparing students for both MTH 094 and MTH 097. No changes other than updating the edition of the textbook need to be made to MTH 067 at this time.

**Proposed Start Semester:** Fall 2021

**Course Description:** In this developmental math course, students learn problem-solving and basic algebra skills. Topics for this course include applications involving integers, decimals and fractions, as well as applications of percents, proportions and consumer credit, algebraic expressions, algebraic properties, algebraic operations and multi-step equation-solving. The Rectangular Coordinate system and applications of algebra are also introduced. Students who successfully complete this course with a minimum grade of "C" will raise their Academic Math level to 2.

#### Course Credit Hours

**Variable hours:** No

**Credits:** 4

**Lecture Hours: Instructor: 60 Student: 60**

**Lab: Instructor: 0 Student: 0**

**Clinical: Instructor: 0 Student: 0**

**Total Contact Hours: Instructor: 60 Student: 60**

**Repeatable for Credit:** NO

**Grading Methods:** Letter Grades

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**Are lectures, labs, or clinicals offered as separate sections?:** NO (same sections)

#### College-Level Reading and Writing

Reduced Reading/Writing Scores

#### College-Level Math

No Level Required

## **Requisites**

### **Prerequisite**

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### **Degree Attributes**

Below College Level Pre-Reqs

## **Request Course Transfer**

### **Proposed For:**

## **Student Learning Outcomes**

1. Solve application problems involving integers, fractions, decimals, percents and proportions.

### **Assessment 1**

Assessment Tool: Outcome-related common final exam questions

Assessment Date: Winter 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: A random sample of approximately 30% of students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of all students assessed will achieve a mean score of 70% or higher for all questions on the common final exam related to this outcome.

Who will score and analyze the data: Course mentor

2. Solve algebraic equations that involve more than two steps.

### **Assessment 1**

Assessment Tool: Outcome-related common final exam questions

Assessment Date: Winter 2024

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Course section(s)/other population: All sections

Number students to be assessed: A random sample of approximately 30% of students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of all students assessed will achieve a mean score of 70% or higher for all questions on the common final exam related to this outcome.

Who will score and analyze the data: Course mentor

3. Graph coordinate pairs in the Cartesian coordinate plane.

### **Assessment 1**

Assessment Tool: Outcome-related mastery test questions

Assessment Date: Winter 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: A random sample of approximately 30% of students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of all students assessed will achieve a mean score of 70% or higher for all questions on the mastery test related to this outcome.

Who will score and analyze the data: Course mentor

## **Course Objectives**

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2. Solve application problems involving addition, subtraction, multiplication and division of integers with calculator support.
3. Solve application problems involving addition, subtraction, multiplication and division of fractions and mixed numbers with calculator support.
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5. Convert from percents to decimals to fractions.
6. Solve application problems involving percent, ratio and rate with calculator support, including applications of simple and compound interest.
7. Simplify algebraic expressions involving the distributive property and combining like terms.
8. Evaluate expressions for a given value of the unknown.
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10. Solve two-step algebra equations.
11. Solve algebraic equations requiring more than two-steps, including those involving the distributive property and combining like terms.

### New Resources for Course

#### Course Textbooks/Resources

##### Textbooks

Miller, J., M. O'Neill, N. Hyde. *Prealgebra*, 2 ed. McGraw-Hill, 2015, ISBN: 9781259543913.

College of the Redwoods (edited by Jason Davis)). *Prealgebra*, 2 ed. Department of Mathematics  
College of the Redwoods, 2009

##### Manuals

##### Periodicals

##### Software

#### Equipment/Facilities

Level III classroom

<b><u>Reviewer</u></b>	<b><u>Action</u></b>	<b><u>Date</u></b>
<b>Faculty Preparer:</b> <i>Jason Davis</i>	<i>Faculty Preparer</i>	<i>Jun 05, 2021</i>
<b>Department Chair/Area Director:</b> <i>Lisa Manoukian</i>	<i>Recommend Approval</i>	<i>Jun 16, 2021</i>
<b>Dean:</b> <i>Victor Vega</i>	<i>Recommend Approval</i>	<i>Jun 17, 2021</i>
<b>Curriculum Committee Chair:</b> <i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Aug 10, 2021</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Aug 10, 2021</i>
<b>Vice President for Instruction:</b> <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Aug 17, 2021</i>