

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

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 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

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

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

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

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

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