Washtenaw Community College Comprehensive Report

MTH 067 Foundations of Mathematics
Effective Term: Spring/Summer 2020

Course Cover

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:

Textbooks/resources

Rationale: Over the course of the past year, an OER textbook has been piloted in several sections of Mth067. Adding this free textbook as an option for Mth067 faculty to use in their sections was approved during the last department meeting of the Winter 2019 semester.
Proposed Start Semester: Fall 2019
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 Cartesian 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: End-of-semester common final exam
   Assessment Date: Winter 2020
   Assessment Cycle: Annually
   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: End-of-semester common final exam
   Assessment Date: Winter 2020
   Assessment Cycle: Annually
   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: End-of-semester mastery test
   Assessment Date: Winter 2020
   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

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

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

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Jason Davis	*Faculty Preparer*	*Sep 17, 2019*
Department Chair/Area Director:		
Lisa Manoukian	*Recommend Approval*	*Sep 17, 2019*
Dean:		
Victor Vega	*Recommend Approval*	*Sep 17, 2019*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Oct 10, 2019*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Nov 08, 2019*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Nov 08, 2019*

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Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Three Year Review / Assessment Report
Change Information:
Course description
Pre-requisite, co-requisite, or enrollment restrictions
Outcomes/Assessment
Rationale: Changing success standard to be more clear and better evaluate student success. Changing the assessment process from once every three years to once every year in order to keep track of any impact the cancellation of the prerequisite course MTH 034 may have on MTH 067 success rate.
Proposed Start Semester: Winter 2018
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 Cartesian 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.

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Request Course Transfer

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Student Learning Outcomes

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Assessment 1

Assessment Tool: End of semester common final exam.
Assessment Date: Winter 2018
Assessment Cycle: Annually
Course section(s)/other population: Common final exams from all sections will be numbered and a random sample of approx 30% of all students will be assessed. This will be approximately 60 students.
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Assessment Cycle: Every Three Years
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Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Jason Davis	*Faculty Preparer*	*May 22, 2017*

Department Chair/Area Director:		
Lisa Rombes	*Recommend Approval*	*May 25, 2017*
Dean:		
Kristin Good	*Recommend Approval*	*May 30, 2017*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Sep 05, 2017*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Sep 11, 2017*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Sep 11, 2017*