Washtenaw Community College Comprehensive Report

MTH 125 Everyday College Math
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: 125
Org Number: 12200
Full Course Title: Everyday College Math
Transcript Title: Everyday College Math
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:
Consultation with all departments affected by this course is required.
Outcomes/Assessment
Rationale: Update based on assessment report
Proposed Start Semester: Fall 2021
Course Description: In this course, students will further their knowledge of mathematical concepts and applications they might encounter in everyday adult life. Students will explore the following topics: investing and borrowing, home loans, student loans, sets, Venn diagrams, functions, probability and statistics. The following outcomes will be addressed: interpretation of mathematical information; representation of mathematical information; calculation and communication of results; application of information, which includes making judgments and conclusions based on quantitative analysis of data; and communication of information, which includes expressing quantitative evidence in support of an argument.

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

College-level Reading & Writing

College-Level Math

Level 3

Requisites

Prerequisite
MTH 097 minimum grade "C"
or Academic Math Level 3
or
Prerequisite
MTH 094 minimum grade "C"
or Academic Math Level 3
or

General Education

MACRAO
MACRAO Science & Math
General Education Area 3 - Mathematics
Assoc in Applied Sci - Area 3
Assoc in Science - Area 3
Assoc in Arts - Area 3
Michigan Transfer Agreement - MTA
MTA Mathematics

Request Course Transfer

Proposed For:
Eastern Michigan University
Ferris State University
Grand Valley State University
Jackson Community College
Kendall School of Design (Ferris)
Lawrence Tech
Michigan State University
Oakland University
University of Detroit - Mercy
University of Michigan
Wayne State University
Western Michigan University

Student Learning Outcomes

1. Perform consumer finance calculations for interest, loans, annuities, and mortgages.
   Assessment 1
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: A random sample of 25% of students with a minimum of 50 students
   How the assessment will be scored: Departmental rubric
   Standard of success to be used for this assessment: At least 70% of students will score 75% (3 out of 4) or higher on the outcome-related questions.
   Who will score and analyze the data: Departmental faculty

2. Calculate operations on sets and use Venn diagrams to answer questions involving "and", "or", and "not".
   Assessment 1
   Assessment Tool: Outcome-related test questions

Assessment Date: Fall 2023
Assessment Cycle: Every Three Years
Course section(s)/other population: All sections
Number students to be assessed: A random sample of 25% of students with a minimum of 50 students
How the assessment will be scored: Departmental rubric
Standard of success to be used for this assessment: At least 70% of students will score 75% (3 out of 4) or higher on the outcome-related questions.
Who will score and analyze the data: Departmental faculty

3. Identify and state domain and range; graph and interpret linear, quadratic and exponential functions.
   Assessment 1
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: A random sample of 25% of students with a minimum of 50 students
   How the assessment will be scored: Departmental rubric
   Standard of success to be used for this assessment: At least 70% of students will score 75% (3 out of 4) or higher on the outcome-related questions.
   Who will score and analyze the data: Departmental faculty

4. Calculate probabilities including those using addition and multiplication rules; solve probability problems.
   Assessment 1
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: A random sample of 25% of students with a minimum of 50 students
   How the assessment will be scored: Departmental rubric
   Standard of success to be used for this assessment: At least 70% of students will score 75% (3 out of 4) or higher on the outcome-related questions.
   Who will score and analyze the data: Departmental faculty

5. Calculate and interpret statistics, including measures of center and spread, and make predictions based on the normal curve.
   Assessment 1
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: A random sample of 25% of students with a minimum of 50 students.
   How the assessment will be scored: Departmental rubric
   Standard of success to be used for this assessment: At least 70% of the students will score 75% or higher (3 out of 4) on outcome-related questions.
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Solve problems relating to compound interest. Calculate compound interest on savings and annuities and compare earnings from simple versus compound interest.

2. Solve problems relating to mortgages. Calculate mortgage payments including tax and insurance liabilities and amortization tables.
3. Find annual percentage interest rate for purchases such as rent-to-own and payday loans.
4. Solve problems involving "and", "or", and "not" with a Venn diagram.
5. Calculate measures of central tendency: mean, median and mode.
6. Solve problems relating to probability. Calculate probability of events using multiplication and addition rules.
7. Calculate monthly personal budget amounts under stated criteria.
8. Calculate compound interest on savings and annuities, and compare earnings from simple versus compound interest.
9. Calculate measures of spread (variance, range and standard deviation), and use these measures to draw conclusions and comparisons between data sets.
10. Find z-values for specific data values and probabilities for given z-values and data values.
11. Use z-values to make decisions about data values.
12. Calculate conditional probabilities.
13. Calculate rounded values for financial calculation, including intermediate rounding of calculations where necessary.
14. Represent information given in a problem with a Venn diagram.
15. Represent linear models in various ways: table, equation or graph.

New Resources for Course

Course Textbooks/Resources

Textbooks

Sobecki. *Mathematics in our World*, 4 ed. McGraw Hill, 2018

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Laura Perez	*Faculty Preparer*	*Apr 16, 2021*
Department Chair/Area Director:		
Lisa Manoukian	*Recommend Approval*	*Apr 26, 2021*
Dean:		
Victor Vega	*Recommend Approval*	*May 20, 2021*
Curriculum Committee Chair:		
Randy Van Wagnen	*Recommend Approval*	*Aug 05, 2021*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Aug 10, 2021*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Aug 17, 2021*