Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Mathematics	125X	MTH 125X 05/29/2025-Everyday College Math
College	Division	Department
Math, Science and Engineering Tech	Math, Science and Engineering Tech	Math & Engineering Studies
Faculty Preparer		Jason Davis
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

   No

2. Briefly describe the results of previous assessment report(s).

   3.

4. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

   5.

II. Assessment Results per Student Learning Outcome

Outcome 1: Perform consumer finance calculations for interest, loans, annuities, and mortgages.

- Assessment Plan
  - Assessment Tool: Outcome-related test questions
  - Assessment Date: Winter 2025
  - 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

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2025	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
	50

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Master syllabus states 25% of enrolled students or 50 students, whichever is larger will be assessed. 50 students was significantly larger than 25% of 104 students, so 50 students were randomly selected using Random.org.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All sections of MTH125X were face-to-face. All midterm and final exams were submitted to course mentor.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A common midterm/final exam was used to assess all outcomes. Questions 1, 2, 4, and 5 were used to assess outcome #1. These questions were scored using the Mathematics department rubric (attached). The scores for these four questions were then totaled and divided by four to achieve a mean score for each test.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
19 of the 50 students (approximately 38%) achieved an average score of 75% or better on outcome #1. This falls significantly short of the standard of 70% of

students scoring 75% or higher. It is likely that this result is linked to the fact that this is a math level 3 course being taught to math level 1 and 2 students, thus none of the students were properly prepared to take this course.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Only a minority of students could successfully complete these multi-step financial math applications. Those who were successful showed strength in their ability to organize and label their work. These problems require several steps to be performed in the correct order and though most students were not able to do so, those who spent the time to write out all work and properly label that work were often able to successfully navigate these problems with little to no error.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Improvement will be difficult as this student population consisting of math level 1 and 2 students is not prepared for this math level 3 course. Barring a proper remedial course sequence that would prepare students to successfully meet this outcome, a few areas could be focused on to attempt to improve student success. Students need more instruction and modeling on properly reading applications for information. They would benefit from MTH125X faculty emphasizing the writing of full and complete work as well as a focus on the labeling of intermediate steps in the problem solving process.

Outcome 2: Calculate operations on sets and use Venn diagrams to answer questions involving "and", "or", and "not".

- Assessment Plan
    - Assessment Tool: Outcome-related test questions
    - Assessment Date: Winter 2025
    - 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

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2025	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
	50

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Master syllabus states 25% of enrolled students or 50 students, whichever is larger will be assessed. 50 students was significantly larger than 25% of 104 students, so 50 students were randomly selected using Random.org.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All sections of MTH125X were face to face. All midterm and final exams where submitted to course mentor.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A common midterm/final exam was used to assess all outcomes. Questions 7, 8, 9, and 10 from the midterm were used to assess outcome #2. These questions were scored using the Mathematics department rubric (attached). The scores for these four questions were then totaled and divided by four to achieve a mean score for each test.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
32 of the 50 students (approximately 64%) achieved an average score of 75% or better on outcome #2. This falls somewhat short of the standard of 70% of students scoring 75% or higher. Though the standard of success was not met, the results are surprisingly strong given that this student population is significantly underprepared for this course. Most students were able to organize data given in

table form and build a three circle Venn diagram. They were then able to take this diagram and interpret it correctly to answer a series of questions. It is likely that this student population did not meet the standard of success because this is a math level 3 course being taught to math level 1 and 2 students, thus none of the students were properly prepared to take this course. That being the case, the results were quite strong.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The majority of students showed skill in correctly interpreting two-circle Venn diagrams. Most students were also able to create two-circle and three-circle Venn diagrams from written information and use these diagrams to correctly answer questions involving populations.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Improvement will be difficult as this student population, consisting of math level 1 and 2 students, is not prepared for this math level 3 course. Barring a proper remedial course sequence that would prepare students to successfully meet this outcome, a few areas could be focused on to attempt to improve student success. Students who were not successful fell into two groups. The first made no attempt on the problem. This leads the course mentor to believe that students would benefit from direct instruction on assessing their skill/deficits via homework and the resources that WCC provides for additional tutoring. The second group attempted the problems, but their work was incomplete and/or highly disorganized. More instruction on attentive reading or applications, proper work flow, and organization would likely help this group improve their chances of success with outcome #2.

Outcome 3: Calculate probabilities including those using addition and multiplication rules; solve probability problems.

- Assessment Plan
    - Assessment Tool: Outcome-related test questions
    - Assessment Date: Winter 2025
    - 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

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2025	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
	50

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Master syllabus states 25% of enrolled students or 50 students, whichever is larger will be assessed. 50 students was significantly larger than 25% of 104 students, so 50 students were randomly selected using Random.org.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All sections of MTH125X were face to face. All midterm and final exams where submitted to course mentor.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A common midterm/final exam was used to assess all outcomes. Questions 1,2,3, and 4 from the Final exam were used to assess outcome #3. These questions were scored using the Mathematics department rubric (attached). The scores for these four questions were then totaled and divided by four to achieve a mean score for each test.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

41 of the 50 students (approximately 82%) achieved an average score of 75% or better on outcome #3. This surpasses the standard of 70% of students scoring 75% or higher. The overwhelming majority of students were able to use arithmetic to correctly combine percentages given in application form. They were able to use addition to find probabilities and correctly use subtraction to avoid double counting when necessary. They were also able to use multiplication to find the probability of successive events.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The overwhelming majority of students showed skill in finding probabilities using both percentages and reduced fractions from given information. They showed skill in recognizing when double counting needed to be accounted for and subtraction needed to be employed to remove double counted data values.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Improvement will be difficult as this student population consisting of math level 1 and 2 students is not prepared for this math level 3 course. The math level 1 students have significant struggles with basic arithmetic concepts like decimal place value, correct conversions of decimals to percents, and reducing fractions. In order to attempt to improve success, these students need to be identified early in the course and an individualized plan needs to be created to get their basic math skills remediated.

Outcome 4: Identify and state domain and range; graph and interpret linear, quadratic and exponential functions.

- Assessment Plan
    - Assessment Tool: Outcome-related test questions
    - Assessment Date: Winter 2025
    - 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

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2025	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
	50

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Master syllabus states 25% of enrolled students or 50 students, whichever is larger will be assessed. 50 students was significantly larger than 25% of 104 students, so 50 students were randomly selected using Random.org.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All sections of MTH125X were face to face. All midterm and final exams where submitted to course mentor.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A common midterm/final exam was used to assess all outcomes. Questions 3 and 6 from the midterm exam as well as questions 5 and 6 from the final exam were used to assess outcome #4. These questions were scored using the Mathematics department rubric (attached). The scores for these four questions were then totaled and divided by four to achieve a mean score for each test.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
32 of the 50 students (approximately 64%) achieved an average score of 75% or better on outcome #4. This falls short of the standard of 70% of students scoring 75% or higher. Though the standard of success was not met, the results are surprisingly strong given that this student population is significantly underprepared for this course. The majority of students were able to pull data from

applications involving exponential functions and properly simplify these formulas. They were also able to successfully interpret linear graphs and evaluate a linear function. It is likely that this student population did not meet the standard of success because this is a math level 3 course being taught to math level 1 and 2 students, thus none of the students were properly prepared to take this course. Given this lack of preparedness, the results were strong.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The majority of students showed they could successfully employ formulas involving exponential functions to successfully find a monthly mortgage payment. They were also able to successfully interpret linear functions and evaluate linear functions involving decimals.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Improvement will be difficult as this student population consisting of math level 1 and 2 students is not prepared for this math level 3 course. For many students in this population, basic algebra skills are quite weak. If improvement is to be made on this outcome, students' understanding of basic algebra will need to be strengthened early in the semester. This will prove difficult as this is normally done throughout a separate 15-week course.

Outcome 5: Calculate and interpret statistics, including measures of center and spread, and make predictions based on the normal curve.

- Assessment Plan
    - Assessment Tool: Outcome-related test questions
    - Assessment Date: Winter 2025
    - 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

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2025	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
	50

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Master syllabus states 25% of enrolled students or 50 students, whichever is larger will be assessed. 50 students was significantly larger than 25% of 104 students, so 50 students were randomly selected using Random.org.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All sections of MTH125X were face to face. All midterm and final exams where submitted to course mentor.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A common midterm/final exam was used to assess all outcomes. Questions 7,8,9, and 10 from the final exam were used to assess outcome #5. These questions were scored using the Mathematics department rubric (attached). The scores for these four questions were then totaled and divided by four to achieve a mean score for each test.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
25 of the 50 students (50%) achieved an average score of 75% or better on outcome #5. This falls short of the standard of 70% of students scoring 75% or higher. The students who did successfully meet this outcome were able to find the mean, median, midrange, and mode of a data set. They were also able to correctly find a percentile ranking as well as calculate Z-score and find the area under the normal curve and connect this to probability. It is likely that this student population did not meet the standard of success because this is a math level 3

course being taught to math level 1 and 2 students, thus none of the students were properly prepared to take this course. This outcome deals with mathematically complex ideas and this population lacks the foundation necessary to successfully meet this objective.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The majority of students performed well on Final question #7 showing that they could use a data set to correctly find discrete measures; mean, median, midrange, and mode. Many students also showed they could successfully use the concept of percentile rank to find the number of students scoring below a certain percentile rank.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Improvement will be difficult as this student population, consisting of math level 1 and 2 students, is not prepared for this math level 3 course. The majority of student difficulties were found in final exam questions 9 and 10. These questions require students to find z-scores and then draw and correctly label a normal curve. They then must use a z-score table to find the areas under the curve. These are complex problems requiring multiple steps. In order to attempt to improve student success, more emphasis should be placed on the correct drawing of these curves as well as more instruction on understanding when to use subtraction or addition to find the correct areas under the curve.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

This is the first semester that MTH125X was offered, therefore there was no previous report to compare it to.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

Though the standard of success was not met for four out of five outcomes, the results were surprisingly good for all outcomes other than outcome #1. MTH125 was designed to serve students with a math level of 3 which means that it was designed for students with a good understanding of both arithmetic and basic algebra. Given that math level 1 and 2 students are deficient in at least one of these

areas, the fact that the majority of students were successful on outcomes 2, 3,and 4 and half were successful on outcome 5 is encouraging.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

The results of this assessment will be shared with faculty during the August 2025 faculty meeting

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Classroom materials	Outcome 1: Students need more instruction and modeling on properly reading applications for information. They would benefit from MTH125X faculty emphasizing the writing of full and complete work as well as a focus on the labeling of intermediate steps in the problem-solving process. Outcome 2: More instruction on attentive reading or applications, proper workflow, and organization would likely help this group improve their chances of success with outcome 2. Outcome 3: In order to attempt to improve success,	Increased emphasis on lower-performing aspects of the course in order to improve student learning and scores.	2025

	Math Level 1 students need to be identified early in the course and an individualized plan needs to be created to get their basic math skills remediated. Outcome 4: Students' understanding of basic algebra will need to be strengthened early in the semester in order to see improvement in outcome 4. Outcome 5: In order to attempt to improve student success, more emphasis should be placed on the correct drawing of these curves as well as more instruction on understanding when to use subtraction or addition to find the correct areas under the curve.		

5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

Data
midterm
Final
Rubric

Faculty/Preparer:	Jason Davis	**Date:** 06/02/2025
Department Chair:	Nichole Klemmer	**Date:** 06/02/2025
Dean:	Tracy Schwab	**Date:** 06/03/2025
Assessment Committee Chair:	Jessica Hale	**Date:** 09/17/2025