

Course Assessment Report
Washtenaw Community College

| Discipline | Course Number | Title |
|---------------------------------------|---------------|--|
| Mathematics | 167 | MTH 167 06/26/2017- Math Applications for Health Science |
| Division | Department | Faculty Preparer |
| Math, Science and Engineering Tech | Mathematics | Laura Perez |
| Date of Last Filed Assessment Report | | |

I. Assessment Results per Student Learning Outcome

Outcome 1: Solve dosage calculation problems using proportions and dimensional analysis.

- Assessment Plan
 - Assessment Tool: Final Exam
 - Assessment Date: Fall 2013
 - Course section(s)/other population: All sections
 - Number students to be assessed: Random sample of 50% of all students
 - How the assessment will be scored: departmentally-developed rubric
 - Standard of success to be used for this assessment: 90% of students will score 90% or higher.
 - 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) |
|-----------------------------|-------------------------------|------------------------------|
| 2016 | 2017 | |

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

| # of students enrolled | # of students assessed |
|------------------------|------------------------|
| 114 | 88 |

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.

I assessed all students who took the final exam.

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 were assessed, including over 50% of students who took the course online.

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

Gathered the the final exam results and scored the outcome 1 related questions using an answer key of right or wrong. The percent of students who correctly answered each related question was calculated. Then the average score for the entire group of related questions was calculated.

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

Of thirteen questions related to outcome one, students scored over 90% on only two of the questions. Scores ranged from 94% to 68% on the thirteen questions. All but one of the questions had a score of 77% or higher.

The original standard of success was chosen prior to the switch to a different tool. Originally, the students were required to score 90% on the tool within the nursing program, so the 90% cutoff made sense. Since that criteria and tool are no longer used, the standard of success will need to be revised.

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

Over the entire group of questions, students correctly answered at a rate of 83.8%. They did particularly well on questions 17 and 19, where they scored 94% and 93% respectively. 77% of the students correctly answered all but one of the questions which would meet the standard of success for most other courses.

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.

Questions in which students must perform multiple calculations to determine the answer need improvement.

Outcome 2: Interpret medication orders using various systems of measurement.

- Assessment Plan
 - Assessment Tool: Final Exam
 - Assessment Date: Fall 2013
 - Course section(s)/other population: All sections
 - Number students to be assessed: Random sample of 50% of all students
 - How the assessment will be scored: departmentally-developed rubric
 - Standard of success to be used for this assessment: 90% of students will score 90% or higher.
 - 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) |
|-----------------------------|-------------------------------|------------------------------|
| 2016 | 2017 | |

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

| # of students enrolled | # of students assessed |
|------------------------|------------------------|
| 114 | 88 |

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.

I assessed all students who took the final exam.

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 were assessed, including over 50% who took the course online.

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

Gathered the the final exam results and scored the outcome 2 related questions using an answer key of right or wrong. The percent of students who correctly answered each related question was calculated. Then the average score for the entire group of related questions was calculated.

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

Of twelve questions related to outcome two, students scored over 90% on only two of the questions. Scores ranged from 94% to 60% on the twelve questions. All but one of the questions had a score of 73% or higher.

The original standard of success was chosen prior to the switch to a different tool. Originally, the students were required to score 90% on the tool within the nursing program, so the 90% cutoff made sense. Since that criteria and tool are no longer used, the standard of success will need to be revised.

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

Over the entire group of questions, students correctly answered at a rate of 82%. They did particularly well on questions 10 and 21, where they scored 92% and 94% respectively. 73% of the students correctly answered all but one of the questions which would meet the standard of success for most other courses.

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.

Questions in which students must perform multiple calculations to determine the answer need improvement.

II. Course Summary and Action Plans Based on Assessment Results

1. 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?

This is a comprehensive first course in drug dosage calculations covering a wide range of topics. It prepares nursing and pharmacy tech students for their programs.

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

I will share my results in a department meeting and with the part time faculty who teach the course.

3. Intended Change(s)

| Intended Change | Description of the change | Rationale | Implementation Date |
|-----------------|---|---|---------------------|
| Assessment Tool | Correct the tool and change the standard of success to be in greater alignment with the assessment tool currently being used. | The tool has been changed and has a different focus and significance. | 2017 |

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

5.

III. Attached Files

[Data mth 167](#)

Faculty/Preparer: Laura Perez **Date:** 06/28/2017
Department Chair: Lisa Rombes **Date:** 06/29/2017
Dean: Kristin Good **Date:** 07/05/2017
Assessment Committee Chair: Michelle Garey **Date:** 09/27/2017