

**Course Assessment Report
Washtenaw Community College**

Discipline	Course Number	Title
Geology	104	GLG 104 09/03/2019- Weather
Division	Department	Faculty Preparer
Math, Science and Engineering Tech	Physical Sciences	Suzanne Albach
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: Recognize and identify principles and concepts of weather and climate.

- Assessment Plan
 - Assessment Tool: Departmental Exams
 - Assessment Date: Winter 2013
 - Course section(s)/other population: All sections
 - Number students to be assessed: Random sample of 50% of students from each section with a minimum of one full section.
 - How the assessment will be scored: Multiple choice questions will be scored using the key. Essay and short answer questions will be scored using a departmentally-developed rubric.

- Standard of success to be used for this assessment: Students will score an overall average of 72.5% or better on each assessment question.
- Who will score and analyze the data: Appropriate geology faculty will analyze the data.

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)
	2019	

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

# of students enrolled	# of students assessed
43	30

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.

This assessment includes all students that completed GLG 104 during the Winter 2019 semester, which totaled 30 students across two sections. This is more than the targeted goal of 50% of the students from each section. Students who withdrew, or did not complete the course were not included in this assessment.

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.

Both sections assessed are DL courses, one running 15-weeks, and one section running 12-weeks as a late-start section.

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

The tools used for this assessment were two multiple-choice departmental exams, a midterm exam, and a final exam. Answers were scored using a key.

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

For the midterm exam, students scored an average of 81.7% across both sections, and for the final exam, students scored an average of 72.7% across both sections. The standard of success is that "students will score an overall average of 72.5% or better on each assessment question". Instead of basing the assessment results on individual questions, the standard of success was judged based on overall exam scores. The wording for the standard of success will be changed when the master syllabus is revised, following this report, to "70% of students will score a 72.5% better on each exam". With either wording, students met this standard of success.

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

The data shows that students scored an overall average of 76.9% across both exams, with an 81.7% overall average on the midterm exam, and a 72.7% overall average on the final exam, thus meeting the stated standard of success for this outcome. In both 12-week and the 15-week sections, students performed much better on the midterm exam, showing the teaching materials and methods used for the first half of the course are very helpful to the students.

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.

While students met the standard for success, the data shows that students performed lower on the final exam (72.7% overall average) than the midterm exam (81.7% overall average). Whenever we see performance drop off, it is an opportunity to look for ways to help our students achieve a higher level of success. In reviewing student scores for both quizzes and investigation manual activities for the second half of the semester, the data does not show that students are scoring lower on these items than they did in the first half. The only difference is in the final exam score. This may be due to it being a final exam, and students are facing multiple finals and projects at the same time. Instructors can help by offering additional exam material reviews, or perhaps allowing students to complete the final on alternate dates so students can stagger their final exams.

Outcome 2: Apply appropriate principles to solve problems as well as construct and interpret weather maps and graphs.

- Assessment Plan
 - Assessment Tool: Departmental Exams
 - Assessment Date: Winter 2013
 - Course section(s)/other population: All sections

- Number students to be assessed: Random sample of 50% of students from each section with a minimum of one full section.
- How the assessment will be scored: Multiple choice questions will be scored using the key. Essay and short answer questions will be scored using a departmentally-developed rubric.
- Standard of success to be used for this assessment: Students will score an overall average of 72.5% or better on each assessment question.
- Who will score and analyze the data: Appropriate geology faculty will analyze the data.

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)
	2019	

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

# of students enrolled	# of students assessed
43	30

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.

This assessment includes all students that completed GLG 104 during the Winter 2019 semester, which totaled 30 students across two sections. This is more than the targeted goal of 50% of the students from each section. Students who withdrew, or did not complete the course were not included in this assessment.

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.

Both sections assessed are DL courses, one running 15-weeks, and one section running 12-weeks as a late-start section.

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

The tools used for this assessment were two multiple-choice departmental exams, a midterm exam, and a final exam. Answers were scored using a key.

However, a better assessment for this outcome would be the mapping exercises required for this class, as they require students to apply appropriate principles to

solve problems as well as construct and interpret weather maps and graphs more directly than the multiple-choice questions on the exams do. This will be changed and included in the master syllabus revision for this course.

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

For the midterm exam, students scored an average of 81.7% across both sections, and for the final exam, students scored an average of 72.7% across both sections. The standard of success is that "students will score an overall average of 72.5% or better on each assessment question". Instead of basing the assessment results on individual questions, the standard of success was judged based on overall exam scores. This change in wording will be made with the master syllabus is revised, following this report.

I would envision that our revision would stipulate that our standard of success would be that "70% of students will score an overall average of 72.5% or better across all mapping activities". The data for the Winter 2019 semester shows that students scored an 81.6% average across these two sections, and over the current 14 individual mapping activities. Upon closer examination, it is also observed that students scored 72.5% or better on all mapping activities, except the mapping activity labeled "10A".

In summary, whether we used the exams or the mapping activities, students did meet the standard of success for this outcome.

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

As the data shows, students did an excellent job mastering the ability to solve problems as well as construct and interpret weather maps and graphs, with an overall average score of 81.6% across the 14 mapping activities.

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.

While students scored well across all mapping activities, a few activities were lower scoring than others. Namely, this involved map 10A, involving weather systems in the mid-latitudes. For this mapping activity, students scored an average of 70%. Additional examples and reinforcement should be given to students to help students master this mapping activity.

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.

N/A

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?

Overall, the data support that this course is meeting the needs of students. The data has given an insight into the areas where we can make some improvements to help students with the more difficult concepts and activities in this course.

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

This assessment report will be made available to all geology faculty, especially those actively teaching the course.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	For Outcome 2, the assessment tool will be changed from departmental exams to mapping exercises.	The departmental exams do not assess the second outcome as well as the mapping exercises will.	2020
Course Assignments	Additional mapping activities	Additional examples and reinforcement should help students master the mapping activities that had lower scores in the current assessment.	2020
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Additional exam reviews	To improve final exam scores, as the assessment showed average scores were	2020

		lower on the final exam compared to the midterm exam.	
Other: Standard of Success Language	In the first outcome, the language will be changed from the original "students will score an overall average of 72.5% or better on each assessment question" to "70% of students will score an overall average of 72.5% or better on each exam".	Given that this course is only delivered online, it is necessary to randomly order questions and answer choices to help maintain academic integrity of the exam. This process makes comparing the same questions across all students a challenge.	2020
Other: Standard of Success Language	For outcome two, the standard of success will be changed to "70% of students will score an overall average of 72.5% or better across all mapping activities".	Because the assessment tool will be changed, the standard of success verbiage needed to be changed.	2020
Other: alternate exam dates	Offer alternate dates to complete the final.	Scores may be lower on the final exam (compared to the midterm exam) as students are juggling multiple finals and projects at the same time. Offering an alternate date might allow students to stagger their final exams.	2020

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

I wanted to thank the primary instructors for this course, David Thomas, Leroy Kettren, and Deleon Narcisse for their hard work and continuous efforts to make this course a rewarding and successful learning experience for our students!

III. Attached Files

[GLG 104 W19 Assessment Data](#)

Faculty/Preparer: Suzanne Albach **Date:** 09/03/2019
Department Chair: Suzanne Albach **Date:** 09/03/2019
Dean: Victor Vega **Date:** 09/26/2019
Assessment Committee Chair: Shawn Deron **Date:** 11/15/2019