Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Geology	125	GLG 125 03/01/2025-The Earth Through Time
College	Division	Department
Math, Science and Engineering Tech	Math, Science and Engineering Tech	Physical Sciences
Faculty Preparer		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 various geologic principles, events, and time periods associated with understanding Earth's history.

- Assessment Plan
  - Assessment Tool: Outcome-related questions on the departmental exams
  - Assessment Date: Fall 2023
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Answer key.

- Standard of success to be used for this assessment: 70% of students will score 72.5% or better on all outcome-related questions on the departmental exams.
- Who will score and analyze the data: 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)
2024		

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

# of students enrolled	# of students assessed
24	23

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 who completed GLG 125 during the Fall 2024 semester, which totaled 23 students across one section. One student withdrew so that student was not included in this assessment report.

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.

The section assessed was a DL course (the only format this course is offered).

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 four multiple-choice departmental exams (each following a unit that covered one-quarter of the course material). Answers were scored using a key. A second tool was used, 12 module quizzes, which helped identify specific strengths and potential weaknesses in individual modules (different content areas). This second tool was scored using a key and will be added to the next master syllabus revision.

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
Students scored an average of **82.3%** across all four unit exams. The standard of success is that "70% of students will score an average of 72.5% or better on each exam". All students scored an average of 84.7% on the Unit One Exam, 82.9% on the Unit Two Exam, 79.1% on the Unit Three Exam, and 82.5% on the Unit Four Exam. A similar standard for success was used for the module quizzes, which said that all students would average 73% or better on each module quiz (this success criteria will be updated in the next revision of the master syllabus). The results showed that students scored an average of **89.9%** across all twelve module quizzes. Class averages for individual module quizzes are as follows: Module 1: 90.4%, Module 2: 91.3%, Module 3: 91.4%, Module 4: 86.1%, Module 5: 92.2%, Module 6: 96.5%, Module 7: 93%, Module 8: 93%, Module 9: 82.6%, Module 10: 83.9%, Module 11: 88.3%, and Module 12: 80%. Based on the results of both assessment tools, it is clear that students have met the standard of success and can recognize and identify various geologic principles, events, and time periods associated with understanding Earth's history.

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

Based on the assessment results, students show strong comprehension and retention of geological principles, events, and time periods associated with understanding Earth's history. One clear area of strength is overall exam performance, as 82.3% was the average score across all four unit exams, well above the standard of success threshold of 72.5%. Additionally, the majority of students met or exceeded the benchmark for each unit exam, indicating consistent understanding across different topics within the course. Another significant strength is performance on module quizzes, where students achieved an average score of 89.9% across all twelve module quizzes. Each module quiz exceeded the success threshold, with several modules (Modules 1–8) scoring above 90%. This suggests that students are excelling at recognizing and identifying key geologic concepts.

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 and exceeded the standard of success for both unit exams and module quizzes, there are still areas for potential improvement

to further enhance their understanding of geologic principles, events, and time periods. One area that could be strengthened is exam performance on the material covered in Unit Three, where the percentage of students meeting the success threshold was the lowest of all four exams, at 79.1%. This suggests that students may have found the material in this unit more challenging and could benefit from additional instructional support for the topics covered in this unit. Additionally, while module quiz performance was strong overall with an 89.9% average, a few modules showed slightly lower scores, particularly Modules 9 (82.6%), 10 (83.9%), 11 (88.3%), and 12 (80%). Since these four modules fall at the end of the semester in Units 3 and 4, it seems clear that additional instructional support and reinforcement of concepts could be added here to help students finish the course strong.

Outcome 2: Apply appropriate geology principles to interpret data from geologic maps, charts, diagrams, and graphs.

- Assessment Plan
    - Assessment Tool: Outcome-related questions on the departmental exams
    - Assessment Date: Fall 2023
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Answer key.
    - Standard of success to be used for this assessment: 70% of students will score 72.5% or better on all outcome-related questions on the departmental exams.
    - Who will score and analyze the data: 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)
2024		

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

# of students enrolled	# of students assessed
24	23

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 who completed GLG 125 during the Fall 2024 semester, which totaled 23 students across one section. One student withdrew so that student was not included in this assessment report.

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.

The section assessed was a DL course (the only format this course is offered).

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

While the tool listed was department exams, the actual tool used instead was course activities to measure this outcome. It was determined that this change in the assessment tool would better show areas of student strengths and potential weaknesses than the exams since the activities were more closely connected to the goals of this outcome. This change will be made in the next master syllabus revision. The activities 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
The standard of success for measuring this outcome, using the activities as tools, is that students will score an average of 73% or better on all activities. Students scored an average of **83.3%** over twelve module activities. A breakdown of the average for each activity is also given below. Based on these results, it is clear that students have met this standard for success and can apply appropriate geology principles to interpret data from geologic maps, charts, diagrams, and graphs. Activities 1-12 scores: Activity 1 (95.7%), Activity 2 (100%), Activity 3 (91.3%), Activity 4 (84.8%), Activity 5 (66.1%), Activity 6 (95.7%), Activity 7 (74.3%), Activity 8 (74.6%), Activity 9 (88.7%), Activity 10 (70.9%), Activity 11 (87.4%), and Activity 12 (70.4%).

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

The assessment results indicate that students demonstrated strong proficiency in applying geology principles to interpret data from geologic maps, charts, diagrams, and graphs. The overall average score of 83.3% significantly exceeds the standard of success, which requires 70% of students to score at least 73% on all activities. This suggests that the majority of students have successfully mastered the learning outcome.

Specific areas of strength include Activity 1 (95.7%), Activity 2 (100%), Activity 3 (91.3%), Activity 6 (95.7%), Activity 9 (88.7%), and Activity 11 (87.4%). These high scores indicate that students excel in interpreting and analyzing geological data, particularly in structured tasks requiring the application of geological principles. The consistently high performance across multiple activities suggests a solid understanding of core concepts related to geologic mapping and data interpretation. Additionally, the strong results in Activities 4, 9, and 11 (all above 84%) indicate that students can effectively apply these skills in different contexts, further supporting their competency in geological analysis.

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 and exceeded the standard of success, there are specific areas where achievement could be improved to ensure more consistent mastery across all module activities. The most notable areas for improvement include Activity 5 (66.1%), Activity 10 (70.9%), and Activity 12 (70.4%), as these had the lowest scores.

Activity 5, in particular, stands out as the only assessment where students scored below 70%, indicating a possible gap in understanding or difficulty with the task. However, when taking a closer look at the assessment data, one can see that only 18/23 students completed this activity. When removing these zeroes, the average score for this activity becomes 84.4%. So, a better question here might be why about 20% of the students failed to complete this activity. It is possible students did not understand the assignment, or perhaps the directions and reminders were not as clear as they could have been to help students complete this activity, so these will be analyzed and updated to improve clarity to see if this improves the participation rate in future semesters.

Activities 10 and 12 showed similar results when removing the zeroes for missed assignments, with Activity 10 jumping to 77.6% from 70.9% and Activity 12 jumping to 95% from 70.4%. Interestingly, four of the five students who missed Activity 5 also missed these two activities, that may be a case where reaching out to students missing Module 5 in the future will help increase the likelihood that they will complete these later modules.

It is clear that Activity 10 still scores lower, even when removing missed activity zeroes, so this activity will be analyzed and updated to improve clarity in the directions to improve both completion rates and success rates.

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?

The assessment results show that this course is doing a great job meeting student needs. Students are clearly understanding and applying key geology concepts, with both learning outcomes exceeding the success standard.

That said, the assessment process highlighted a few areas for improvement. One surprising takeaway was that lower scores in Activities 5, 10, and 12 were mostly due to missing assignments, not a lack of understanding. When removing zeroes from unsubmitted work, the actual scores improved significantly. This suggests that non-completion—possibly due to unclear instructions, lack of reminders, or disengagement—was the bigger issue. To address this, the plan is to improve clarity in activity directions, increase reminders, and focus on early intervention for students who miss assignments early on to help keep them on track for the rest of the course.

Another area for improvement is Unit 3 exam scores, which were lower than other units. This suggests that students may find some of these concepts more challenging and could benefit from additional instructional support.

Overall, the course is successfully helping students reach their learning goals, and the assessment data provides valuable insights into both strengths and areas for improvement. Making these adjustments will help boost student success and engagement even further in future semesters.

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

The overall results of the assessment will be shared during an upcoming department meeting, and individually, information obtained from this assessment will be shared with geology instructors teaching this course at WCC for planning and revision purposes.

4.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	A second assessment tool will be added to outcome one (module quizzes that cover the 12 modules).	The exams provide a broad view of material covered in units, but analyzing student performance in individual module quizzes will provide a clearer picture of strengths and weaknesses in student performance for Outcome One.	2025
Assessment Tool	A different assessment tool will be added to outcome two (module activities that cover the 12 modules).	The exams provide a broad view of material covered in units, but analyzing student performance in individual module activities will provide a clearer picture of strengths and weaknesses in student performance for Outcome Two.	2025
Assessment Tool	Standards of success will be updated to 70% of students will score 73% or higher.	Boilerplate alignment.	2025

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

The assessment process brought to light some interesting observations (that were mentioned in this report). I look forward to investigating these and implementing changes to improve this course! I also wanted to thank the Curriculum and Assessment Committee for all their hard work and help-- you are appreciated!

III. Attached Files

F24 GLG 125 Assessment Data

Faculty/Preparer:	Suzanne Albach	**Date:** 03/02/2025
Department Chair:	Suzanne Albach	**Date:** 03/02/2025
Dean:	Tracy Schwab	**Date:** 03/03/2025
Assessment Committee Chair:	Jessica Hale	**Date:** 02/10/2026