

**Course Assessment Report
Washtenaw Community College**

Discipline	Course Number	Title
Geology	100	GLG 100 11/21/2019- Introduction to Earth Science
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: Students will be able to recognize and identify introductory principles and concepts of the earth sciences, including geology, hydrology and meteorology, as well as the environmental concerns associated with each.

- Assessment Plan
 - Assessment Tool: Departmental Exams
 - Assessment Date: Winter 2009
 - Course section(s)/other population: random selected sample
 - Number students to be assessed: 50% from each section offered
 - How the assessment will be scored:

- Standard of success to be used for this assessment:
- Who will score and 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
268	217

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.

Fifty-one students either withdrew or failed to complete the semester (stopped attending/participating).

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.

Twelve sections were included, which represents all sections that ran during the Winter 2019 semester. This includes three 15-week fully on-campus sections, one late-start 12-week fully on-campus section, five fully online 15-week sections, one late-start 12-week fully online section, and two 15-week blended, or mixed-mode sections, where students completed all work online, except labs (which are completed in-class).

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

The current master syllabus for this course states that we will use 50% of the students from each section offered, and that we would use a random sample of those students. Instead, we used all students from all sections that completed the course. No information was provided on how we would measure success, so we measured success using the criteria that students would score an overall average score of 72.5% or better on all departmental exams. Multiple-choice questions were assessed using an answer key, and short answer and essay questions were scored using departmentally-developed rubrics. All students that finished the

semester were included, and all questions from the departmental exams were included in this assessment.

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 data shows that these students (all sections and formats) achieved an overall average score 83.0% overall (on all four exams). This average score exceeded our standard of success of 72.5%. When looking at each of the four individual exams, (across all sections) the average is a 84.4% on Exam One, 81.2% on Exam Two, 83.6% on Exam Three, and 82.7% on Exam Four. Whether examining individual exams, or the overall average of exams, the data shows that all exam averages meet our standard of success. This is true for all formats and regardless of the length of the course. The exams used for this outcome contained all outcome-related questions.

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 these students (all sections and formats) achieved an overall average score of 83.0 % overall (on all four exams). This average score exceeded our standard of success of 72.5%. When looking at each of the four individual exams, (across all sections) the average is an 84.4% on Exam One, 81.2% on Exam Two, 83.6% on Exam Three, and 82.7% on Exam Four. When examining individual exams, the data shows that all exams meet our standard for success.

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 we did meet our standard of success, there is always room for improvement. In order to identify areas that need improvement, scores for each exam were examined. At 81.2% average, it appears that Exam 2 is the lowest scoring exam. While still exceeding our standard of success, we can definitely look for ways to help students understand this material even more. The second exam largely covers plate tectonics, and the concepts are new and challenging for students. We also spend a lightly less amount of time on this unit. So, we will look for ways to spend more time on this unit, and bolster student learning with additional practice and examples.

Ideally, we would complete a question by question comparison, but that is not possible because on-line section exams are randomly drawn from a larger pool, and randomly ordered, which provides every student with a unique exam. While this helps maintain the integrity of the assessment, it makes direct comparisons very difficult. On-campus sections also use different versions of the same test to help maintain the integrity of the assessment. Perhaps this is something we can change temporarily for future assessments, or look into finding another solution as it would be helpful to obtain and compare data on which specific questions students struggled with. In the meantime, instructors can analyze each assessment to identify any common areas where students struggle and could benefit from different, or additional instruction.

Outcome 2: students will apply appropriate principles and concepts to solve problems, as well as construct and interpret maps, charts, diagrams and graphs.

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 - Number students to be assessed: 50% from each section offered
 - How the assessment will be scored:
 - Standard of success to be used for this assessment:
 - Who will score and analyze the data:

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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 shows student success in all formats, with an 84.5% final grade average (on-line, mixed-mode/blended, and fully on-campus) across all types of assessments and assignments in this course, so we believe the course is fully meeting the needs of our students. That there is a minimal difference between formats and type of formats is also encouraging since if we found a large difference we would definitely want to address that. It did surprise me that students taking the 12-week format actually did slightly better than students taking the full 15-weeks, regardless of format. This is a welcome sign, especially for summer scheduling, to know that students do well in the 12-week format.

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

All data will be shared with geology faculty before the start of Winter 20 semester, either through email or in our welcome back meeting during the January 20 in-service. It is worthwhile to note that we maintain strong communication lines throughout each semester so when a problem or error exists, or even simply recommendations for improvements, we act immediately so all are updated and these changes can be made. I believe the strong communication ties and our teamwork are directly connected to the success of this course!

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	For future assessments, we will administer the same assessment questions across all sections while randomizing the other questions/question-blocks.	This will produce richer outcome-specific data that will allow us to more precisely see the strengths and weaknesses in student learning.	2020
Assessment Tool	The following missing language will be added/changed for the next assessment (for both outcomes): Course section(s)/other	Adding this information will provide a clear assessment plan for both outcomes. The exams used for both of these outcomes contain all outcome-related questions.	2020

	<p>population: All course sections</p> <p>Number students to be assessed: All students that complete both the course and all assessments.</p> <p>How the assessment will be scored: Multiple-choice questions were assessed using an answer key and short answer and essay questions were scored using departmentally-developed rubrics.</p> <p>Standard of success to be used for this assessment: Students would score an overall average score of 72.5% or better on all departmental exams.</p> <p>Who will score and analyze the data: Geology faculty</p>		
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Additional learning material for both outcomes, especially regarding Unit 2 material on plate tectonics.	To reinforce and supplement concepts to encourage further improvement and continued student success.	2020

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

I want to thank my team, which includes all the geology faculty that contributed to this report. Daily, they go above and beyond to ensure that our students have the best learning experience possible and finish the course with a greater appreciation for the Earth, and science in general!

III. Attached Files

[GLG 100 W19 Assessment Data](#)

Faculty/Preparer: Suzanne Albach **Date:** 12/02/2019
Department Chair: Suzanne Albach **Date:** 12/02/2019
Dean: Victor Vega **Date:** 12/04/2019
Assessment Committee Chair: Shawn Deron **Date:** 02/03/2020