

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Geology	202	GLG 202 03/13/2017-Earth Science for Elementary Teachers
Division	Department	Faculty Preparer
Math, Science and Engineering Tech	Physical Sciences	Suzanne Albach
Date of Last Filed Assessment Report		

I. 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 astronomy, geology, hydrology, and meteorology, as well as the environmental concerns associated with each.

- Assessment Plan
 - Assessment Tool: departmental exams
 - Assessment Date: Fall 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)
2015		

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

# of students enrolled	# of students assessed
33	29

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.

Four students were non-attending, so 29 of 33 were used in this Assessment, which is more than our target goal of 50% of each section.

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.

Two sections ran this semester, both were day courses, and both were included.

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

Note: This information ("How the Assessment will be scored" appears to be missing from the current GLG 202 Master Syllabus on file. This document will be revised and updated to include this.

What we used, and will add to the revised document: Questions in common were used from individual instructor exams, and were graded using the answer key. Instructors teaching this course worked together to determine which questions were included in the Assessment from the departmental exams for this outcome.

Specific questions in each exam were assessed: 15 multiple choice questions from Exam 1, 9 multiple choice questions from Exam 2, 16 multiple choice questions from Exam 3 and 17 multiple choice questions from Exam 4. Multiple choice items were scored using the answer 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

Note: The standard of success for this outcome appears to be missing from the current GLG 202 Master Syllabus. This document will be revised and updated to include this.

What we used, and will add to the revised document: Students will correctly answer 75%, or more, of the total questions selected from all exams.

Based on this, students scored an overall average of 88.5% for Exam 1, 73.6% for Exam 2, 83.3% for Exam 3, and 80.3% for Exam 4. Overall, this equates to an overall average of 81.4 % for all selected questions covering all four exams.

Based on our standard of success, students have successfully mastered introductory principles and concepts of the Earth sciences.

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

Students did very well overall on the exams and the data shows that students scored an overall average of 81% mastered the stated outcome based on our standard of 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, closer examination of individual exams shows areas where we could improve. For example, students scored lower on Exam 2, with a 73.6% overall average. This is likely due to the more difficult subject matter, plate tectonics, which requires significant visualization skills and involves complex systems within the interior of the Earth. Instructors should spend more time on this unit and subject matter, as well as more review on this material going forth.

In addition, instructors should analyze specific questions that were assessed that had less than a 75% success rate across sections to see where instruction can be further emphasized to improve the overall success rate for that material.

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

- Assessment Plan
 - Assessment Tool: departmental exams
 - Assessment Date: Fall 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)
2015		

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

# of students enrolled	# of students assessed
33	29

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.

Four students were non-attending, so 29 of 33 were used in this assessment, which is more than our target goal of 50% of each section.

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.

Two sections ran this semester, both were day courses, and both were included.

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

Note: This information ("How the Assessment will be scored" appears to be missing from the current GLG 202 Master Syllabus on file. This document will be revised and updated to include this.

What we used and will add to the revised document: Questions in common were used from individual instructor exams, and were graded using the answer key. Instructors teaching this course worked together to determine which questions were included in the Assessment from the departmental exams for this outcome.

Specific questions in each exam were assessed: 15 multiple choice questions from Exam 1, 9 multiple choice questions from Exam 2, 16 multiple choice questions from Exam 3 and 17 multiple choice questions from Exam 4. Multiple choice items were scored using the answer 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

Note: The standard of success for this outcome appears to be missing from the current GLG 202 Master Syllabus. This document will be revised and updated to include this.

What we used and will add to the revised document: Students will correctly answer 75%, or more, of the total questions selected from all exams.

Based on this, students scored an overall average of 88.5% for Exam 1, 73.6% for Exam 2, 83.3% for Exam 3, and 80.3% for Exam 4. Overall, this equates to an overall average of 81.4 % for all selected questions covering all four exams.

Based on our standard of success, students have successfully applied appropriate principles and concepts to solve problems, as well as construct and interpret maps, charts, diagrams and graphs.

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

Students did very well overall on the exams, and the data shows that students scored an overall average of 81% mastered the stated outcome based on our standard of 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, closer examination of individual exams shows areas where we could improve. For example, students scored lower on Exam 2, with a 73.6% overall average. This is likely due to the more difficult subject matter, plate tectonics, which requires significant visualization skills and involves complex systems within the interior of the Earth. Instructors should spend more time on this unit and subject matter, as well as more review on this material going forth.

In addition, instructors should analyze specific questions that were assessed that had less than a 75% success rate across sections to see where instruction can be further emphasized to improve the overall success rate for that material.

Outcome 3: Students will employ appropriate teaching methodology to successfully create and present lesson plans.

- Assessment Plan
 - Assessment Tool: teaching presentations and lesson portfolio

- Assessment Date: Fall 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)
2015		

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

# of students enrolled	# of students assessed
33	29

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.

Four students were non-attending, so 29 of 33 were used in this Assessment, which is more than our target goal of 50% of each section.

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.

Two sections ran this semester, both were day courses, and both were included.

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

Note: This information ("How the Assessment will be scored" appears to be missing from the current GLG 202 Master Syllabus on file. This document will be revised and updated to include this.

What we used and will add to the revised document: Departmental rubrics were used to score both the lesson portfolio and the lesson presentation. Instructors teaching this course worked together to create these rubrics.

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: <u>No</u>
Note: The standard of success for this outcome appears to be missing from the current GLG 202 Master Syllabus. This document will be revised and updated to include this.
What we used and will add to the revised document: Students will score an overall average of 75%, or better, on both the lesson portfolio and the lesson presentation.
Based on this, students obtained a 72% overall average on the lesson portfolio project and a 82% overall average on the lesson presentation.
Based on our standard of success, students have successfully mastered the lesson presentation but fell slightly short on the lesson portfolio.

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

For Outcome 3, students did very well on their single lesson presentation, achieving a 82% overall average. We attribute this to having provided students with a grading rubric, examples, and dedicated time in class to prepare for this assignment.
--

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.

Students had some difficulty with the lesson portfolio used in this outcome, obtaining an overall average of 72%, which fell below our standard of success. While we do provide the students with a scoring rubric, examples, and dedicated time in class to work on this, we find that some students procrastinate and either are unable to finish, or turn in incomplete work, which is what has brought down the overall average. Those that do complete it, pass well above the standard for success measurement. We believe that having students show progress before the deadline will help students stay on track and obtain help well before the deadline, and this will help improve the overall outcome.
--

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?

Overall, we were very happy that students were meeting, or nearly meeting all course objectives. The assessment process really showed us that more instruction needs to be spent on the second unit material involving plate tectonics. We also were able to see the importance of having students show progress on their culminating project, the lesson portfolio.

Otherwise, we were very happy with the results and eager to implement the suggestions to help further improve our student success.

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

The summary report with data has already been sent to all the faculty teaching this course.

- Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Other: Master Syllabus Changes	The Master Syllabus, needs to be updated to reflect the missing language specifying how the assessment will be scored, the standard of success to be used for the assessment, and who will score and analyze the data. Otherwise, no other changes are deemed necessary for the Master Syllabus for this course.	The changes for the Master Syllabus are required, but missing. So, completing this will update this document and make future assessments easier.	2017
Other: Course Procedures	We plan to change course procedures by having students show progress on their final project, the lesson portfolio, and to spend more class time covering and reviewing the	We believe the changes in the course, as outlined above, will strengthen student success and deepen their understanding of the course concepts.	2016

	Unit 2 material, on plate tectonics.		
--	---	--	--

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

Big thanks to Amy Webb and Bruce Low for their help in coordinating and compiling data from their courses. Bruce also made the first draft for this Assessment Report, provided the most current rubrics, as well as many of the recommendations used in this assessment. Many thanks to you both for all your help!

III. Attached Files

[Portfolio Rubric](#)

[Presentation Rubric](#)

[Assessment Data Results](#)

[Common Questions Used For Exams](#)

Faculty/Preparer: Suzanne Albach **Date:** 03/14/2017
Department Chair: Kathleen Butcher **Date:** 03/30/2017
Dean: Kristin Good **Date:** 03/31/2017
Assessment Committee Chair: Ruth Walsh **Date:** 04/25/2017