Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Geology	103	GLG 103 01/30/2019-Field Geology
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 related to geology and hydrology, including: mapping, minerals and rocks, fossils and geologic time, weathering and soil, Michigan glaciations, stream and groundwater dynamics, as well as the environmental concerns associated with each.

- Assessment Plan
  - Assessment Tool: Departmental Exams
  - Assessment Date: Spring/Summer 2010
  - Course section(s)/other population: entire section (only one section is offered per semester)
  - Number students to be assessed: 100% from section offered

- How the assessment will be scored: The departmental rubric is based on zero to four points for problem-solving and item analysis for subjective mapping and essay assignments.
- Standard of success to be used for this assessment: 100% of students from the section offered will be assessed and all sampled students should achieve a group average score of 75% or better per question
- Who will score and analyze the data: Appropriate geology faculty will assess 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)
2018		

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

# of students enrolled	# of students assessed
21	20

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.

Only one student was excluded from this assessment report because this student stopped attending and did not complete the semester.

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.

Only one section ran in Fall 2018, and that is a fully on-campus class.

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

The tool used to assess this outcome is the final exam in the course, which consists of a multiple-choice test. The current master syllabus for this course states that all sampled students should achieve a group average score of 75% or better per question. However, we instead assessed this outcome (and will update the master syllabus for future assessments) with the standard that all students assessed will score an overall average final exam score of 72.5% or better.

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 the class achieved an overall average of 77.3% on their final exam, which exceeds our 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.

Students met our standard for success for this objective with a 77.3% average. We offer online notes, lectures in class and in the field to help students learn the material for the class and what is necessary to complete the field activities. While we find these educational methods are effective, we do see that there is room for improvement by adding more open educational resources and perhaps weekly quizzes to help enforce learning and overall success rates.

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 met the stand of success for this course, there is room for improvement to help raise the success rate further. One idea we discussed was creating on-line quizzes that are given throughout the semester via Blackboard to make sure students are keeping up on the learning material and readings. Another idea is to develop additional course material, perhaps open educational resources, where students would have access to more learning material since we do not require a textbook. Finally, we plan to analyze each question on the final exam in future assessments to look for specific areas where additional instruction and materials can help improve student success.

Outcome 2: Students will apply appropriate principles, tools and concepts to solve problems, as well as construct and interpret maps, charts, diagrams and graphs both in the field and in the classroom.

- Assessment Plan
    - Assessment Tool: Departmental Exams
    - Assessment Date: Spring/Summer 2010
    - Course section(s)/other population: entire section (only one section is offered per semester)
    - Number students to be assessed: 100% from section offered

- How the assessment will be scored: The departmental rubric is based on zero to four points for problem-solving and item analysis for subjective mapping and essay assignments.
- Standard of success to be used for this assessment: 100% of students from the section offered will be assessed and all sampled students should achieve a group average score of 75% or better per question
- Who will score and analyze the data: Appropriate geology faculty will assess 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)
2018		

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

# of students enrolled	# of students assessed
21	20

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.

Only one student was excluded from this assessment report because this student stopped attending and did not complete the semester.

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.

Only one section ran in Fall 2018, and that is a fully on-campus class.

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

The tool used to assess this outcome is the final practical exam in the course, which is a multi-part hands-on laboratory exam that covers material learned in labs over the entire semester. The current master syllabus for this course states that all sampled students should achieve a group average score of 75% or better per question. However, we instead assessed this outcome (and will update the master syllabus for future assessments) with the standard that all students assessed will score an overall average final practical exam score of 72.5% or better.

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 the class achieved an overall average of 85.8% on their final exam, which exceeds our 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.

With an average score of 85.8% on the final practical laboratory exam, we feel that our current methods are meeting our expectations. These methods include modeling correct laboratory procedures and providing plenty of hands-on practice with each field activity completed.

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 are meeting our standard of success for this outcome, we could dig deeper to look at the individual questions on the final practical laboratory exam to see specific areas where students struggled with a specific lab. In looking at the lab scores for each field activity individually, we do see one field activity, wastewater treatment, for example, where students scored an overall average of 70.3%. The water quality field experience was another lab, where students earned an average of 79%. We plan to take a look at these field experiences to see how we can improve the success rate for these field activities, and we believe in doing so will help improve the overall final practical laboratory exam scores.

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.

Not applicable.

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?

I believe this course is meeting the needs of our students, based on our assessment. The assessment process brought to light that we need to develop a better tool for future assessments where we can analyze individual questions in our exams to

look for areas where students are scoring lower. With that information, we can add additional learning resources and activities to increase student success.

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

The data for this report has been shared with all faculty that teach this course.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	We plan to change the standard of success to 75% of the students will correctly answer 72.5% of the outcome-related questions for both outcomes one and two.	The previous wording was not specific as to what students needed to score the minimum average in, and we wanted to use the 72.5% minimum threshold to align with the standard for success in other geology courses.	2019
Assessment Tool	For the actual assessment tools of exams, we plan to analyze the data for each question in both the multiple-choice final exam and the practical laboratory exam, rather than just viewing a general overall score.	By analyzing specific questions, we will better be able to identify potential problem areas so they can be addressed and rectified to help support student learning.	2019
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Additional open educational resources will be included (in lieu of a textbook), as well as adding weekly quizzes.	Currently, we use notes to help students learn the material without the aid of additional learning resources. By identifying and implementing the use of open	2019

		educational resources, we will allow our students to dig deeper into content areas. In addition, pairing this with "concept check" quizzes will encourage or students to use these resources and will help with their overall learning experience as well.	

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

A big thanks to Vicky Hover, part-time geology faculty and lead instructor for this course-- she provided the data and contributed many of the ideas in this report to continue to improve this course. Her dedication to her students is inspiring and commendable!

III. Attached Files

GLG 103 Assessment Data

Faculty/Preparer:	Suzanne Albach	**Date:**	02/24/2019
Department Chair:	Suzanne Albach	**Date:**	02/24/2019
Dean:	Kristin Good	**Date:**	03/04/2019
Assessment Committee Chair:	Shawn Deron	**Date:**	03/21/2019

COURSE ASSESSMENT REPORT

Background Information

1. Course assessed:
   Course Discipline Code and Number: GLG103
   Course Title: Field Geology
   Division/Department Codes: MNB

2. Semester assessment was conducted (check one):
   - ☐ Fall 20__
   - ☒ Winter 2006
   - ☐ Spring/Summer 20__

3. Assessment tool(s) used: check all that apply.
   - ☐ Portfolio
   - ☐ Standardized test
   - ☐ Other external certification/licensure exam (specify):
   - ☐ Survey
   - ☐ Prompt
   - ☒ Departmental exam
   - ☐ Capstone experience (specify):
   - ☐ Other (specify):

4. Have these tools been used before?
   - ☒ Yes
   - ☐ No

   If yes, have the tools been altered since its last administration? If so, briefly describe changes made.
   no

5. Indicate the number of students assessed/total number of students enrolled in the course.
   13 of the 13 students of one section were assessed

6. Describe how students were selected for the assessment.
   All studentswere required to take the departmental final exam.

Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.
   none

2. State each outcome from the master syllabus that was assessed.
   Rock and Fossil Identification, Glacial Geology and Field Mapping

3. Briefly describe assessment results based on data collected during the course assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. Please attach a summary of the data collected.
   The departmental exam was given to all students in the course, questions varied from mathematical to multiple choice. The students were asked to calculate field related problems and to collect, identify and organize specimens as described in course objectives. Of the these outcomes, the goal was to show that 75% of the students could recognize the specific concept. For all concepts, the students satisfied 2 of the 3 requirements.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success.
   For each outcome, 75% of the students were expected to achieve this goal. Rock and Fossil Collecting - 79%; Glacial Geology - 89%; Field Mapping - 73%, these percentages represent the number of students who correctly answered the questions. This indicates that we succeeded in two of the three outcomes.

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5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.
   Strengths: The students were able to show understanding in two of the three oucomes

   Weaknesses: Students fell slightly below expectations in Field Mapping

Changes influenced by assessment results

1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses, along with a timeline for these actions.
   We will improve our preparation of students in Field Mapping.

2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.
   - ☐ Master syllabus
     Change/rationale:
   - ☐ Curriculum
     Change/rationale:
   - ☐ Course syllabus
     Change/rationale:
   - ☐ Course assignments
     Change/rationale:
   - ☐ Course materials (check all that apply)
     - ☐ Textbook
     - ☐ Handouts
     - ☐ Other:

     Change/rationale:
   - ☐ Instructional methods
     Change/rationale:
   - ☐ Other:
     Change/rationale:

Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.
   The assessment tool helps the geology department to locate student weaknesses. This assessment tool will be modified in the future in order to improve student success.
2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

Submitted by:

Name: _____ Date: 6/29/06

Department Chair: _____ Date: 6/29/06

Dean: _____ Date: 7/3/06

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