

B.S. in Geology Student Outcomes Assessment Report
2016-2017 Academic Year Results

Geology Degree Assessment Committee
Department of Earth and Environmental Sciences
California State University

1 Learning outcome assessed

For the 2016-2017 academic year, the Geology B.S. SOAP required assessment of Outcome C (“Students will effectively disseminate technical findings and conclusions by means of written reports, and organize and give professional oral presentations”). Also, the SOAP called for one indirect measure of assessment this year; exit interviews of students.

2 Instruments used to assess the outcomes

To assess Outcome C, writing sample from EES 12 (usually a review of a peer-review journal article), EES 101 (usually a report on a geologic topic) and from EES 107 (final field report) will be assessed; students may submit their best drafts from all three classes. Faculty will compare the best work from each student to discover whether their writing ability has improved. For each outcome evaluated on the rubric, a score of 3.5 on a 5 point scale will define having met the learning outcome. The department expects a mean score for each criteria >3.5 when all student scores are averaged.

An online exit interview was sent this year and the replies of all five respondents were analyzed.

3 Results of assessment

3.1 EES 12 and 101

The writing assignments of 4 students that subsequently enrolled in EES 12 and EES 101 were analyzed and scored using the rubric shown in Table 1, while the results are summarized in Table 2 in increments of half a point. *Note on the scale: 1. Unacceptable, 2. Poor, 3. Acceptable, 4. Good, and 5. Excellent.*

Criterion	SOAP Goal	Max	Score
Good introductory background, development, and summary	1	5	
Evaluation of the scientific claims found in the paper	2	5	
Correct spelling and grammar	3	5	
Overall command of the English language	3	5	
Total		20	

Table 1: Grading rubric for EES 12, 101, and 107.

Students from the Geology program progressed in three criteria but one (“correct spelling and grammar”) from their early writing assignment to their later one. Despite not progressing in spelling and grammar, the department remarks that all students’ grades were above the minimum 3.5 out of 5 required. Furthermore, it should be noted that the writing assignment in EES 101 is twice as long as the one given in EES 12 and requires a much deeper understanding of the literature.

As stated in the SOAP, the department expects a mean score for each criteria >3.5 out of 5 when all student scores are averaged. This goal has been met by each and every criterion. Thus, the faculty consider that Outcome C has been met.

	Student 1	Student 2	Student 3	Student 4	Average	Increase	EES 12 to EES 101 (%)
EES 12							
Good introductory background, development, and summary	4	4	5	4	4.25		15
Evaluation of the scientific claims found in the paper	3.5	4	5	4	4.125		12
Correct spelling and grammar	4	4	5	4	4.25		0
Overall command of the English language	3.5	3.5	5	4	4		6
<i>Number of resources used</i>	8	N/A	15	4	9		14

2

EES 101							
Good introductory background, development, and summary	4.5	5	5	5	4.875		
Evaluation of the scientific claims found in the paper	4.5	4	5	5	4.625		
Correct spelling and grammar	4.5	3	5	4.5	4.25		
Overall command of the English language	4	4	5	4	4.25		
<i>Number of resources used</i>	14	8	13	6	10.25		

Table 2: Writing proficiency comparison between EES 12 and EES 101

3.2 EES 107

The field reports of 7 students enrolled in EES 107 were analyzed and scored using the same rubric show in Table 1, and the scores are summarized in Table 3 in increments of half a point.

Though not all students reached a 3.5 out of 5 on all four categories, the averages met the minimum assigned by the department. The length of the bibliography was not taken in account for the field report due to the very nature of the assignment where students wrote about their observations without necessarily tying to published literature.

As stated in the SOAP, the department expects a mean score for each criteria >3.5 out of 5 when all student scores are averaged. This goal has been met by each and every criterion. Thus, the faculty consider that Outcome C has been met.

3.3 Student exit interviews

Student exit interviews were collected from five students this year with responses which suggest relatively high satisfaction with the degree program. Students were asked to ranked their answers from 1 (strongly disagree) to 5 (strongly agree).

Several comments and facts demonstrating overall student satisfaction are below;

- To the question “What is your current job status after graduation?,” 3 students have accepted full-time employment, and 2 plan to work full time but has not yet found a position.
- To the question “I was able to obtain instruction (courses) in subjects that I am interested in,” the mean value was 4.8 (5 respondents)
- Relevant to the outcome assessment this year, to the question “Formal, course-based field experiences contributed to my learning,” the mean value is 4.8 (5 respondents).
- To the question “I was able to obtain the knowledge and training from the courses that will help me advance my career objective,” the mean value is 4.6 (5 respondents).
- To the question “I was intellectually challenged by the teaching of the faculty,” the mean value is 4.8 (5 respondents).
- To the question “Faculty members are competent undergraduate level instructors,” the mean value is 4.8 (5 respondents).
- To the question “My advisor was a good mentor,” the mean value is 5 (5 respondents).
- To the question “Your over-all ranking of your undergraduate education experience is . . .,” the mean value is 4.6 (5 respondents)

4 Changes made as a results of the findings

The results were presented by the Departmental Assessment Committee during a faculty meeting. Based upon the assessment of EES 12, 101, and 107, the department agreed that no further action is necessary as the goal for Outcome C was met.

It was noted that most students make formating mistakes when citing references from the literature. Hence, faculty in EES 12, 101, and 107 agreed to spend some time on teaching students the best practices used in the Sciences.

Based upon feedback from student responses to exit interview questions, the department also agreed that no further action is necessary as there appears to be substantial satisfaction with the Geology Degree Program.

5 Future assessment activities in the 2014-15 academic year

In 2017-18, we will evaluate Outcome B: Use the scientific method to organize and conduct research, and apply quantitative methods to solve problems, analyze data and formulate models, either independently or collaboratively, perform another set of exit interviews and conduct an employer survey.

6 B.S. in Geology Action Plan Progress

The Department is currently working on generating an action plan for the Geology B.S.

Students	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6	Student 7	Average
Good introductory background, development, and summary	4.5	4	5	4	3.5	5	5	4.4
Evaluation of the scientific claims found in the paper	4	4	5	5	4	5	5	4.6
Correct spelling and grammar	3.5	2	4	5	2	4.5	4.5	3.6
Overall command of the English language	4	3	4	5	2.5	4.5	4.5	3.9

Table 3: Writing proficiency in EES 107