Year	2022-23
Course number and Name:	BIOL 2306 – Environmental Science
Component area:	030-Life and Physical Science
Number of sections offered:	2
Number of students enrolled:	111
Contact Person (include email & Phone#)	James Armacost

Summary of Continuous Improvement Efforts since Last Report

Provide a brief description of how assessment results have been used for core course improvement. Point to a specific example of how an assessment provided the department with data it could use for improvement and what that improvement was, if possible, also show evidence of the improvement. You may look at data from the two previous academic years to support this case.

Respond here:

Course improvements centered on assessment learning outcomes, including new instructional content and group activities fostering communication, teamwork, and quantitative analysis, were implemented in the current cycle.

Course highlights Since Last Report

Identify and briefly discuss any changes made to the course since the last report.

Respond here:

Critical thinking – PowerPoint presentations were updated to reflect current information and relevance.

Communication, **Teamwork, Empirical and quantitative skills** – An in-class ecological footprint group activity developed and offered online during the pandemic was integrated into the face-to-face setting. This activity required students to collect, analyze, and present data in tabular and graphic forms.

Table 1. Assessment Results and Analysis for Current Cycle

Stage 1: PLAN			STAGE 2: DO		Stage 3: STUDY	
General Education Competencies Addressed in this Course:	**Assessment Method(s)** – e.g. pre/post tests, embedded questions, portfolio evaluation, rubric-scored essay; list only activities for which you are reporting assessment data	**Proficiency** – e.g. the proficient student will correctly answer 5 out of the 6 embedded questions on the final exam	**Benchmark** – e.g. 80% of students taking the final exam will correctly answer 5 of the 6 embedded questions on the final exam	**Results of course assessment(s)**	**Analysis of results** – e.g. strengths and weaknesses What does this data tell you? How will you use this data? How were data from the last cycle used to make changes during this cycle, and what were the results of those changes?	**Recommendations for Course based on assessment**
Communication (required)	Rubric-graded student activity	To assess the ability to work effectively with others to support a shared goal, students will work in groups on an activity on their ecological footprint. They will work cooperatively to complete the exercise and to help all group members	Students will score and average of 3 on the evaluation rubric.	Target Met	To assess the ability to effectively communicate scientific concepts and results, each student completed an activity on his or her ecological footprint and produced a written report. The average score of a random	Increase the target threshold to an average of 3.5 on the evaluation rubric.

		understand the material. Each student will complete an evaluation of the group's ability to work cooperatively to complete the activity.			sample of n = 20 students in the Spring 2021 class was 3.20 out of four. The target was met.	
Critical Thinking (required)	Rubric-graded student activity	To assess analysis, evaluation, and synthesis of information, students will be asked to apply knowledge of the discipline to solve novel problems in the form of an activity on their ecological footprint. Students will work in groups to complete the activity. Students will answer the following three critical thinking questions regarding the activity:	Students will score and average of 3 on the evaluation rubric.	Target Met	To assess analysis, evaluation, and synthesis of information, students were asked to apply knowledge of the discipline to solve novel problems in the form of an activity on their ecological footprint. Students answered three critical thinking questions regarding the activity. The average score of a random sample of n = 20 students in the Spring 2020 class was	Increase the target threshold to an average of 3.5 on the evaluation rubric.

		What aspects of your lifestyle might account for the difference between your ecological footprint and the average for the U.S.? What aspects of your lifestyle might account for the difference between your ecological footprint and the average for the world? Which of the four choices was most effective at reducing your ecological footprint?			3.50 out of four. The target was met.	
Select One: ___<mark>Empirical & Quantitative Skills</mark> ___<mark>Teamwork</mark> ___Social responsibility ___Personal Responsibility	Rubric-graded student activity	To assess applications of scientific and mathematical concepts, students will be asked to demonstrate	Students will score and average of 3 on the evaluation rubric.	Target Met	To assess applications of scientific and mathematical concepts, students were asked to demonstrate	Increase the target threshold to an average of 3.5 on the evaluation rubric.

		knowledge of the discipline in the form of an activity on their ecological footprint. Students will work in groups to complete the activity, which includes using data to create a graph comparing different options for reducing their ecological footprint.			knowledge of the discipline in the form of an activity on their ecological footprint. The activity included using data to create a table. The average score of a random sample of $n = 20$ students in the Spring 2020 class was 3.85 out of four. The target was met.	
Select One: ___Empirical & Quantitative Skills ___Teamwork ___Social responsibility ___Personal Responsibility						

Table 2. Continuous Improvement Results Since Last Report

STAGE 4: ACT		
Actions/Goals based on data results *copy last cycles actions/goals and report on progress toward continuous improvement on those here*	**Status** *C=Complete* *P=Progressing* *N=No action taken*	**Discussion of status** *If C, describe efforts that led to accomplishment of actions/goals* *If P, provide update on progress made toward accomplishing actions/goals and what tasks remain* *If N, discuss why action toward accomplishing actions/goals has been delayed and what work will be initiated toward accomplishment.*
Increase target thresholds for SLOs.	P	Assess outcomes in light of new thresholds.