

Crafton Hills College - Outcomes Assessment Report

General Education Outcome 1: Natural Science

Assessed: 2018-2019

Learning Outcomes Statement

Students successfully completing a course in this area will be able to apply a problem solving strategy such as the scientific method or other systematic process of inquiry and to recognize the contributions of science and technology in our world.

Means of Assessment (Measurement Method)

At the Faculty Department Chairs meeting approximately 25 faculty from disciplines across the campus reviewed the results and proposed actions. Proposed actions were developed for improving the outcome reviewed.

Summary of Evidence

The Office of Institutional Effectiveness, Research, and Planning (OIERP) provided a summary of the GEO results based on faculty mappings to the GEO, the proposed actions, and the list of courses where the outcome was mapped. A list of proposed actions, courses with outcomes mapped to the outcome reviewed, and the results are illustrated below.

Table 1: Number and Percent of students scoring 3 or Higher on the GEO.

GEO #	Institution Learning Outcomes	# of Students				# 3 or higher	% 3 or higher
		Meeting SLO Rubric					
		1	2	3	4		
1	Students successfully completing a course in this area will be able to apply a problem solving strategy such as the scientific method or other systematic process of inquiry and to recognize the contributions of science and technology in our world.	220	454	1,038	2,258	3,296	83.02%

Table 2: List of Proposed Actions for Courses Mapped to this Outcome.

A higher number of students than past classes did not pass the course. These students stopped attending after about half of the semester was completed. I did talk with each of them and they understood what grade they would earn in the class if they stopped attending and completing the assignments and exams.
Add more diverse learning outcomes and more critical thinking experiments
Continue interaction with students to determine the best way to help them with the learning process.
Continue to develop worksheets to enhance student learning. Help students better understand where they stand in the class before the withdrawal date.
Continue to interact with students and determine what additional needs they have for better understanding of the material.
Continue to monitor students' progress through the term.
Continue to monitor students' progress throughout the term.
Continue with development of topic worksheets
Edit
Help students better understand where they stand in class before the withdrawal date. Develop topic worksheets as needed to enhance learning.
Help students develop more optimal flow charts and analyze their data effectively. Develop new student learning outcomes
I asked for an additional SI leader, which was provided for this semester. This additional help increased the number of students that performed very well. There were several students that performed poorly that did not attend class often.
I did not meet outcomes on harmonic motion and conservation of momentum. Generally these are harder subjects for the students to grasp, but I think spending more time on these subjects in the future will help student outcomes
I did not meet outcomes on harmonic motion and conservation of momentum. Generally these are harder subjects for the students to grasp, but I think spending more time on these subjects in the future will help student outcomes. I also had quite a few students miss the question on gravitation in the final exam, which may be due to the large gap of time between going over this material and the exam itself. Having to cover so much material so quickly may hinder the students ability to retain knowledge.
I need to be more deliberate about teaching students what is involved in the creation of genetically modified organisms and the reasons drugs affect prokaryotes and eukaryotes differently.
Make sure all students can develop optimal flow charts efficiently with minimal or no assistance. Develop new learning objectives such as basic understanding of cellular functions.
Most of the students that were in lecture only this semester did not attend SI sessions, and did not attend lecture regularly. As a result, their understanding of the concepts is lower.
n/a
None
None at this time.
none necessary. The new prerequisite for CHEM 150 has shown to have helped the students be more successful in the class.
Nothing to add.
Nothing to propose other than we need to keep the class alive. Let them have fun.
Spend more time on fundamentals and less time on system work.
Target met. I will continue with current SLOs.
Target was met. I will continue with current student learning outcomes.
The majority of the students that enroll in field classes are majors. As a result, the quality of work and understanding of the subject are generally excellent.
The program target goal is met. The successful practice of instructions will continue as plan.
The SI sessions were attended by the majority of the lab classes. The results reflect this fact.
There was only one honors student.
These are students are working toward the various healthcare professional programs and are using this course to satisfy the pre-requisites for the most part. A small number of students in this course may be satisfying a science with a lab for their General Education (GE) requirement. This data will be share within this discipline so the continuing work of a satisfactory outcome is ensured.
These students have completed the ANAT 150 with a "C" or better as a pre-requisite. The target goal is expected to be likely met. This data will be share within this discipline so the continuing work of a satisfactory outcome is ensured.
These students satisfied the pre-requisite of completing ANAT 101 and/or combined ANAT 150 and ANAT 151. They were also recommended by their professor so, this course is very selective. The target goal is expected to be met at this level. This data will be used to continue with the high success rate of this course.

This section of ANAT 101 did not meet the target goal. Continuing work with the students to increase their understanding is a goal of this set to work on for an improvement for the future.
This section of ANAT 101 had a high non-participation rate. The target goal was not met. Working to improve the participation rate may assist in meeting the target goal for the future.
This section of ANAT 101 had a large number of students (10) who did not participate and 3 students with unsatisfactory in this SLO assessment which contributed to a 61.3% and did not meet the target goal of 70%. This was a factor that was uncontrollable.
This section of ANAT 101 has met the target goal. Continue work in this area will ensure the future of the achievement of the target goals.
Work on critical thinking and data analysis. Propose more hands on critical thinking experiments

List of Courses where Outcomes were mapped to the GEO.

ANAT-101, ANAT-150, ANAT-151, ANAT-159, ASTRON-150, BIOL-130, BIOL-130H, CHEM-102, CHEM-123, CHEM-150, CHEM-151, CHEM-212, CHEM-213, GEOL-100, GEOL-100H, GEOL-101, GEOL-175, KIN/S-116A, MATH-095, MATH-995, MICRO-102, MICRO-150, OCEAN-101, PHYSIC-100, PHYSIC-110, PHYSIC-250, PHYSIC-251

Use of Results/Proposed Actions (Implications for Program Improvement & Planning)

1. Increase SI sessions for more challenging courses.
2. Increase student attendance by offering classes throughout the day.
3. Increase the use of online record keeping for students to have real-time access to grading (e.g.: Canvas grade book).