

# Crafton Hills College - Outcomes Assessment Report

**General Education Outcome 7: Quantitative Reasoning**

**Assessed: 2018-2019**

***Learning Outcomes Statement***

Students successfully completing a course in this area will be able to interpret quantitative reasoning and perform mathematical operations in an effort to demonstrate quantitative reasoning skills.

***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		
7	Students successfully completing a course in this area will be able to interpret quantitative reasoning and perform mathematical operations in an effort to demonstrate quantitative reasoning skills.	357	224	701	706	1,407	70.77%

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

Chapter 14 is a problem due to being theoretical and the last chapter before the final exam. Not a lot of problems dealing with Curl F, Stokes theorem, and Greens Theorem. Most students having hard time visualizing or don't want to visualize what is going on. Book also does not help in visualizing what is going on with the 3D problems (especially in Chapter 11). Most students just want to work out the problem and move on.
Chapter 4 and some of 6 is still a problem. Due to Chapter 4 and 6 being the most theoretical, it is understandable for their issues with these chapters.
Continue to work with students' belief in themselves as well as pushing them to persevere when the course content becomes complex.
Expand activities and class time spent on central tendency, dispersion, box plots, and correlation.
More practice solving problems for testing hypotheses, evaluating formulas.
N.A
n/a
N/A
Not having a lab is problem for entering students who are not up to this level of rigor. Many students not looking for or don't want tutoring...not sure why. Many no shows after the last day to drop class with W which skews statistics. 2/3 of the class should have been in Math 085 not 095.
Power Series summation for differential equations a problem--changing index AND starting point of summation.. Spend more time on the following semester.
Proper action to be taken will be discussed in the department meetings.
Proper action will be discussed in a departmental meeting.
Results will be discussed in a department meeting.
SLO created for management of website using Dreamweaver.
The department will discuss proper actions in a departmental meeting.
The proper actions to be taken will be discussed in a departmental meeting.
To improve SLO # 2: Incorporate, reinforce, and assess the use of the six trigonometric functions with commonly-used angles. To improve SLO # 3: Expand the activities and class time spent on solving trigonometric equations and proving identities.

**List of Courses where Outcomes were mapped to the GEO.**

ACCT-208, BUSAD-053, BUSAD-100, BUSAD-210, CIS-161, MATH-095, MATH-102, MATH-103, MATH-110, MATH-115, MATH-250, MATH-252, MATH-265, MATH-266, MATH-910, MATH-995

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

1. Promote and advertise lab hours where students can receive additional support.
2. Increase the use and accessibility of online tutoring.
3. Develop universal rubrics.
4. Provide training at department meetings.