Crafton Hills College - Outcomes Assessment Report

General Education Outcome D3: Quantitative Reasoning   **Term Assessed:** 2015 Spring

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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)

On Flex Day, April 1, 2015, the Institutional Effectiveness, Accreditation, and Outcomes Committee (IEAOC) with the Professional Development Committee (PDC) organized a campus wide meeting to discuss the results collected from SLO Cloud tool on the Quantitative Reasoning GEO. Twenty-six adjunct and full-time instructional and non-instructional faculty from 20 different disciplines attended the session and chose which GEO group to participate in.

Summary of Evidence

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

Table 1: List of Proposed Actions for Courses with Outcomes Mapped to GEO D3: Quantitative Reasoning.

: Most students were able to accurately calculate their target heart.
Continue to push students to give it their all and not give up or look for an easy way out when it comes to their understanding or mathematics
Dedicate a few minutes each class day to reviewing one or more of these concepts.
Dedicate a few minutes each class day to reviewing these mathematical concepts.
more practice on limits and explore ideas with other faculty
Note on SLO #2: The two application problems I chose were both fairly difficult. In the future I will probably put one simpler application problem and one that is of medium difficulty.   Note on this website: This website runs well and fast. One recommendation would be that the prompts for which semester, which subject, which class, etc have more white space below them on the page so that when the next prompt comes up (after selecting from the previous one) one does not have to scroll down the page to see it (in other words, it can be hidden from the users view if the user does not know to scroll down).
Note on SLO #4: Rational models are not required in the Course Outline of Record (COR) for Math 090 (My SLO #4 consisted of 2 linear model problems).   Note on SLO #2: Many students seemed to have difficulty with the language "y-intercept", "x-intercept", "slope-intercept form", and "point-slope form", by the end of the course. I see it as a lot of mathematical language to retain for this level course. In the future, for Math 090, maybe there could be a department discussion about emphasizing the T-chart method and slope-intercept form and possibly omitting the point-slope form, which would cut down on at least one definition.   This website works well and fast. I would recommend on thing on the prompt page for which semester, which subject, which semester, etc. which is that there should be some additional white space at the bottom of the page where the new prompt will show up after selecting the previous prompt. As it is now, the next prompt appears out of nowhere and can be missed until you scroll down a bit.   One more note: Perhaps the "Program Mapping" prompts ("Program-Level", "General Ed", and "Institutional") could be pre-determined by the course, as determined by the college?
Notes: For the first SLO, the majority of the students were able to identify the type of differential equation and implement an appropriate method to solve it. Some made minor mistakes in the computational part. For the second SLO, the majority of the

students were able to apply reasoning to solve a word problem of a real-life situation. The majority of the students were able to analyze the word problem, set up the appropriate differential equation, and solve the problem. There were very few mistakes. Overall, the results are very positive. I think the target was met because only 26 students out of the 28 were evaluated in the SLOs, two students stopped showing up to class after the drop date and were not evaluated in the SLOs. If the base number for the SLOs is 26 and not 28, the percentages would be 84.6% and 88.5%, which in my opinion are very good result.   I have no proposed actions.

The class is not being offered for the Spring, however, if it returns there will be more application of computerized accounting included. The students excelled in all facets of the course and it served as an excellent preparation for Accounting 208.

The students were hampered by a poor knowledge of Financial Accounting which directly impacted their performance. The Instructor was required to teach both Financial and Managerial Accounting. A new textbook is now being used that focuses less on standard cost accounting and more on managerial decision making. In addition, the scope of material has been reduced to allow for more time on each topic.

This class showed an abnormally low level of critical thinking skills. More workgroup time in class is required for this type of student so that they can discover where their understanding is lacking and seek immediate help. I will incorporate more in class exercises and white board explanations to help alleviate this issue. However, this will not replace the need for more coordination with high schools in preparing students for college level challenges.

Understanding the creation and analysis of financial statements is the more difficult challenge for most students. More emphasis will be made in future classes on the format and construction of the statements combined with increased analysis of where the information comes from. This will lead to a better grasp of what the statements represent with regards to a company's performance and value.

Table 2: Number and Percent of students scoring 3 or Higher on the Quantitative Reasoning GEO.

#	Institution Learning Outcomes	# of Students Meeting SLO Rubric				# 3 or higher	% 3 or higher
		1	2	3	4		
7	Quantitative Reasoning: 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.	234	134	332	334	666	64.41%

Table 3: List of Courses where Outcomes were mapped to the Quantitative Reasoning GEO.

ACCT-105	MATH-090	MATH-160	PE/I-173
ACCT-208	MATH-095	MATH-250	
ACCT-209	MATH-103	MATH-266	

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

- Motivation & Encouragement to learn quantitative reasoning.
- Stress that mathematical operations are tools not an end in themselves.
- Change students focus from finding the answers to understanding the context.
- More collaborative learning to discover where their understanding is lacking and to seek assistance
- Dedicate time each class to reviewing the concepts being taught.
- Also spend time discussing where the bar is in college.