University Summary Report: Quantitative Reasoning Assessment of Student Learning for Graduate Programs

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Development of these discipline-specific quantitative reasoning skills is completed within major

Table 1. Numbers of programs aligned by college for Quantitative Reasoning ILO 2019-20.

College	Programs Represented	# Programs Aligned to Quantitative Reasoning ILO

their own rubrics or used the ones required by their accrediting bodies. The variations in rubric criteria and the number of criteria may exemplify wide variation in the outcomes specified by the graduate programs at CSUEB in terms of quantitative reasoning skills or may be the result of discipline-specific terminology and proposed assessment methods in specifying those outcomes.

Table 2. Characterization of Rubrics for Quantitative Reasoning ILO Assessment

College	**Program**	**Rubric**	**# Criteria**	**Scale**
CBE				
	Business Analytics	Accrediting Organization	3	1-4
	Economics	Accrediting Organization	4	0-8
CEAS				
	Counseling			
	Marriage and Family Therapy concentration	Accrediting Organization	N/A	N/A
	School Counseling concentration	Accrediting Organization	3	1-4
	School Psychology concentration	Accrediting Organization	1	1-4
CLASS				
	None			
CSCI				
	Biostatistics	Discipline-specific	1	1-5
	Chemistry and Biochemistry	Modification to University	7	1-4
	Computer Science	University	5	1-4
	Construction Management	Discipline-specific	1	1-8
	Engineering Management	Discipline-specific	1	1-8
	Mathematics	University	4	1-4
	Statistics	Discipline-specific	1	1-5

Given the variation in criteria used for assessment, direct comparison is problematic. That said, all programs have a common goal of measuringeasur

The results of the assessment of quantitative reasoning performance for the Quantitative Reasoning ILO on a per-program basis ranged between 3.06 to 3.6 on a 1-4 scale. The interpretation of the ranking values for the university rubric is given below. No programs from CLASS were aligned with the Quantitative Reasoning ILO.

Table 3. Average score on all Quantitative Reasoning criteria on scale of 1-4

	University	**CBE**	**CEAS**	**CLASS**	**CSCI**
Average score	3.43	3.33	3.42	No	

The categories which show need for improvement include problem formulation with interpretation of data and analysis of

accreditation organization. This often results in programs assessing both their own PLO and an unrelated university ILO in one year. In some cases, due to the confusion, programs have failed to assess and collect the assessment data needed for ILO assessment. If program and CAPR schedules were synchronized, there would less opportunity for error and hopefully less work to complete. It might be useful for CAPR to recommend that programs match their assessment schedules to the CAPR schedule to the extent possible.

5. Which quantitative reasoning interventions are working well, and which are not, for graduate students in particular?
6. What else can be done to improve quantitative reasoning skills?