

2018

Quantitative Reasoning Undergraduate Learning Outcome Rubric

California State University, Monterey Bay

Follow this and additional works at: https://digitalcommons.csumb.edu/ulo1_quantitative-reasoning

Recommended Citation

California State University, Monterey Bay, "Quantitative Reasoning Undergraduate Learning Outcome Rubric" (2018). *ULO 1 - Quantitative Reasoning*. 1.
https://digitalcommons.csumb.edu/ulo1_quantitative-reasoning/1

This Rubric is brought to you for free and open access by the ULO Assignment Guides, Rubrics, and Threshold Concepts at Digital Commons @ CSUMB. It has been accepted for inclusion in ULO 1 - Quantitative Reasoning by an authorized administrator of Digital Commons @ CSUMB. For more information, please contact digitalcommons@csumb.edu.

Quantitative Reasoning Undergraduate Learning Outcome Rubric

California State University, Monterey Bay

CSUMB's Intellectual Skills Rubrics were influenced by the [AAC&U VALUE Rubrics](#) and created to help educators design activities and assignments that better help students demonstrate their learning. Rubric levels are developmental (describing student development over a 4-year undergraduate program). See link at bottom for guidance on how to use this rubric.

	4 - Advanced	3 - Proficient	2 - Developing	1 - Beginning
	Expectations for some students at or near graduation.	Expectations for all students at or near graduation.	Expectations for students advancing towards proficiency.	Expectations for students initiating development towards proficiency.
Methodology	Explicitly describes assumptions, theory, or bias associated with creation, development, or analysis of quantitative forms and applications and provides compelling rationale for why each assumption is appropriate. Evaluates the creation, development, or analysis of quantitative forms and applications based on the limitations of the assumptions.	Explicitly describes assumptions, theory, or bias associated with creation, development, or analysis of quantitative forms and applications and provides complete and correct rationale for why each assumption is appropriate.	Explicitly describes assumptions, theory, or creation, development, or analysis of quantitative forms and applications that are partially complete/necessary or partially correct.	Attempts to describe assumptions, theory, or bias associated with creation, development, or analysis of quantitative forms and applications, but rationale may be incomplete, inaccurate, or missing.
Calculation	Calculations are successful and sufficiently comprehensive to solve the problem. Shows all work and includes units when appropriate and work is presented in logical fashion.	Calculations are essentially all successful and sufficiently comprehensive to solve the problem. Shows all work and includes units when appropriate.	Calculations are only partially correct and/or partially complete. Intermediate steps and/or units are missing.	Calculations are inaccurate or unnecessary.
Visual Representation	Converts relevant information into an insightful, complete, appropriate, and accurate visual quantitative portrayal in a way that demonstrates a deep understanding of the information presented in the quantitative form.	Converts relevant information into a complete, appropriate, and accurate visual quantitative portrayal.	Converts information but resulting visual quantitative portrayal is only partially appropriate, accurate, or complete.	Converts information but resulting visual quantitative portrayal is inappropriate, incomplete, or inaccurate.
Interpretation	Provides accurate identification and a precise description of information presented in quantitative forms.	Provides accurate identification and a general description of information presented in quantitative forms.	Provides some accurate descriptions of information presented in quantitative forms, but makes minor errors in identification/description of information.	Attempts to identify and describe information presented in quantitative forms, but makes incorrect identifications or descriptions about what the information provided.

Evaluation	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions.	Uses the quantitative analysis of data as the basis for competent (and comprehensive) judgments, drawing convincing/reasonable and appropriately qualified conclusions.	Uses the quantitative analysis of data as the basis for basic and simple judgments, drawing plausible conclusions.	Uses the quantitative analysis of data as the basis for incomplete or inaccurate conclusions.
Coherence/Purpose	Organizes and synthesizes judgements and conclusions based on quantitative information to fully achieve a specific, intended purpose with clarity and depth.	Organizes and synthesizes judgements and conclusions based on quantitative information to achieve an intended purpose.	Organizes judgements and conclusions based on quantitative information.	Provides judgements and conclusions based on quantitative information.
Reasonableness	Identifies solution or inference as sensible or not sensible in context and justifies the assessment of sensibility. Explains the limitations of solutions or inferences, including any sources of error.	Identifies solution or inference as sensible or not sensible in context and justifies the assessment of sensibility.	Identifies solution or inference as sensible or not sensible in context	Incorrectly identifies a solution or inference as sensible or not sensible in context.