

## QUANTITATIVE LITERACY ASSESSMENT RUBRIC

**LEARNING OUTCOME: Students will use quantitative information to draw inferences and communicate informed arguments.**

Criteria	Advanced (4)	Proficient (3)	Developing (2)	Beginning (1)
<b>Information Contextualization/Preparation:</b> <i>Identify and format appropriate quantitative information needed to address a question or problem. (e.g. data source, equations, functions, graphs, or theoretical constructs, etc.)</i>	Identifies and evaluates the most relevant quantitative information and thoroughly explains the connection to the question or problem. Expertly selects and organizes appropriate variables, parameters, or elements for use within the analytical or theoretical framework.	Identifies relevant quantitative information and explains its connection to the question or problem. Selects generally appropriate variables, parameters, or elements and organizes them adequately for use within the analytical or theoretical framework.	Recognizes limited understanding of relevant quantitative information and partially explains its connection to the question or problem. Selects some appropriate variables, parameters, or elements but organizes them with errors or inconsistencies, impacting their effectiveness.	Fails to identify relevant quantitative information and fails to explain its connection to the question or problem. Chooses inappropriate or irrelevant variables, parameters, or elements and does not prepare them adequately.
<b>Comprehension of Mathematical Forms:</b> <i>Explain information presented in mathematical forms (e.g., graphs, equations, tables, words, diagrams, etc.)</i>	Accurately interprets and explains mathematical forms. Provides detailed elaboration revealing relevant facts or ideas.	Explains the meaning of mathematical forms clearly and appropriately.	Partially explains or interprets mathematical forms with limited accuracy or detail.	Provides an incorrect interpretation or explanation of mathematical forms.
<b>Calculation:</b> <i>Perform appropriate quantitative operations to solve the problem or address the task.</i>	Applies and executes appropriate quantitative operations accurately and thoroughly to solve the problem or question.	Applies generally appropriate quantitative operations with minor errors in execution.	Uses some quantitative operations that are partially aligned with the problem or question resulting in minor calculation errors.	Fails to apply appropriate quantitative operations or executes them inaccurately, resulting in significant errors or omissions.
<b>Interpretation and Communication:</b> <i>Make inferences and communicate appropriate conclusions based on quantitative analysis, theoretical results, or information provided (e.g. graphs, equations, etc.)</i>	Draws, justifies, and explains comprehensive conclusions based on quantitative analysis. Clearly evaluates the significance of results and articulates data or methodologic limitations.	Draws and explains appropriate conclusions based on quantitative information, recognizing some recognition of limitations in data, methods, theoretical assumptions.	Draws limited or partially relevant conclusions with minimal explanation or evaluation of quantitative significance information. Identifies few limitations.	Fails to draw, explain, or evaluate conclusions based on quantitative information, showing no recognition of limitations.
<b>Disciplinary Conventions</b> <i>(Methodology) When applicable, select and apply methods and models that align with discipline-specific standards, demonstrating adherence to established conventions in the field.</i>	Applies discipline-specific methods with detailed attention and accurate execution aligned to established conventions.	Applies discipline-specific methods correctly with minor errors.	Attempts to apply discipline-specific methods but with major errors or inconsistencies.	Does not apply discipline-specific conventions or methods appropriately.

Developed by CPP Summer Assessment Institute faculty 8.13.2024; Approved and adopted by Academic Assessment Committee, 2.7.2025; Modified, approved and adopted by AAC 12.1.2025.