QUANTITATIVE LITERACY VALUE RUBRIC

for more information, please contact value@aacu.org (Edited by NC State Faculty for use in GE Competency Assessment)

Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a "habit of mind," competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	Milestones 2	1
Interpretation *Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)*	Provides sophisticated explanations of information presented in quantitative forms.	Provides accurate explanations of information presented in quantitative forms.	Provides somewhat accurate explanations of information presented in quantitative forms, but makes minor errors.	Attempts to explain information presented in quantitative forms, but makes major errors.
Representation *Ability to convert relevant information into various quantitative forms (e.g., equations, graphs, diagrams, tables, maps, words)*	Skillfully converts relevant information into quantitative forms, appropriate for the task at hand.	Competently converts relevant information into quantitative forms, appropriate but may not be optimal for the task at hand.	Developing the ability to convert relevant information into quantitative forms, as appropriate.	Displays difficulty in converting relevant information into appropriate quantitative forms.
Calculation	Attempts and successfully completes all appropriate calculations for the task at hand.	Successfully completes appropriate calculations attempted.	Appropriate calculations for the task at hand are attempted but are not completed uniformly and successfully.	Appropriate calculations for the task at hand are unsuccessful and/or not attempted.
Application / Analysis *Ability to make judgments and draw appropriate conclusions based on the quantitative, logical and statistical analysis of data, while recognizing the limits of this analysis*	Engages in a process that uses the quantitative, logical and statistical analysis of data as the basis for sophisticated judgments, drawing insightful conclusions from this work.	Engages in a process that uses the quantitative, logical and statistical analysis of data as the basis for competent judgments, drawing reasonable conclusions from this work.	Developing the ability to engage in a process that uses the quantitative, logical and statistical analysis of data as the basis for judgments, drawing plausible conclusions from this work.	Attempts to engage in a process that uses the quantitative, logical and statistical analysis of data as the basis for judgments, attempting to draw conclusions from this work.
Assumptions *Ability to make and evaluate important assumptions in estimation, modeling, and data analysis*	Explicitly describes assumptions, and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.	Explicitly describes assumptions, and provides compelling rationale for why each assumption is appropriate.	Describes most assumptions with a plausible rationale.	Attempts to describe assumptions.
Communication *Expressing quantitative, logical and statistical evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized)*	Use of quantitative, logical and statistical information enhances the argument or purpose of the work.	Use of quantitative, logical and statistical information supports and possibly enhances the argument or purpose of the work.	Use of quantitative, logical and statistical information mostly supports the argument or purpose of the work.	Use of quantitative, logical and statistical information weakly supports the argument or purpose of the work.