GT PATHWAYS COMPETENCY: QUANTITATIVE LITERACY

Required in GT Pathways Categories:

GT-MA1 (SLOs 1-5; and SLO 6 for Statistics courses only)
GT- SC1 (SLOs 1 & 2)
GT-SC2 (SLOs 1 & 2)

Quantitative Literacy

Competency in quantitative literacy represents a stude quantifiable information and mathematical analysis to make connections and draw conclusions. Students with strong quantitative literacy skills understand and can create sophisticated arguments supported by quantitative evidence and can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc.).

Student Learning Outcomes (SLOs)

Students should be able to:

1. **Interpret Information (required for GT-MA1, GT-SC1 & GT-SC2)**
   a. Explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).

2. **Represent Information (required for GT-MA1, GT-SC1 & GT-SC2)**
   a. Convert information into and between various mathematical forms (e.g., equations, graphs, diagrams, tables, words).

3. **Perform Calculations (required for GT-MA1)**
   a. Solve problems or equations at the appropriate course level.
   b. Use appropriate mathematical notation.
   c. Solve a variety of different problem types that involve a multi-step solution and address the validity of the results.

4. **Apply and Analyze Information (required for GT-MA1)**
   a. Make use of graphical objects (such as graphs of equations in two or three variables, histograms, scatterplots of bivariate data, geometrical figures, etc.) to supplement a solution to a typical problem at the appropriate level.
   b. Formulate, organize, and articulate solutions to theoretical and application problems at the appropriate course level.
   c. Make judgments based on mathematical analysis appropriate to the course level.

5. **Communicate Using Mathematical Forms (required for GT-MA1)**
   a. Express mathematical analysis symbolically, graphically, and in written language that clarifies/justifies/summarizes reasoning (may also include oral communication).

6. **Address Assumptions (*required of S***

QUANTITATIVE LITERACY RUBRIC

*This rubric is meant to be an **optional** course design and assessment tool. Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet level one performance criteria minimum.*

	4	3	2	1
Interpret Information	Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information.	Provides accurate explanations of information presented in mathematical forms.	Provides explanations of information presented in mathematical forms, but makes errors within the explanation or inappropriate inferences based on the information.	Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means.
Represent Information	Skillfully converts rec			

	4	3	2	1
Apply and Analyze Information	Uses quantitative analysis as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified			