

QUANTITATIVE REASONING CURRICULUM

RUBRIC OF LEARNING OBJECTIVES (DESIRED OUTCOMES) & COMPETENCIES

Program goal: Guide and prompt students to interpret mathematical forms, analyze through calculations, and communicate quantitative reasoning.

Learning objectives <i>Desired outcomes</i>	Levels of Competency		
	Unsatisfactory	Developing	Proficient
Interpretation <i>The student is able to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, and words).</i>	Fails to demonstrate ability to interpret information presented in mathematical forms.	Provides somewhat accurate interpretations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units.	Provides accurate interpretation of information presented in mathematical forms.
Analysis <i>The student is able to perform calculations and draw appropriate conclusions based on them.</i>	Fails to demonstrate ability to perform appropriate calculations.	Calculations attempted are either unsuccessful or not comprehensive; tentative judgments are drawn from the calculations, but uncertain about drawing conclusions.	Calculations are correct and comprehensive; competent judgments or reasonable conclusions are drawn from the calculations.
Communication <i>The student can express quantitative evidence in support of an argument (considering what is used, and how evidence is formatted, presented, and contextualized).</i>	Fails to demonstrate the ability to present an argument for which quantitative evidence is pertinent.	Uses quantitative information, but does not effectively connect it to the argument.	Effectively uses quantitative information in connection with the argument. Evidence is clearly formatted, presented, and contextualized.

A **program goal** is a clear statement that expresses what our program will do for students. Each goal is designed to prompt and guide teaching practice and program assessment.

A **student learning objective** is a clear statement about what we expect students to learn or accomplish. Like any type of objective, a student learning objective is a desired outcome.

A **student learning outcome** is the result of a learning process; in other words, it is an actual outcome. To foster assessment of student learning, student learning outcomes must be observable, observed, measurable, and measured. Student learning outcomes can be characterized using an ordinal scale of competency (e.g., unsatisfactory, developing, and proficient).

A **competency** is the ability to do something successfully.