Assessment Plan	Quantitative Reasoning
Definition	Longwood University defines quantitative reasoning as the ability to analyze which quantitative reasoning methods best address different types of questions and apply them to various problems in context.
Outcome(s)	At the completion of the Pillar course, students will be able to • formulate a question/issue using appropriate mathematical, algorithmic, and/or statistical terms, and explain the decision process behind the choices made in that formulation (representation). • use mathematical, algorithmic, and/or statistical methods to gather and/or analyze data (solving problems). Justification of the methods chosen should be included. • determine the reasonableness of an answer and/or evaluate the explanations of the data for reasonableness. Understand the limitations behind the methods used in the previous outcome (reasonableness). • interpret the results of a mathematical, algorithmic, and/or statistical analysis, and present the interpretation in a context appropriate for a broader audience (close the loop).
Goal(s)	For student artifacts collected from Quantitative Reasoning (QR) Pillar courses in the Civitae Core Curriculum and assessed by juried assessment, the target mean score for the Reasonableness outcome (QR Rubric SLO 3) will be 2.75 and on each of the 3 other QR outcomes (QR Rubric, SLOs 1, 2, and 4) the target will be 3.0 or higher. (Note: A score of 3 indicates "Developing.")
Method(s)	Quantitative reasoning is specifically addressed in the outcomes of all Quantitative Reasoning Pillar courses. All students are required to take a QR course of their choice to satisfy Foundation requirements. The AAC&U's VALUE Quantitative Reasoning rubric served as a reference from which Longwood's QR rubric was produced and modified through rater input from juried assessments. Randomly selected written work from students enrolled in QR Pillar course sections are evaluated using the QR rubric. The evaluation is completed in the summer by a group of faculty members trained in the application of the QR rubric to student work.
Schedule of data collection	QR assessment data was collected in the fall semesters from 2019-20 through 2022-23. Data analysis and identification of needed improvements in student learning occurred in the spring semesters. 2023-24 was a professional development year during which the QR rubric was revised. A three-year cycle of QR assessment will begin in 2024-25.
Communication of findings	Once the faculty raters complete their evaluation of student work, the Director of Core Curriculum, the QR Faculty Leader, and staff of the Office of Assessment and Institutional Research at Longwood will report and disseminate the findings to the QR instructors, and Core Curriculum Committee, and chief academic officers by the beginning of Year three. Discussion among the faculty members who participate in quantitative reasoning instruction and the members of the Core Curriculum Committee will focus on: • Summarizing the findings • Identifying the area(s) in need of improvement • Developing strategies for improvement • Developing strategies for assessing improvement

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