



# Quantitative Reasoning (QR) at Longwood University

**REPORT: SCHEV Core  
Competency Assessment &  
Planning for Improvement**

Report Years:  
2024-25 and 2025-26

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Competency Lead and AIR Staff

# Overview

## *How is this core competency defined at Longwood?*

QR is the ability to analyze which quantitative reasoning methods best address different types of questions and apply them to various problems in context.

## *How are Longwood students able to develop the knowledge and/or abilities expected of this competency?*

QR is specifically addressed in the QR Pillar Courses of the Civitae Core. All students are required to take a QR course of their choice to satisfy the Core Foundation requirements.

At the completion of the Pillar course, students will be able to:

### Representation:

Formulate a question/issue using appropriate mathematical, algorithmic, and/or statistical terms, and explain the decision process behind the choices made in that formulation.

### Solving Problems:

Use mathematical, algorithmic, and/or statistical methods to gather and/or analyze data. Justification of the methods chosen should be included.

### Reasonableness:

Determine the reasonableness of an answer and/or evaluate the explanations of data for reasonableness. Understand the limitations behind the methods used in the previous outcome.

### Close the Loop:

Interpret the results of a mathematical, algorithmic, and/or statistical analysis. Present the interpretation in a context appropriate for a broader audience.



## Goals & Methods

### *How do we know whether and how well students have achieved the competency?*

Student artifacts are collected from QR pillar courses in the Civitae Core Curriculum to be assessed by faculty jurors. Random samples of the collected artifacts are assessed by using an internally developed rubric designed to assess each QR learning outcome. QR Assessors are faculty teaching QR courses.

#### ***Expected Level of Success:***

The target mean score for all QR Elements will be a 2.0 or higher.

### *Competency Assessment Results*



## Key Findings

Quantitative Reasoning results improved substantially from 2024 to 2025 with all sub-outcomes now meeting the target mean score of at least a 2.0 (developing) on a 4-point scale (2023 results were not included in this report due to the low number of submissions).

## Actions & Next Steps

Action items and next steps to be determined by faculty in Professional Development workshops in August, 2026.