

Mathematical Ways of Knowing

UAR Plan, 2025 - 2027

Goal/Outcome:	Students Will Meet the General Education Learning Outcomes for Mathematical Ways of Knowing
GELO 1	Read, interpret, and communicate mathematical concepts.
Assessment Method	The team will develop a common assessment for each course that represents the ability of students to not only do the mathematical manipulations but also to meet the General Education Learning Outcomes. The assessment topic will be relevant to the course being assessed. All sections of a given course will use the same assessment. The Mathematical Ways of Knowing Assessment Committee for each course will review the results for 100% of the students' assessments.
Benchmark	75% of students meeting end-of-course expectations
Data Sources	Each fall, the students' assessments will be collected and provided to the course assessment team who will review the artifacts in the spring semester. Assessments for Dual Credit sections will be distributed to teachers in the spring semester instead of the fall semester. Note: Statistics done by the math faculty have demonstrated that analyzing any proportion of the quizzes, rather than all of them, could result in either over-estimation or under-estimation of the student's actual abilities.
Relevant Dates	Data collection FA25; review SP26; report FA26; report to faculty SP27 MATH-157/257 and MATH-130 and 130PT: Data collection FA21; review SP22; report FA22 MATH-147, MATH-147B and MATH-170: Data collection FA20; review SP21; report FA21 MATH-123 and MATH-253: Data collection FA19; review SP20; report FA20
Results	
Analysis	
Work Plan Element	
Courses to be Assessed	MATH-123, MATH-143, MATH-147, MATH-153, MATH-170, MATH-253, MATH-257, MTHPT-130, MTHPT-137, MTHPT-153

Goal/Outcome:	Students Will Meet the General Education Learning Outcomes for Mathematical Ways of Knowing
GELO 2	Represent and interpret information/data.
Assessment Method	The team will develop a common assessment for each course that represents the ability of students to not only do the mathematical manipulations but also to meet the General Education Learning Outcomes. The assessment topic will be relevant to the course being assessed. All sections of a given course will use the same assessment. The Mathematical Ways of Knowing Assessment Committee for each course will review the results for 100% of the students' assessments.
Benchmark	75% of students meeting end-of-course expectations
Data Sources	Each fall, the students' assessments will be collected and provided to the course assessment team who will review the artifacts in the spring semester. Assessments for Dual Credit sections will be distributed to teachers in the spring semester instead of the fall semester. Note: Statistics done by the math faculty have demonstrated that analyzing any proportion of the quizzes, rather than all of them, could result in either over-estimation or under-estimation of the student's actual abilities.
Relevant Dates	Data collection FA25; review SP26; report FA26; report to faculty SP27 MATH-157/257 and MATH-130 and 130PT: Data collection FA21; review SP22; report FA22 MATH-147, MATH-147B and MATH-170: Data collection FA20; review SP21; report FA21 MATH-123 and MATH-253: Data collection FA19; review SP20; report FA20
Results	
Analysis	
Work Plan Element	
Courses to be Assessed	MATH-123, MATH-143, MATH-147, MATH-153, MATH-170, MATH-253, MATH-257, MTHPT-130, MTHPT-137, MTHPT-153

Goal/Outcome:	Students Will Meet the General Education Learning Outcomes for Mathematical Ways of Knowing
GELO 3	Select, execute and explain appropriate strategies/procedures when solving mathematical problems.
Assessment Method	The team will develop a common assessment for each course that represents the ability of students to not only do the mathematical manipulations but also to meet the General Education Learning Outcomes. The assessment topic will be relevant to the course being assessed. All sections of a given course will use the same assessment. The Mathematical Ways of Knowing Assessment Committee for each course will review the results for 100% of the students' assessments.
Benchmark	75% of students meeting end-of-course expectations.
Data Sources	Each fall, the students' assessments will be collected and provided to the course assessment team who will review the artifacts in the spring semester. Assessments for Dual Credit sections will be distributed to teachers in the spring semester instead of the fall semester. Note: Statistics done by the math faculty have demonstrated that analyzing any proportion of the quizzes, rather than all of them, could result in either over-estimation or under-estimation of the student's actual abilities.
Relevant Dates	Data collection FA26; review SP27; report FA27; report to faculty SP28 MATH-157/257 and MATH-130 and 130PT: Data collection FA21; review SP22; report FA22 MATH-147, MATH-147B and MATH-170: Data collection FA20; review SP21; report FA21 MATH-123 and MATH-253: Data collection FA19; review SP20; report FA20
Results	
Analysis	
Work Plan Element	
Courses to be Assessed	MATH-123, MATH-143, MATH-147, MATH-153, MATH-170, MATH-253, MATH-257, MTHPT-130, MTHPT-137, MTHPT-153

Goal/Outcome:	Students Will Meet the General Education Learning Outcomes for Mathematical Ways of Knowing
GELO 4	Apply quantitative reasoning to draw appropriate conclusions and support them.
Assessment Method	The team will develop a common assessment for each course that represents the ability of students to not only do the mathematical manipulations but also to meet the General Education Learning Outcomes. The assessment topic will be relevant to the course being assessed. All sections of a given course will use the same assessment. The Mathematical Ways of Knowing Assessment Committee for each course will review the results for 100% of the students' assessments.
Benchmark	75% of students meeting end-of-course expectations
Data Sources	Each fall, the students' assessments will be collected and provided to the course assessment team who will review the artifacts in the spring semester. Assessments for Dual Credit sections will be distributed to teachers in the spring semester instead of the fall semester. Note: Statistics done by the math faculty have demonstrated that analyzing any proportion of the quizzes, rather than all of them, could result in either over-estimation or under-estimation of the student's actual abilities.
Relevant Dates	Data collection FA27; review SP28; report FA28; report to faculty SP29 MATH-157/257 and MATH-130 and 130PT: Data collection FA21; review SP22; report FA22 MATH-147, MATH-147B and MATH-170: Data collection FA20; review SP21; report FA21 MATH-123 and MATH-253: Data collection FA19; review SP20; report FA20
Results	
Analysis	
Work Plan Element	
Courses to be Assessed	MATH-123, MATH-143, MATH-147, MATH-153, MATH-170, MATH-253, MATH-257, MTHPT-130, MTHPT-137, MTHPT-153