



Student Learning Outcome Assessment Plan

Department: Mathematics
 Degree Program: BA-Mathematics: Teaching (Secondary)

Many Student Learning Outcomes for this program are assessed either through Portfolios or the WEST-E Examination.

For all Portfolio based assessment, the Criterion of Achievement is “75% of applicable Portfolio artifacts achieve a rating of Exemplary or Proficient” referred to as “Portfolio Criterion” in the table below.

For all WEST-E based assessment, the Criterion of Achievement is “60% of responses correct on applicable WEST-E category” referred to as “WEST-E Criterion” in the table below.

Student Learning Outcome (performance, knowledge, attitudes)	Related CWU Strategic Outcome(s) http://www.cwu.edu/strategic-planning/	Method(s) of Assessment (What is the assessment?)*	Who Assessed (Students from what courses - population)**	When Assessed (term, dates)***	Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)
1. Graduates will be able to explain the concepts and applications of elementary functions.	1.1.1 Students will achieve programmatic learning outcomes.	499E Portfolios WEST-E “Functions and Calculus” Exam	Students in MATH 499E Students taking WEST-E Exam	Fall Spring	Portfolio Criterion WEST-E Criterion
2. Graduates will be able to explain the concepts of calculus to model dynamic change.	1.1.1 Students will achieve programmatic learning outcomes.	499E Portfolios WEST-E “Functions and Calculus” Exam	Students in MATH 499E Students taking WEST-E Exam	Fall Spring	Portfolio Criterion WEST-E Criterion
3. Graduates will be able to explain the concepts, methods, and applications of logic and discrete models.	1.1.1 Students will achieve programmatic learning outcomes.	499E Portfolios WEST-E “Matrix Algebra and Discrete Mathematics” Exam	Students in MATH 499E Students taking WEST-E Exam	Fall Spring	Portfolio Criterion WEST-E Criterion

Student Learning Outcome (performance, knowledge, attitudes)	Related CWU Strategic Outcome(s) http://www.cwu.edu/strategic-planning/	Method(s) of Assessment (What is the assessment?)*	Who Assessed (Students from what courses - population)**	When Assessed (term, dates)***	Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)
4. Graduates will be able to apply and explain the concepts, methods, and applications of algebra systems.	1.1.1 Students will achieve programmatic learning outcomes.	499E Portfolios WEST-E “Algebra and Number Theory” Exam	Students in MATH 499E Students taking WEST-E Exam	Fall Spring	Portfolio Criterion WEST-E Criterion
5. Graduates will be able to apply and explain the concepts, methods, and applications of Euclidean and Non-Euclidean geometry using inductive and deductive approaches.	1.1.1 Students will achieve programmatic learning outcomes.	499E Portfolios WEST-E “Measurement, Geometry, and Trigonometry” Exam	Students in MATH 499E Students taking WEST-E Exam	Fall Spring	Portfolio Criterion WEST-E Criterion
6. Graduates can plan, teach, and assess lessons concerning topics presented in Student Learning Outcomes 1–5 using their understanding of mathematics, learning theory, and pedagogy.	1.1.1 Students will achieve programmatic learning outcomes.	324 Portfolio	Students in MATH 324	Winter	Portfolio Criterion
7. Graduates can use appropriate technology to investigate and represent concepts, methods, and applications of mathematical problems. Graduates can use appropriate technology to teach and assess student understanding of mathematical concepts.	1.1.1 Students will achieve programmatic learning outcomes.	299E Portfolio 324 Portfolio	Students in MATH 299E and 324	Fall and Winter	Portfolio Criterion
8. Graduates will be able to use the principles of mathematical thinking to solve and prove mathematical problems.	1.1.1 Students will achieve programmatic learning outcomes.	299E Portfolio	Students in MATH 299E	Fall	Portfolio Criterion

Student Learning Outcome (performance, knowledge, attitudes)	Related CWU Strategic Outcome(s) http://www.cwu.edu/strategic-planning/	Method(s) of Assessment (What is the assessment?)*	Who Assessed (Students from what courses - population)**	When Assessed (term, dates)***	Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)
9. Graduates will be able to plan, teach, and assess lessons involving mathematical thinking using their understanding of mathematics, learning theory, and pedagogy.	1.1.1 Students will achieve programmatic learning outcomes.	324 Portfolio	Students in MATH 324	Winter	Portfolio Criterion
10. Graduates will be able to apply and explain the historical and cultural development of each branch of mathematics to the discovery of important mathematical ideas.	1.1.1 Students will achieve programmatic learning outcomes.	324 Portfolio	Students in MATH 324	Winter	Portfolio Criterion

*Method(s) of assessment should include those that are both direct (tests, essays, presentations, projects) and indirect (surveys, interviews) in nature

**Data needs to be collected and differentiated by location (Ellensburg campus vs University Centers) and modality (face-to-face, online)

***Timing of assessment should ideally be at different transition points of program (i.e., admission, mid-point, end-of-program, post-program)

Assessment Cycle

Analysis and Interpretation: December
Improvement Actions: Completed by June
Dissemination: Completed by June

Teacher education programs are recurrently required to have annual reports.

Year SLOs	15-16	16-17	17-18	18-19	19-20	20-21
1	x	x	x	x	x	x
2	x	x	x	x	x	x
3	x	x	x	x	x	x
4	x	x	x	x	x	x
5	x	x	x	x	x	x
6	x	x	x	x	x	x
7	x	x	x	x	x	x
8	x	x	x	x	x	x
9	x	x	x	x	x	x
10	x	x	x	x	x	x

Assessment Oversight

Name	Department Affiliation	Email Address	Phone Number
Mark D. Oursland	Mathematics	Oursland@cwu.edu	(509) 963-2100