

UNIVERSITY OF ALASKA FAIRBANKS
Student Learning Outcomes Assessment Plan
Mathematics M.S. Degree
College of Natural Sciences and Mathematics
Adopted Fall 2025

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
MISSION STATEMENT: We provide high-quality advanced mathematics education and training responsive to the needs of individual students, the diverse population of Alaska, and the national and international mathematics communities.	Mastery of base knowledge for teaching and research: Students will attain a level of technical ability and knowledge to succeed as educators and researchers, including breadth in standard mathematical topics and depth in selected topic areas.	Students will demonstrate increasing mastery through performance in course work, and TA or similar duties. Knowledge will be assessed in comprehensive exams in 3 topical areas.	The student and their graduate committee assess student progress at least annually, with input from instructors and TA supervisors. Remedial steps may be required to address deficiencies. Assessments and comprehensive exam results are conveyed to the MS program chair.
	Potential to conduct independent mathematical research: Students will be able to formulate research objectives, find and absorb relevant work of others, and complete a project or thesis document.	The project or thesis document is the primary basis for assessment. Input from the advisor is sought on the quality and independence of the work. The work will be assessed on its potential for publication in peer-reviewed journals, but publication is not required.	The graduate committee and department chair assess the project or thesis as program completion nears. Factors include quality of the research, quality of the mathematical exposition, and the placement of the work within modern mathematical research. Final assessments are conveyed to the MS program chair.
	Communication skills consistent with professional standards and suitable for the teaching of college-level mathematics: Students will have oral presentation skills sufficient to prepare and present classroom lectures on mathematics, and introductory skills for professional talks on research subjects, and writing skills sufficient to produce professional publications.	Oral: The results of the project or thesis research are presented in a public presentation as part of the defense. Oral presentations are given in the teaching seminar. Written: The project or thesis document will be evaluated for content, clarity, and style.	The oral presentation is evaluated by the graduate committee with input from other faculty who attend. The project or thesis is assessed by the advisor and graduate committee. Faculty who are supervising the teaching seminar will assess oral communication skills. Final assessments are conveyed to the MS program chair.