

UNIVERSITY OF ALASKA FAIRBANKS
Student Learning Outcomes Assessment Plan
Biological Sciences M.S.
 College of Natural Science and Mathematics
 30 October 2025

MISSION STATEMENT: The Biology and Wildlife Department educates students from diverse backgrounds worldwide about living systems with an emphasis on the circumpolar North by fostering intellectual inquiry, problem solving, and creativity through coursework and research.

GOAL STATEMENT: The Biology and Wildlife Department aims to provide its students a strong foundation in biological knowledge; to empower them through course experiences, research, and inquiry to think creatively, flexibly, and critically; and to prepare them to achieve their future educational and professional goals.

Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
1. Demonstrate knowledge of biology relevant to the student's research area and of the scientific method by writing an original scientific project proposal 2. Communicate science effectively in writing 3. Communicate science effectively in speech 4. Contribute original knowledge discovered through research to the broader scientific community	1. M.S. students will write a formal thesis proposal following the general format of a research grant proposal and including at minimum an introduction, rationale, research plan including methodology and data analysis, and a set of references cited 2. Assessment of writing quality in the student's thesis proposal is included in the proposal assessment rubric 3. M.S. students will present and defend their thesis effectively in a public setting 4a. At least half of M.S. graduates will publish a thesis-related journal article or book chapter within four years of graduation 4b. At least 30% of M.S. students will present their work each year to a broad audience, for example at a meeting or conference.	1. The student's graduate advisory committee members will evaluate the student's research proposal based on a rubric, provide formative feedback, and communicate their final evaluations to the department chair 2. The student's graduate advisory committee members will evaluate the quality of the science writing in the student's proposal using a rubric 3. The graduate advisory committee will assess the quality of communication using standard rubric 4a. B&W will monitor publications by former M.S. students to quantify the average frequency of publication of thesis research in peer-reviewed journals and other avenues of written science within 4 years of graduation 4b. B&W will track presentations made by students using two forms: an annual survey by the department, and the Graduate School's Report of Advisory Committee form