

University of Alaska Fairbanks
Student Learning Outcomes Assessment for Physics BS Program
Department of Physics
Revised 2025

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
Mission Statement: The Physics Undergraduate Program will provide scientists and professionals broad problem-solving skills and the training and insight to understand and explore the physical world, from elementary particles to the structure and origin of the universe. Goal Statement: We will maintain a program of high quality, international reputation and produce scientists and professionals capable of solving current problems and anticipating future challenges in Physics as well as other disciplines.	Basic understanding of fundamental laws of physics and ability to apply them to real world problems. Ability to engage in analytical thinking, problem solving and demonstrate subject expertise. Appropriate preparation for higher education and/or professional career. Preparation for communicating science through outreach and community development	1. Final exam scores from upper level Physics courses, which evaluates students' understanding of the laws of physics. Student average exam grade must be 75%. 2. Satisfactory faculty evaluation of Capstone written report and oral presentation. Students will demonstrate their abilities and progress through presentations and written reports. Students will have been exposed to research and appropriate communication techniques through the Capstone course and communications sequence. Students will demonstrate their abilities through presentations and outreach activities.	1. FCI: At the beginning and end of Phys 211X, at the end of Phys F213X and just before graduation. 2. Capstone Course (presentation form) 3. Student presentations (presentation form) 4. Exit interview (written and/or oral form) 1. Research experience: Capstone project (mentor rubric/presentation form) 2. Assessment of written report for Advanced Labs 3. National competition presentation evaluation (presentation form) 1. Capstone courses: research, mentor rubric/presentation form 2. Communication: Phys 213, 381, 462, capstone (presentation forms) 3. Number of students involved in faculty research (enumerate) 4. Honors, awards, and other forms of Recognition (enumerate) 5. Presentations and publications (enumerate) 6. Survey of student perception of their own learning (annual survey form) 7. Survey of alumni perception of their own learning (alumni survey form - after 1 and 5 years) 1. Capstone course (presentation form) 2. 213 general audience presentation (presentation form) 3. Outreach activity involvement: - Outreach presentations (enumerate) - Targeted seminars (enumerate) - Science fair participation (enumerate)