

**UNIVERSITY OF ALASKA FAIRBANKS**  
**Student Learning Outcomes Assessment for Physics PhD program**

Department of Physics  
 Adopted May 12, 2016

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
<p><b>MISSION STATEMENT:</b></p> <p>The Space Physics PhD Program will provide scientists and professionals with the training, insight, and problem solving skills to understand and explore the physical world, from elementary particles to the structure and origin of the universe.</p> <p><b>GOAL STATEMENT:</b></p> <p>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 and other related disciplines.</p>	<p>Upon completion of the program, graduates can function effectively in their area of expertise.</p>	<p>Physics will maintain a strong international reputation for producing well-trained PhD graduates.</p>	<p>Graduates and alumni will be surveyed each year in May to identify program strengths and weaknesses using online exit surveys. PhD candidates are required to pass the department's comprehensive physics exam, given in August.</p>
	<p>Students will be capable of independently analyzing a problem, identifying the critical aspects, and devising appropriate methods to resolve the questions that arise.</p>	<p>Students will demonstrate their abilities and progress through conference presentations, manuscripts, and/or annual reports.</p>	<p>Advisory committee members will be surveyed after each meeting using form "Physics_SLOA_Graduate_Assessment_Form". Physics faculty in attendance will be surveyed after thesis defense using the same form.</p>
	<p>Graduates will be successful in obtaining work, or progressing in their field.</p>	<p>80% who desire employment will be employed one year after graduation.</p>	<p>Graduates and alumni will be surveyed each year in May using online exit surveys.</p>
	<p>Demonstrated ability to make original contributions to that research field.</p>	<p>A successfully defended thesis. At least one first authored peer-reviewed publication or at least one conference abstract. Graduates will make significant contributions to the peer-reviewed literature.</p>	<p>PhD level students will give a professional presentation with an abstract. Student research outcome data will be collected and analyzed each year using an online form. Thesis quality will be evaluated using form "Physics_SLOA_Thesis_Evaluation".</p>
	<p>Demonstrate modern teaching skills and the ability to communicate to a broad audience.</p>	<p>A series of evaluations (using the TA teaching evaluation form) will be made (generally in the first year) both as the students are TA's and as they go through the mandatory teaching seminar courses.</p>	<p>Student teaching/presentation evaluations (form "Physics_SLOA_TA_Presentation") will be tabulated and analyzed to ensure we are appropriately training them in modern teaching/communication techniques and pedagogical methods.</p>