Detailed Assessment Report  
Spring 2015 Applied Physics, M.S  
As of: 2/13/2015 04:01 PM CDT

Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

**SLO 1: Advanced physics knowledge and application**  
Students will be able to apply advanced concepts in electrodynamics, classical mechanics, thermodynamics, and mathematical methods to real-world research problems.

**Related Measures**

**M 1: Thesis**  
Review of MS Thesis by thesis committee  
Source of Evidence: Senior thesis or culminating major project  
**Target:**  
MS thesis will have an acceptable level of scholarship and demonstrate a mastery of the subject matter as determined by the thesis committee

**M 2: Oral examination**  
Oral examination  
Source of Evidence: Academic direct measure of learning - other  
**Target:**  
Score of acceptable on each area of the examination as established by departmental guidelines.

**SLO 2: Communicate scientific knowledge**  
Students will be able to communicate scientific research results and related physics concepts in oral and written form.

**Related Measures**

**M 3: Research Productivity**  
Research output produced by the student (presentations and/or publications)  
Source of Evidence: Presentation, either individual or group  
**Target:**  
75% of all MS students will have submitted one first-author manuscript to a scientific journal prior to graduation and/or given a presentation at a national scientific meeting

**SLO 3: Research**  
Student will be able to independently design and conduct experimental and/or computational physics research projects including data acquisition, computer simulations and analysis.

**Related Measures**

**M 1: Thesis**  
Review of MS Thesis by thesis committee  
Source of Evidence: Senior thesis or culminating major project  
**Target:**  
100% will score at "acceptable" or above on the rubric established by departmental and degree requirements.

**M 4: Physics Research Methods Report**  
Quality of work in PHYS 7025 (Research Methods in Physics course)  
Source of Evidence: Academic direct measure of learning - other  
**Target:**  
All students will score acceptable on each area of the scoring rubric as judged by a faculty panel.