Assurance of Student Learning 2018-2019	
Ogden College of Science and Engineering	Physics and Astronomy
Homeland Security Sciences 413	

Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.			
Student Learning Outcome 1: Students will demonstrate successful use of critical laboratory methods required for empirical measurements.			
Instrument 1	Performance in constructing research presentations for Physics 598 and or at conferences.		
Instrument 2	Successful defense and completion of the required MS Thesis		
Instrument 3			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.		**Met**	**Not Met**
Student Learning Outcome 2:			
Instrument 1			
Instrument 2			
Instrument 3			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.		**Met**	**Not Met**
Student Learning Outcome 3:			
Instrument 1			
Instrument 2			
Instrument 3			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.		**Met**	**Not Met**

Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)

The graduate director coordinates the Physics 598 course and meets with the thesis committee after the thesis defense to discuss each student's individual progress and performance. Information gained from these discussions is used as feedback to adjust the content of the Physics 598 course to better train students in research presentation and is provided to faculty mentors to inform them of student strengths and weakness so that they may adjust their expectations and training methods accordingly. Follow-up occurs after every thesis defense, which is typically 1-3 times per academic year. Information from the 2018-19 academic year has been used adjust content focus areas in Physics 598 and inform faculty mentors of identified student weaknesses that can be addressed in the process of the thesis research.

Student Learning Outcome 1				
Student Learning Outcome	Students will demonstrate successful use of critical laboratory methods required for empirical measurements.			
Measurement Instrument 1	This will be measured by student performance in the physics 598 (Graduate Seminar) courses. Students are required to present results of their research activities as part of the course requirements.			
Criteria for Student Success	Students receive a grade of B or better in the course.			
Program Success Target for this Measurement	100	**Percent of Program Achieving Target**	100	
Methods	In 2018-2019 a total of 4 students were evaluated in the Physics 598 course. Student oral presentations are evaluated based upon the following criteria: the content of the presentation was high quality, and the delivery of the presentation was high quality, and student made a serious effort to prepare for the presentation.			
Measurement Instrument 2	Successful defense and completing of the MS thesis			
Criteria for Student Success	Students will successfully defend the MS thesis and graduate with the MS degree.			
Program Success Target for this Measurement	100	**Percent of Program Achieving Target**	100	
Methods	MS student projects will be overseen by a committee of faculty who will evaluate their oral (MS defense) and written (MS Thesis) presentation of their thesis project. The oral thesis defense is judged based on quality of the presentation and the ability of the students to clearly explain their research and answer questions about their experimental methodology. The written thesis is evaluated based on the ability of the students to clearly explain in writing their research and their experimental methodology.			
Measurement Instrument 3				
Criteria for Student Success				
Program Success Target for this Measurement		**Percent of Program Achieving Target**		

Methods			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.		**Met**	**Not Met**
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)			
The graduate director coordinates the Physics 598 course and meets with the thesis committee after the thesis defense to discuss each student's individual progress and performance. Information gained from these discussions is used as feedback to adjust the content of the Physics 598 course to better train students in research presentation and is provided to faculty mentors to inform them of student strengths and weakness so that they may adjust their expectations and training methods accordingly.			
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
Follow-up occurs after every thesis defense, which is typically 1-3 times per academic year. Information from the 2018-19 academic year has been used adjust content focus areas in Physics 598 and inform faculty mentors of identified student weaknesses that can be addressed in the process of the thesis research.			