

## Program Assessment Plan for Physics

### Program Mission

The mission of the Department of Physics and Electrical Engineering is to provide comprehensive undergraduate programs in Physics, Electrical Engineering, Computer Engineering, Biophysics, Engineering Management, and Pre-engineering. The Department is committed to providing an environment in which our students attain the knowledge and skills to contribute to and thrive in their chosen profession. This environment includes a full spectrum of courses, providing a framework and foundation, research and internship opportunities to foster the application and expansion of knowledge and skills, mentoring and advising to promote personal and intellectual growth and opportunities to reach out to the local and regional community to reinforce a commitment to ethical, professional and socially conscientious practices. The Department of Physics and Electrical Engineering seeks to support the overall mission of The University of Scranton and the College of Arts and Sciences to provide a transformative educational experience for our students firmly rooted in the Jesuit intellectual tradition.

### Curriculum

The curriculum provides more than one opportunity for students to meet the Program Learning Objectives

### Key Courses And Assignments

ETS Testing Phys 150, Phys 140/140L, Phys 141/141L, Phys 270/270L, ENGR 253L, ENGR 254L Phys 350, Phys 352, Phys 371, Phys 372, PHYS 447, PHYS 448/448L, PHYS 493, PHYS 494 Electives including: PHYS 404, PHYS 255, PHYS 360, Optics, Cosmology, EE 241

**Program Learning Outcomes to be Assessed**

PLO	1).Knowledge: The student will demonstrate knowledge and comprehension in several basic and applied fields of Physics.	ILOs to which the PLOs map	1,3
Year:	Year 2 AY 2015-16		
Is the evidence Direct or Indirect	Both direct and indirec		
Where in the program does the evidence reside?	Department files stored in LSC 235		
What tools are necessary to collect evidence? (Rubics, Portfolio,Embedded Exam Questions etc.)	ETS in Physics will be administered to gradu		
Benchmarks	TBD		
ListOfSources	Aggregate scores on embedded questions; scores on standardized tests; course exit survey		

**Program Learning Outcomes to be Assessed**

PLO	2).Problem Solving: The student will demonstrate problem-solving skills in several basic and applied fields of Physics.	ILOs to which the PLOs map	1,3
Year:	Year 2 AY 2015-16		
Is the evidence Direct or Indirect	Both direct and indirec		
Where in the program does the evidence reside?	Department files stored in LSC 235		
What tools are necessary to collect evidence? (Rubics, Portfolio,Embedded Exam Questions etc.)	No special tools required		
Benchmarks	TBD		
ListOfSources	Aggregate scores on embedded questions; scores on standardized tests; course exit survey		

**Program Learning Outcomes to be Assessed**

PLO	3).Laboratory Work: The Student will demonstrate good experimental technique, including proper use of equipment,	ILOs to which the PLOs map	1
Year:	Year 1 Spring 2015		
Is the evidence Direct or Indirect	Both direct and indirec		
Where in the program does the evidence reside?	Department files stored in LSC 235		
What tools are necessary to collect evidence? (Rubics, Portfolio,Embedded Exam Questions etc.)	No special tools required		
Benchmarks	TBD		
ListOfSources	Rubric to score samples of student lab reports; aggregate scores on embedded questions; course exit survey		

**Program Learning Outcomes to be Assessed**

PLO	4).Written Communications: The student will demonstrate effective written communication skills through clear and	ILOs to which the PLOs map	1
Year:	Year 1 Spring 2015		
Is the evidence Direct or Indirect	Both direct and indirec		
Where in the program does the evidence reside?	Department files stored in LSC 235		
What tools are necessary to collect evidence? (Rubics, Portfolio,Embedded Exam Questions etc.)	No special tools required		
Benchmarks	TBD		
ListOfSources	Rubric to score samples of student work; aggregate scores on embedded questions; course exit survey		

**Program Learning Outcomes to be Assessed**

PLO	5).Oral Communications: The student will demonstrate effective oral communication skills in oral presentations in	ILOs to which the PLOs map	1
Year:	Year 1 Spring 2015		
Is the evidence Direct or Indirect	Both direct and indirec		
Where in the program does the evidence reside?	Department files stored in LSC 235		
What tools are necessary to collect evidence? (Rubics, Portfolio,Embedded Exam Questions etc.)	No special tools required		
Benchmarks			
ListOfSources	Rubric to score samples of student work; aggregate scores on embedded questions; course exit survey		

**Program Learning Outcomes to be Assessed**

PLO	6).Professional Development: The student will demonstrate the protocols of the professional physicist by attending	ILOs to which the PLOs map	3
Year:	Year 3 AY 2016-17		
Is the evidence Direct or Indirect	Both direct and indirec		
Where in the program does the evidence reside?	Department files stored in LSC 235		
What tools are necessary to collect evidence? (Rubics, Portfolio,Embedded Exam Questions etc.)	No special tools required		
Benchmarks	TBD		
ListOfSources	Rubric to score samples of student work; course exit survey; student attendance and presentation at seminars and scientific meetings		