Learning Goals for Engineering Physics

Students will

1. Demonstrate a solid understanding of the core principles and concepts of physics, and gain understanding in selected additional advanced topics in engineering;
2. Apply mathematical, analytical, computational, and experimental skills to model the behavior of physical systems, solve a wide range of physics problems, design and conduct experiments to measure and interpret physical phenomena, and to critically evaluate scientific results and arguments, both of their own and that of others;
3. Effectively communicate scientific hypothesis, research methods, data and analysis both orally and in writing and in a variety of venues;
4. Demonstrate awareness of professional responsibilities and good citizenship as members of the scientific community;
5. Be prepared to enter graduate school or employment appropriate to their chosen career path; and

Alignment with Academic Learning Goals

Graduates will	1	2	3	4	5
Demonstrate an integrative knowledge of the human and natural worlds;	X				
Develop habits of critical analysis and aesthetic appreciation;		X			
Apply creative and innovative thinking;		X			
Communicate skillfully in multiple forms of expression;		X	X		
Act competently in a global and diverse world;				X	
Understand and promote social justice;					
Apply a framework for examining ethical dilemmas;				X	
Employ leadership and collaborative skills;					
Understand the religious dimensions of human experience.					

Alignment with Assessment Measures

Measure	1	2	3	4	5
Pre/Post Diagnostics Exams (FCI in PH135, BEMA in PH136; CUE in PH365, QMCS in PH445)	Direct				
Course-Embedded Assessment: Lab Report (PH347)		Direct	Direct		
Exam Problems	Direct	Direct			
Course-Embedded Assessment: Computational Project (PH315)		Direct			
Capstone Project and Presentation	Direct		Direct		
Event Participation				Direct	
Placement Rates					Direct
Employer Surveys					Direct
Exit Interviews	Indirect	Indirect	Indirect	Indirect	Indirect
Course Evaluations		Indirect			