TO: Ruth Heinrichs
FROM: Kendall Mallory
RE: Physics and Engineering Department Assessment Report
DATE: July 25, 2010

Enclosed here is our department's annual assessment report for 2009/2010.

The PLNU Institutional Learning Outcomes are reprinted here:

- *Learning: Informed by our Faith:* Members of the PLNU Community will display openness to new knowledge and perspectives to think critically, analytically, and creatively and to communicate effectively.
- *Growing: In Faith Community:* Members of the PLNU Community will demonstrate God-inspired development and understanding of others, living gracefully within complex environmental and social contexts.
- *Serving: In a Context of Faith:* Members of the PLNU Community will engage in actions that reflect Christian discipleship in a context of communal service and collective responsibility, serving both locally and globally.

Department Mission Statement: Our department has not developed a mission statement nor have we developed a statement addressing the institutional learning outcomes or institutional goals. This is something we will be addressing in the coming year.

Department Goals: These listed in …..

Assessment Plan: The current assessment plan for our majors in physics and engineering physics is summarized here. The faculty in our department will review our current plan during the upcoming year. Much of this plan seems inadequate to measuring the real outcomes and successes of our students. Currently the outcomes are the same for both our major areas.

Outcome #1 TEACH: Fundamental understanding of basic concepts and principles of physics
Outcome #2 TEACH: Core literacy in the Physical Sciences and Mathematics
Outcome #3 SHAPE: Prepared for careers through extensive problem solving experiences
Outcome #4 SEND: Continue to post-graduate study

Additional Assessment Items:

There are no additional assessment items defined in our plan.

Process Update and Data Collection:

Outcome #1 TEACH: Fundamental understanding of basic concepts and principles of physics

Method #1 ETS Major Field Tests:
The ETS Major Field Test in physics was not administered during the 2009/2010 academic year in our department. We will reinstitute this major in the following year. Also the department will review what measures we currently use to evaluate our program and consider the use of test in Engineering and earlier standard test like the Force Concept Inventory or the Electromagnetic Theory Inventory.

Method #2 Alumni Survey using ETS Program Self-Assessment Service:
The alumni survey was not administered during the 2009/2010 academic year for our programs. This instrument is not required every year and was completed just two years ago.

Outcome #2 SHAPE: Prepared for careers through extensive problem solving experiences

Method #1 Alumni Survey using ETS Program Self-Assessment Service:
The alumni survey was not administered during the 2009/2010 academic year for our programs. This instrument is not required every year and was completed just two years ago.

Outcome #3 SEND: Continue to post-graduate study:
A survey of our graduates at the end of the spring term 2010 showed two out of seven accepted into graduate programs they were planning on attending, one in materials science and one in medical physics, one out of seven had a job as an engineer at SPAWAR, and three were currently seeking a job, while one student's plans are unknown.

Update to the Learning Outcomes Assessment Plan Physics Major

No updates were developed to the assessment plan for the physics major during this year. The department feels that our Assessment Plan and Methods need a lot of work and this will begin during the upcoming year.

Update to the Learning Outcomes Assessment Plan Engineering Major

No updates were developed to the assessment plan for the engineering major during this year. The department feels that our Assessment Plan and Methods need a lot of work and this will begin during the upcoming year.

Appendix: Nichols Five Column Model

The Nichols Five Column Model

Department: Physics and Engineering				
Degree: BS/BA		**Major: Physics**		
Date Submitted: June 1, 2010		**Assessment Period: 2009-2010**		
Program Mission Statement	**Program Learning Outcomes**	**Means of Program Assessment and Criteria for Success (one or more for each program learning outcome)**	**Summary of Data Collected**	**Use of Results**
None	1. TEACH: Fundamental understanding of basic concepts and principles of physics	1a. ETS Major Field Achievement Test	None collected in 2009/2010	
		1b.		
	2. TEACH: Core literacy in the Physical Sciences and Mathematics	2a. Survey alumni 2-3 years out using ETS Program Self-Assessment Service (PSAS)	None collected in 2009/2010	
		2b.		
	3. SHAPE: Prepared for careers through extensive problem solving experiences	3a. Survey alumni 2-3 years out using ETS Program Self-Assessment Service (PSAS)	Completed during the 2007/2008 year	
		3b.		
	4. SEND: Continue to post-graduate study	4a. Survey of seniors to track admission to graduate or professional schools	No graduates in 2009/2010	

The Nichols Five Column Model

Department: Physics and Engineering				
Degree: BS		**Major: Engineering**		
Date Submitted: June 1, 2010		**Assessment Period: 2009-2010**		
Program Mission Statement	**Program Learning Outcomes**	**Means of Program Assessment and Criteria for Success (one or more for each program learning outcome)**	**Summary of Data Collected**	**Use of Results**
None	1. TEACH: Fundamental understanding of basic concepts and principles of physics	1a. ETS Major Field Achievement Test		
		1b.		
	2. TEACH: Core literacy in the Physical Sciences and Mathematics	2a. Survey alumni 2-3 years out using ETS Program Self-Assessment Service (PSAS)		
		2b.		
	3. SHAPE: Prepared for careers through extensive problem solving experiences	3a. Survey alumni 2-3 years out using ETS Program Self-Assessment Service (PSAS)		
		3b.		
	4. SEND: Continue to post-graduate study	4a. Survey of seniors to track admission to graduate or professional schools	7 graduates in 2009/2010 3 - grad programs 1 - employed	