Course Title: PHY 203 – Principles of Physics I, 4 credits
Program Team: Paul Jozik

Expected Learning Outcomes:

1. Use mathematical models as a medium for quantitative reasoning and describing physical reality.
2. Use graphical models to analyze laboratory data.
3. Apply the classical conservation laws as a basis of deriving and understanding physics principles.
4. Describe physics concepts verbally, graphically, and mathematically
5. Solve problems individually and collaboratively
6. Use software to analyze physics experiments
7. Access, process, analyze and synthesize scientific information.

COURSE CONTENT OBJECTIVES:
1. To learn basic principles of physics through experiments and exercises. The lab sessions will be used to introduce, reinforce, and/or enrich the treatment of related topics studied in the lecture portion of this course.
2. To learn the proper use of various kinds of laboratory equipment.
3. To learn how data can be collected, presented, and interpreted in a clear and orderly manner.
4. To learn problem solving skills related to physics principles and interpretation of laboratory data.
5. To determine error in laboratory measurements and techniques used to minimize such error.

6. To learn how to function as a member of a lab group, respecting and assisting all fellow members of the group. In order for each student to derive the greatest benefit from this course it is necessary for each student to:
    a. be an active participant in each part of all lab exercises: set up, measurement, clean up, etc.
    b. record all data being collected in an organized manner
    c. perform each calculation related to the laboratory activity

Assessment (How do or will students demonstrate achievement of each outcome?)

four examinations* and a comprehensive final

*Each of the four examinations included points accrued for successful completion of laboratory and problem-solving activities.

Validation (What methods have you used or will you use to validate your assessment?)

Students passing with a 75% or better

Results (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)

Follow-up (How have you used or how will you use the data to improve student learning?)

Budget Justification (What resources are necessary to improve student learning?)

No additional resources needed.

Course: PHY 203   **SLOA Data**   **Faculty Team: P. Jozik**

	FA 2009	FA 2010	FA 2011	FA 2012	FA 2013	FA 2014	
# Active students	16	23	32	29	34		
%W	31%	30%	28%	17%	0		
*% walk-away Fs No final exam/grade = F	12%	4%	6%	8%	12%		
% Success (A,B,C)	63%	62%	64%	74%	74%		
Mean Common Lab Practical Score	85%	86%	83%	90%	86%		
Median Score	89%	86%	85%	92%	87%		
Common Comprehensive Final Exam Score	77%	79%	81%	73%	73%		
Median Score	73%	80%	82%	76%	74%		
Mean course grade	2.00	2.44	2.22	2.36	2.15		
Item Analysis **Weakest Content Areas**							

*% Walk-away Fs = Did not take the final exam and received a grade of F.

Content Areas