Course Title: PHY-203 – Principles of Physics 1, 5 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.

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

four lecture exams, two laboratory exams, eight lecture assignments, and ten lab reports

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?)

A large proportion of the students are achieving success in this course.

A common relationship is that students who do not complete assigned problems and/or lab reports make up a disproportionately large portion of the students who begin the course and either do not complete the course or do not achieve success by the end of the semester.

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

I look for weaknesses in the students’ performance on the individual problems on each exam and in their lab reports. All exams and lab reports are returned to the students and reviewed during the next lecture or laboratory meeting when possible. Adjustments to lectures, laboratory activities, and assignments are made where deemed appropriate. Other faculty, full time and adjunct, are encouraged to report to and make suggestions at informal meetings with the lead professor or by email or phone.

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

No additional resources needed at this time.