**August, 2009 Assessment Committee Feedback: Physics**

Assessment Committee Contact Person: Mark Bollman

Plan also reviewed by: Vicki Baker, Scott Hendrix

Thank you for the hard work that went into your assessment plan. As we carefully reviewed your Steps, it became clear just how much thought and effort went into your work. There were some real strengths in your work, and we celebrate these with you!

In general, there were a few themes that the Assessment Committee noticed. First, it is most helpful when the progression from Step 2 to Step 3 and Step 3 to Step 4 are clear. That is, after you have articulated your learning goals, the clearest proposals are explicit in how the courses/experiences in Step 3 directly support the learning goals. And Step 4 should take full advantage of all of the places in Step 3 where data might be collected. Second, make strategic use of both direct and indirect measures[[1]](https://docs.google.com/a/albion.edu/Doc?docid=0AUaAHaCO2ORDZGh0bWJ0NXJfM2dyN3I4eGRm&hl=en" \l "_ftn1" \o "), and think about whether data can be collected at the beginning, during the program of study, and at the end. This gives a richer sense of where and when your work contributes strongly to learning goals and where improvements might be made. Third, make your plan manageable! All data need not be collected annually; some can be done every other year. And you may choose not to measure for all of your learning goals right now. Make claims that you can (a) intellectually, ethically stand behind and (b) find resources to measure.

Please feel free to contact either of us with questions about your feedback. We want to help your assessment plan be successful in collecting relevant data to inform your work! We will be happy to work with you toward timely completion revisions to the first four steps, submission of preliminary findings, and/or completion of this iteration of data collection.

Comments specific to your plan:

Step 1: Mission

The mission appears more like a list of outcomes rather than a mission as this point.  The mission needs to be re-evaluated and updated to be more broad (e.g., focus on the overall program, benefits of the programs, featured options, etc). Review other missions in the sciences as examples (particularly Biology and Geology).

Step 2: Outcomes

I realize there are many intricacies and programs that fall under the purview of physics, but as it stands now, there are A LOT of outcomes to assess.  Similar to what is included under “Learning Goals for All Areas”–can a slightly larger list of outcomes be assembled that transcends all areas covered by the Physics department?  Focusing  on fewer outcomes at a time—esp. for starters—would likely be doubly beneficial: both less work (and less confusing) in the short term, and builds in opportunities for piloting and implementation (and revision, as appropriate) of assessment plans, instruments, results, etc.

(E.g., the dept. might start assessment work with outcomes VII and VIII—assessment of 167 and 168; then these courses, and the specific educational components embedded in the courses, could be the core focus of Step 3 and Step 4…)

For Outcome II under Physics major – do you have a peer group that you compare your students against?  Or, is this just based off of the national norm?  Perhaps including a list of both (assessing both) would be helpful and then you can log this information longitudinally.♦♦

Step 3: Program Components

As of now, you only include a list of required courses related to the various outcomes.  There is no specific information included that would make clear to the reader how these courses achieve the outcomes with which you have them listed. Therefore, it might make sense to put together a matrix (or some other chart) that shows the outcome, the courses that achieve that outcome, and include a sampling of activities, assignments, exams, labs, etc that achieve that outcome.  When I read the information as it stands now, I am asking myself – how do you know this outcome is achieved in these courses?

In addition, the relationship of the individual courses back to specific student learning goals/outcomes is not clearly presented here (aside from suggestions in the outcomes section (Step 2) that 167/168 are designed to teach introductory knowledge).

Step 4: Methods

You do a wonderful job of putting together/collecting direct measures of assessment (national exams, etc).  I might suggest including the information you have noted for Assessment 1 – on your web site (if its not already there – that is certainly something to brag about).

For your Assessment III – You talk about the oral presentation – is there a common grading rubric used to assess the presentation?  Again, how do you know this is really achieving the stated learning outcome.  \*Same issue likely applies to Assessment IV.

You need to supplement your direct measures of assessment with some indirect measures, which I believe you have been thinking about (examples could include graduating senior or alumni surveys, focus groups, exit interviews, etc.).  Also, do you keep any longitudinal data such as national exam scores, etc?  This would be solid supplemental assessment information to include in your assessment report.

Assessment VI could perhaps be worded differently–“Education candidates majoring or minoring in Physics will pass the MTTC test for Physics with a score within one standard deviation of the state average.” suggests that an exceptional student who exceeds the state average by 2 SD’s would not fulfill this goal, which I don’t think is what was meant.  Assessment II has a similar limitation.

Overall,  you are off to a good start, but more work is needed on Steps 3 & 4 as you prepare to address steps 5 & 6 this year and moving forward. It might make sense to focus on one or two outcomes this coming academic year which will make your assessment efforts much more manageable.

[[1]](https://docs.google.com/a/albion.edu/Doc?docid=0AUaAHaCO2ORDZGh0bWJ0NXJfM2dyN3I4eGRm&hl=en" \l "_ftnref1" \o ") *In assessing student learning, there are direct and indirect sources of evidence. Direct evidence is clear and convincing information about student learning, such as: tests, examinations, papers, projects, assignments, field experience assessments, and portfolios. These are particularly strong sources of evidence especially when accompanied by articulated standards (such as a rubric). On the other hand, with indirect evidence there is room for other factors to affect the outcomes either positively or negatively. Examples of indirect evidence include: retention, graduation, and placement rates (may be impacted by economic conditions or college policies); surveys of students and alumni (may indicate feelings about college experience); grades (standards and even content may differ across instructors and institutions).*

Next Steps:

In coordination with your Assessment Committee reviewers and their written and verbal feedback, please observe the following deadlines for your assessment cycle:

September 15:  Revisions to Steps 1-4 due (if necessary)

October 1: Completion of Steps 5 & 6 using preliminary data

November 2: Final Fall 2009 plans due