SLO assessments in Physical Science

2010-2011 Overview

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The Physical Science department houses a variety of disciplines: astronomy, chemistry, geography, geology, physics, and earth/physical science courses. Many are GE courses.

Attached are all the reports from individual instructors within Physical Science. Our approach to assessments has always revolved about the premise that the instructor for the given class is the best person to determine the means for assessing that class. Only some of our courses have “overlapping” instructors, and discussions about using several standard questions between those sections has arisen. Yet each instructor may continue with her/his own choice of other questions as well, since each person has a (slightly?) different perspective on any given class.

A simple example of this would be two instructors of chemistry, each with a different background in industry. Their examples and questions can and do take on different slants because of this. Some simple standard questions can demonstrate the students' capabilities for certain SLO's, but a fuller assessment will go beyond that and utilize a number of questions in each class.

Some instructors have taken the oft- seen approach of using an “SLO quiz” (for lack of a better term), given both at the beginning and later in their course. This works particularly well for the various GE courses taught. Others use similar questions from semester to semester, while others are still trying to develop a good list found through experimentation.

There has been no mention in any discussion of the viability of the SLO’s for any course; people are satisfied with their list as of this time. The focus coming out of all discussions has been exactly what we as professionals should be doing anyway...that being a careful look at what we do in our classes to help the students succeed. The most animated ones have included talks among the instructors about

- the results of keeping labs aligned with lecture, especially in situations where different instructors teach each,
- the ongoing searches for better lab materials to get certain concepts across to students,
- rewriting experiments and handouts,
- learning new approaches to old topics to liven things up,
- figuring out how to use technology (iClickers, various computer programs, Internet resources),
- approaches to grading various assignments, including different instructors teaching lab sections of the same course,
• working more on ways to introduce the students to the area (course “ad-
vertising,” zero week, etc.) and help them outside of class (MESA involve-
ment).

Problems, some of which are old, need to be addressed. A fuller account here for
some courses should be made, missing assessment reports must be completed,
and few adjuncts have yet to be fully pulled into the cycle (beyond discussions
with full-time folks about how things are taught/evaluated). Next year begins
the closure of this side of things. This is largely a reflection on yours truly...

By and large we have been successful. All courses show good student im-
provement through a semester, and attainment of the SLO’s for their classes.
Questions always remain; some are discussed in certain course write-ups here.
But that is a part of the cycle, and change comes from this (an example would
be next semester’s change in the HW system being used in chemistry 1a because
of uncertainty with the current one).

The reports following this introduction are broken into the 2 semesters in-
stead of being coalesced into a single year. This will change next year to make
things more compact as well as more readable.

Both physical science 12 and geology 10 suffered major setbacks this year
(the regular instructors were “lost” for different reasons); a single report for
physical science was possible. The replacement instructors had a hard enough
time dealing with their last minute brand new assignments.