ASSESSMENT WEBSITE INFORMATION

College: Sciences and Mathematics **Degree Program: Physics BS & BSE**

Chair/Director: William Burns

2012 Report

DATA SAY:

Our data says that our students' skills in effectively communicating with the written word are unsatisfactory. This has been observed in several upper-level physics courses that require a term project with a written report. Students follow established formatting guidelines well, but convey an inadequate understanding of the topics and fundamental physics beyond a cursory literature review.

SO WHAT:

In order for our graduates to be successful in their careers as research scientists, teachers, and industry professionals, a high level of competency in written communication is paramount. Whether this be peer-reviewed journal articles, industrial reports, etc., we as instructors must emphasize the importance of effective communication in general while preparing students for the field of physics.

HOW WE CHANGED:

In light of the quality of written reports in the program, several instructors have implemented a variety of specific deadlines for portions of students' projects throughout the semester. We seek to observe the effect demanding project outlines with working bibliographies, rough drafts, etc. have on the quality of our students' written works.

WHAT WE GOT:

We see a marked increase in the overall amount of content covered within student projects and a marginal increase in the overall quality of writing. These results suggest that this method does improve the project quality to a degree but that future efforts should focus more on in-class discussions of best practices in Physics writing.

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2013 Report

DATA SAY:

To meet the learning outcome, "To describe observed and modeled phenomena using fundamental physical principles" in General Physics I/II (2054/2064) and University Physics I/II (2034/2044), a measurement tool was needed.

SO WHAT:

Physics faculty have developed multiple choice, course embedded assessment in these courses.

HOW WE CHANGED:

Using Google Docs, students will receive an email before class with the question(s). We will work the questions before the material is taught and then again immediately afterward. This format will provide instructors with instant feedback so they can assess the effectiveness of their teaching and address any shortcomings.

WHAT WE GOT:

Analysis of the assessment is on-going.

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