

Assessment Progress

Physical Science Department

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Previous Assessment Initiatives

- Physics already has a very thorough assessment program, designed by Anthony Escuadro, and in place for many years.
 - The Force Concept Inventory as both pretest and at the end of the semester.
 - An attitudinal survey at the end of the semester.
- Chemistry 201 (Gen Chem 1) also has a nationally standardized exam (from ACS), but not everyone uses it, and there is no departmental analysis of the data.
 - It is possible that this exam does not quite meet our needs due to the variety of material taught across different sections.

Current Assessment Efforts

- The number of Astronomy 201 sections has been expanded recently (actually, more than tripled!) to meet student demand for non-lab science courses.
- A nationally standardized assessment tool has been chosen by the full-time faculty, and it was given at the beginning of the semester as a pretest, and will be given again at the end of the semester.
- There is currently 100% participation in this program!

Current Efforts – Chem 201

- This semester, a survey was created and distributed to all the full-time faculty to determine what exactly is being taught in Chem 201. The results were expected to be useful in several contexts:
 - Choosing an assessment tool that best matches what is being taught.
 - Communicating to new adjuncts what material should be covered, and what material is optional.
 - Informing professors of later classes in the sequence what they can reasonably expect their students to have seen.
 - Providing an opportunity for individual professors and the department as a whole to reflect on what is being taught and why.

Creating the Survey

- Went through the textbook (Brown & LeMay) and picked out material that seemed of secondary importance, or that students struggled with in Gen Chem 2.
- Also asked the other members of the department what questions they had for their fellow professors.

Results

- The survey was given to all the full-time faculty who teach Chem 201, as well as one adjunct who has been with the department for numerous semesters.
- There was a 100% response rate!
- The results were emailed to the faculty, and there was considerable interest in the results.
- One of the conclusions is that, overall, the ACS exam does cover much the same material as we cover in our classes, although there are some small exceptions (for instance, solubility rules).

Ongoing Assessment Efforts

- Physical Science 107 (Current Public Issues in Physical Science) is a current events class with very nebulous SLOs.
 - “Content outcomes will vary by instructor due to the ‘current Issues’ emphasis of the course”
- Although I am the only professor who routinely teaches this class at HWC, there are several professors who teach it through CDC.
- I have reached out to these professors in an attempt to create a more collaborative environment, with limited superficial success.
 - The book
 - The availability of online resources
 - Swapping some syllabi

Future Plans

- Collect ACS exam data and analyze.
- Begin discussions about the suitability of the ACS exam for our needs.
- Collect astronomy exam data and analyze.
- Develop new strategies to engage the other phy sci 107 professors.