

Annual Assessment Report

Department: Physics

Academic Year: 2016

Date of Submission: Sept. 19, 2016

Department Chair: Kenneth Kihlstrom

I. Response to the previous year PRC's recommendations

<p>Item: Concern over prompt for science paper: The PRC was concerned that the prompt given to the students was inadequate in that it did not focus the students to demonstrate their ability to solve difficult problems that include real world applications. They asked for a rationale.</p>	<p>Response: This is a fair point. The science papers in the senior seminar are actually unlikely to address that part of the SLO. They were more meant to address the students' ability to integrate the various areas of physics by looking at a particular topic of their choosing. This often does involve "real world applications" but perhaps not always. It does test the depth of their knowledge.</p>
<p>Item: Communications PLO: There were concerns raised over both the presentation of the data used for this PLO (suggesting a separate graph for this) and whether writing and presenting scientific work was sufficient in light of the feedback from the alumni survey stressing communication in a broader array of activities.</p>	<p>Response: Again fair points. In the six year report we can recast the data to address the Communications PLO with its own chart (rather than include within the overall chart). On the broader point, we will have an internal discussion of whether we wish to broaden our PLO goal to include things like interpersonal, etc. communication. My guess is we would not though as while they are all important and do get addressed tangentially in our program (for example we have provided a "year by year" guide to preparing or a career on our department page that looks at some of these) we are more inclined to focus on technical writing and speaking. But as a side issue it would be good to be aware of these other issues and look for ways to address them (but not assess them).</p>
<p>Item: Confusion on assessment data/alumni responses: Knowing the individual reviewers response to each of the categories would have been helpful to evaluate reliability. In the alumni responses it was hard to tell when one response left off and another began.</p>	<p>Response: Taking the second question first, to us, it did not matter if one person made several comments or several people made one each. The goal was to get a sense as a whole of the advice and concerns people had. If it mattered we could go back to separate out the comments by each person but we don't think it does. On the first question, frankly the inter-rater reliability was not very good so aggregating the results allowed an overall measure of the goals without exposing the weakness of the process. This is one of the more subjective areas and hard to really get firm</p>

	data
Item:	Response:
Notes: Overall the 2015 PRC feedback was positive toward the report. This past year there was limited ability to focus on assessment because somewhat at the last minute Prof. Rogers took the year off, while Prof. Kihlstrom was off in the fall leading Europe semester leaving Prof. Sommermann to teach five fall semester courses and both Profs. Sommermann and Kihlstrom to teach spring overloads.	

II A. Program Learning Outcome (PLO) assessment

If your department participated in the ILO assessment you may use this section to report on your student learning in relation to the assessed ILO. The assessment data can be requested from the Dean of Curriculum and Educational Effectiveness.

Program Learning Outcome	None: The schedule was to have us evaluate student abstracts this past year for the Communications PLO but because of the problems noted at the end of the previous section, this was not attempted but will be addressed this year (2016-7)
Who is in Charge /Involved?	
<u>Direct Assessment Methods</u>	
<u>Indirect Assessment Methods</u>	
Major Findings	
Closing the Loop Activities	
Collaboration and Communication	

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or/and

II B. Key Questions

Key Question	With an aging department how do we transition for the next 30 years: All three current faculty will be gone in the next decade or so. We need to plan for the future in terms of hiring and equipment needs.
Who is in Charge/Involved?	Dr. Kihlstrom (Dept. Chair) has primary responsibility but all are involved.
<u>Direct Assessment Methods</u>	None
<u>Indirect Assessment Methods</u>	None
Major Findings	With the imminent departure of Prof. Warren Rogers, the first hiring needed to be done. The needs going forward were (1) most urgently, a new professor who could involve undergrads in research (2) A solid and mature person who could take on the mantle of leadership of the department as the senior members go on to retire in the years ahead (3) Someone who understands and embraces the mission of both the physics department and Westmont College. (4) Addressing the issue of diversity. The current department is all white, male and older. (5) Someone who can connect well with students.
Recommendations	These needs formed the core of what we looked for in a new hire. The finalists included a husband/wife team that would have shared a position and a tenured UCLA professor who is also a Westmont alum. The couple had the advantage of diversity but they were young (it turns out, a year from finishing their degrees) and struggled a bit in the classroom. They would have brought strength in the research area but might not have the maturity to lead the department. The UCLA professor excelled at #1 and clearly was much more mature and in a position for future leadership. As an alum, he understood Westmont well and its mission is largely what drew him back. It did mean putting the diversity issue on to the next two hires but the students did like him quite a bit. He was made an offer, which was accepted.
Collaboration and Communication: Dr. Rogers as peripherally involved in the process but there was some feeling that no one helps hire his/her replacement. Nonetheless he did meet with the candidates and gave feedback. The search committee included Drs. Sommermann and Kihlstrom from the department but also Drs. Alistar Chapman (history) and Eileen McMahan McQuade (biology). There were a number of meetings both to choose finalists as well as doing the candidate interviews. Administrators (President, Provost, and several staff) were	

also involved to various degrees. A unanimous consensus was reach in the hiring.

III. Follow-ups

Program Learning Outcome or Key Question	With an aging department how do we transition for the next 30 years
Who was involved in implementation?	Prof. Kihlstrom (chair) had the lead but all members of the department were involved.
What was decided or addressed?	After the hiring was done, it was important to provide the resources needed for Prof. Mitchell to succeed. This included startup funds to establish his research, mentoring to help him succeed.
How were the recommendations implemented?	Besides what the Provost Office was able to commit to startup funds, the department added a substantial amount (\$50K) that came in part from a restricted equipment account the department controls and the rest in yearly installments from the regular fund the department manages. In addition the department is committed to contribute ongoing funds to support Prof. Mitchell's work with students until he can have a grant request funded. On mentoring, this has taken two forms. One is an outside the department mentor: Prof. Steve Contakes from chemistry who has been an exemplary faculty member. Also Prof. Kihlstrom has worked with Dr. Mitchell on providing demos for his classes and well as informal mentoring.
Collaboration and Communication: We've had further discussions on future hires, seeing, in particular, the need for diversity. In addition, while Dr. Mitchell is capable of teaching any of our physics courses, he is an astrophysicist, so in future hires it would be good to get a pure physicist as well as maybe someone with an applied physics leaning (to help run the engineering part of the curriculum).	

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IV. Other assessment or Key Questions related projects

Project	None
Who is in Charge /Involved?	
Major Findings	
Action	
Collaboration and Communication	

V. Adjustments to the Multi-year Assessment Plan (optional)

Proposed adjustment	Rationale	Timing
Do the lab abstract analysis 2016-7	With Dr. Rogers and Kihlstrom unavailable it did not get done last year	Fall 2016

VI. Appendices

- A. Prompts or instruments used to collect the data
- B. Rubrics used to evaluate the data
- C. Relevant assessment-related documents (optional)