UNIVERSITY ASSESSMENT COMMITTEE
Feedback to Departments on Assessment Activities Reported in 2006-2007 Annual Reports

DEPARTMENT_____Physics_____**DATE**_November 2007_____

COMMITTEE MEMBER(S) CONDUCTING REVIEW__Joan Hawthorne, Nabil Suleiman_____

1. STUDENT LEARNING GOALS

- Were any goals referenced?   YES__X__   NO____   QUALIFIED Y/N ___
- If so, were goals well articulated?   YES____   NO____   QUALIFIED Y/N __X_
- Do goals address student learning?   YES____   NO____   QUALIFIED Y/N __X_

In addition to the Departmental goals, please also consider UND's Institutional and General Education goals for student learning (shown in alignment within parentheses). For each goal, use a Y (yes), N (no), or ? (qualified y/n or uncertain) to indicate whether this department has a similar or related goal.
____X___ 1 Communication ("communicate effectively, both orally and in writing")
____X___ 2 Critical/creative thinking ("think critically and creatively" and "be intellectually curious and creative")
_____ 3 Informed choices ("make informed choices")
_____ 4 Understanding across disciplines ("understand how conclusions are reached in the natural sciences, the social sciences, and the arts and sciences" and "acquire knowledge over a broad spectrum of subject areas")
_____ 5 Lifelong learning ("commit themselves to lifelong learning")
_____ 6 Cross-cultural appreciation ("develop some familiarity with cultures other than their own")
_____ 7 Service/citizenship ("commit themselves to…the service of others," and "share responsibility both for their communities and for the world")

Comments regarding Departmental goals and alignment of Departmental Goals with Institutional and General Education Goals:

  Undergraduate: Although the goals themselves are about what the department will do ("Provide students with…"), most of the objectives are about student learning of knowledge and skills. In some cases, the goals are about gaining experience (e.g., "students will practice…" or "students will gain…") rather than learning. Some of the goals are clearly about student learning ("students will acquire a knowledge base…" or "Students will be able to use their knowledge base…").

  Graduate: Goals for the graduate program are written in terms of student learning.

2. ASSESSMENT METHODS

Were any specific assessment methods referenced?   YES__X__   NO____   QUALIFIED Y/N ____
- If so, were specifically chosen assessment methods appropriately aligned with individual goals?   YES_____   NO_____   QUALIFIED Y/N _X__
- Were both direct and indirect assessment methods used as components of a "multiple measures" approach?   YES__X___   NO____   QUALIFIED Y/N ____

Comments:

  Undergraduate: We could find linkages between methods and goals in the assessment plan, although that alignment was not clear in the report itself (either in terms of plans for data collection or use of the data). Direct assessments appear to have been used within the gen ed portion of the curriculum, although not more generally. It would be extremely useful to collect direct assessments of student learning at the outcome level (i.e., among seniors) in order to determine how students are doing in terms of goals of interest. For example, do seniors/recent grads have the desired knowledge base? Can they use that knowledge base to solve physical problems, outside of the normal class context where students typically "know" the sorts of

problems and the sorts of methods they are about to be tested on? Can they demonstrate analytical skills or communication skills consistent with the department's expectations? Etc.

        Graduate: Although appropriate tools are identified (e.g., qualifying and preliminary exams, seminars), it does not appear that data from those tools are being systematically collected, and the data do not appear to be collected in relation to learning goals. However, they do have a plan that specifies intended linkages between goals and data.

3. ASSESSMENT RESULTS

Were any assessment results reported?   YES__X__   NO____   QUALIFIED Y/N ____

- If so, were the results clear in terms of how they specifically affirm achievement of goals?   YES____   NO____   QUALIFIED Y/N __X__
- If so, were the results clear in terms of how they indicate need for improvement?   YES____   NO____   QUALIFIED Y/N __X__
- Were the results tied to goals for student learning?   YES____   NO__X__   QUALIFIED Y/N ____

In addition to departmental goals, some assessment results may be applicable to Institutional and General Education goals. A list of the latter goals is included below. Please indicate with a Y, N, or ? whether results reported are applicable to Institutional or General Education goal achievement. For items with a Y or a ?, please describe findings in the appropriate section below.

_____ 1 Communication ("communicate effectively, both orally and in writing")
_____ 2 Critical/creative thinking ("think critically and creatively" and "be intellectually curious and creative")
_____ 3 Informed choices ("make informed choices")
_____ 4 Understanding across disciplines ("understand how conclusions are reached in the natural sciences, the social sciences, and the arts and sciences" and "acquire knowledge over a broad spectrum of subject areas")
_____ 5 Lifelong learning ("commit themselves to lifelong learning")
_____ 6 Cross-cultural appreciation ("develop some familiarity with cultures other than their own")
_____ 7 Service/citizenship ("commit themselves to…the service of others," and "share responsibility both for their communities and for the world")

Comments regarding results and the application of results to Departmental, Institutional and General Education Goals:

        Undergraduate: The collected data appear to be largely around the general education portion of the curriculum and does not exactly speak to student achievement of departmental learning goals. The data do seem applicable to the goal about acquiring a knowledge base, but that connection is not clearly made and it's difficult to determine if the data are intended to speak to that goal or simply to student success at the course-level. One faculty member appears to have conducted an extensive, high quality effort to assess student learning in an individual course, although the data from that project were not reported here.

        Graduate: Data regarding learning around grad program goals are not reported here.

4. CLOSING THE LOOP

Were any actions taken on the basis of assessment results reported?   YES_____ NO____   QUALIFIED Y/N _X___

- If so, do curricular or other improvements/ changes arising from assessment results directly address goals for student learning?   YES_____ NO____   QUALIFIED Y/N __X__

Comments:

        Undergraduate: Changes were reported, but no clear linkage to either goals or data was documented in the annual report.

Graduate: Changes stemming from systematic data collection are not reported.

SUMMARY

Strengths	*Areas for Improvement*
____ A specific plan for assessment is in place.	____ No specific plan for assessment is in place.
____Student learning goals are well-articulated.	__X__ Student learning goals are not well-articulated.
____Assessment methods are clearly described.	____ Assessment methods are not clearly described.
____Assessment methods are appropriately selected.	____ Assessment methods are not appropriately selected.
____Assessment methods are well-implemented.	__X__ Assessment methods are not well-implemented.
____Direct and indirect methods are implemented.	____ A single type of assessment methods predominates.
____Results are reported.	____ No results are reported.
____Results are tied to closing the loop.	__X__ Results are not clearly tied to closing the loop.
(Decision-making is tied to evidence.)	(Decision-making is not directly tied to evidence.)

OVERALL SUMMARY AND RECOMMENDATIONS:

It is clear that data of various sorts are collected in order to feed into many kinds of decision-making. However, "assessment of student learning," refers specifically to systematically-collected, aggregated data about student learning in relation to program goals, and the degree to which that kind of data are contributing to program change is unclear. Assessment should not be a major workload addition or an "add-on" if it is to be effective – instead, it should be built in so that relevant data are routinely collected. There are many resources on campus (including within other science departments) that can be accessed as part of a review of current assessment work, and such a review might be very helpful in terms of refocusing assessment work on high-value (not high-effort) mechanisms for data collection and analysis, and we encourage the department to take advantage of these resources if that would be helpful. Work within the grad program appears to be "behind" what we'd like to see.

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Section 1: __Y___   Section 2: __?___   Section 3: __?___   Section 4: __N___

Coding Key:
  Y = yes, this is done appropriately and well
  N = no, this is not done at all, or it is not done in relationship to student learning
  NA = no information available
  ? = action or progress is apparent; however, evidence is lacking that this is completely and appropriately done