



UNIVERSITY
of HAWAII®
MĀNOA

August 5, 2010

MEMORANDUM

TO: Alan Teramura, Interim Dean
College of Natural Sciences

FROM: Reed Dasenbrock 
Vice Chancellor
for Academic Affairs

SUBJECT: Natural Sciences One- and Two-Year Progress Report

Thank you for meeting with me, Krystyna Aune, and Wendy Pearson to discuss the One-Year Progress Report on your 2008 Program Review. As you know, we are endeavoring to make the Program Review process more substantive and to link it to various aspects of accreditation, especially the continuous improvement commitments involved in quality assurance. External peer review is an important part of that process, as evidenced in the 2008 review, but equally important is a continuing effort to implement the suggestions in the report that make continuing sense. We particularly appreciated your bringing a Two-Year Progress Report to the meeting, since this shows a commitment on the part of the College to the effort to improve our follow-up on Program Review. This document will focus on that report and on what in our judgment needs to happen over the next year as part of our evolving implementation of the recommendations of the 2008 Review.

I was glad to hear that you have called for hiring plans from each department to be the basis both for a hiring request to be submitted this Fall and for hiring in the future. We need to make sure that the College plan which emerges from these departmental plans is genuinely strategic in two dimensions: first, that faculty are hired in departments and areas that allow us to address the demands on the College for instruction in key gateway courses, by providing permanent faculty to the greatest extent possible in these key courses. The choke points in Natural Sciences seem more severe at present than in any other college, and this is an issue which badly needs our continuing and collective attention. Second, that faculty are hired in areas that help extend the external research funding of the College. It seems that you have clear next steps in this regard in Chemistry and in Physics; the situation in the various biological science departments is a little less clear to me at present, and I think strategic thinking about where we need to go in the biological sciences is critical.

The need for a clear plan for increasing the external research funding of the College is still there. Your Progress Reports marks out a number of important next steps: if PBRC is re-organized, that presents clear opportunities for Natural Sciences to build its research infrastructure as well as add researchers in a couple of important areas. I welcome the focus on undergraduate research grants as we move towards a comprehensive undergraduate research program. Your comment when we met that benchmarking the College against

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Interim Dean Alan Teramura

August 5, 2010

Page 2

other colleges like it might not be appropriate because our Biology Program had a focus on fields that received NSF-not NIH-funding was germane, but I'm wondering if that shouldn't lead us to think more systematically about how to use the hiring opportunities mentioned above to adjust the faculty profiles in ways that make instructional and programmatic sense. Assuming that the new degree in Cell and Molecular Biology is approved, I'm wondering if that shouldn't lead to some additional points of emphasis in the College hiring plan.

A great deal of progress has been made on the College's facilities over the past year, and Office of Facilities and Grounds has a number of projects at various stages that should enhance the condition of the College's facilities. We expect real progress on the renovation of Edmonson over the next year, and Snyder and perhaps other buildings in the College are gaining real traction for renovation as well. What is needed from the College is a focus on ensuring that we have sufficient facilities for the College's instructional program: specifically, we have had some conversation about the need for additional lab space for the introductory Biology and Chemistry courses, and it is key that these needs be kept paramount as we begin to renovate and modernize more of the College's space. I look forward to being kept informed about your needs and plans in this area.

The College seems to have fully embraced student learning outcomes (SLO), regular assessment, and placement of SLO on course syllabi. It has also held an assessment workshop for department chairs and assessment coordinators. The next step, in addition to ensuring greater names of program and course SLO, is the development of curricular maps. We also need all units – including Natural Sciences – to make sure that they are “closing the loop,” i.e., using the results of assessment for program improvement. In these two respects, the College is falling behind the Mānoa norm, though I do consider that progress is clearly evident in this important area.

Less progress has been made in the next area the Program Review highlighted, the need to address undergraduate student concerns about the complexity of the curriculum, inconsistencies in advising, and time to completion. It is good to know that the Biology and Marine Sciences degrees “are being redesigned to reduce the number of required courses,” but I suspect that all of the degree programs in the College could benefit from such a review. It is good to have four-year degree plans up on the web, but obviously we need to monitor if these are being consulted by students, if they are useful, and if they have an effect on student progress. We remain very concerned about the state of advising in the Colleges of Arts and Sciences as a whole, and the four deans involved need to take more responsibility for college-wide advising than they have done. We do not believe that this is a resource question as much as a question of how well the available resources are being deployed. Much more progress has been made on the graduate student concerns in the Program Review, as the College has raised RA stipends. However, no college-wide training for TAs has been implemented as was suggested in the Program Review.

Interim Dean Alan Teramura

August 5, 2010

Page 3

Finally, it does not look as if a great deal of progress has been made on the issue of increased student involvement in the governance of the College, but it is not clear to me that this is a burning issue on anyone's part at this time.

Now, although we consider it extremely important to do this kind of follow-up on Program Reviews, and all of the points made above are important ones for the College to concentrate on, we want to make sure that our ability to address new and emerging issues are not 'crowded out' by a legacy agenda from the past. The 2008 Review was not focused on the one issue which has emerged over the past year, which is the importance of our doing a much better job ensuring access to and success in the key gateway courses in the College, which include Math of course but also introductory science courses. Many of these courses are oversubscribed, so students have a hard time getting into them; many are also 'challenge courses' in which a high number of students fail to progress to the next course in the sequence. I view the fact that this wasn't mentioned in the 2008 Program Review as evidence that the College has historically not been as focused on this issue as it needs to be going forward. UH Mānoa has a complex dual mission, of being a major research institution and the primary provider of baccalaureate and graduate education to the state: Natural Sciences plays an absolutely essential role in undergraduate education as well as being a major site of externally-funded research. Our challenge is to make sure that one prong of that mission isn't neglected in favor of the other. I look forward to working with you on this complex balancing act.