

## **Dean's Response to the Program Review of the Zoology Program**

**August 12, 2013**

I greatly appreciate the thought and effort that went into the report from the Program Review Team, as well as the self-study and report response by the Zoology Department.

During this review cycle, I requested that departments select external reviewers without any ties to the department in order to ensure the most objective review possible. The Zoology Department is to be commended for selecting reviewers who met these criteria, and who also comprised an outstanding cross section of disciplinary professionals from interdisciplinary science programs, as well as those integrated within Biology departments. During their visit, I provided the reviewers with a list of specific questions that I felt would help guide the evaluation, and assured each review team that honest and objective observations, responses, opinions and suggestions were expected. Teams were asked to consider the questions in developing a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, which would comprise the core of their report. Consequently, the corresponding report reflects solely the views and opinions of the reviewers on these issues. While the report provided by the Zoology Departmental review team appears to be a thoughtful assessment of the program at Weber State University, some of the team's recommendations seem to be based upon limited knowledge of the department (e.g., The team suggested that some course offerings—Vertebrate Embryology as an example—should be limited to only once every other year; this is the precisely the current format), suggesting that at least in some respects, the actual review may not have been as comprehensive as desired.

Nonetheless, in their report, the reviewers identified a number of strengths, including a “palpably high level of collegiality among faculty,” the expectation of excellence in academics, superior research quality and quantity, and a diverse faculty with respect to areas of expertise. The review team also recommended against consolidation of the life science departments. I agree with these points.

The review team also identified some action areas after completion of their SWOT analysis, and made a number of recommendations (17), each of which is addressed to a variable degree in a lengthy departmental response, as well as in a brief ‘Executive Summary’ of the longer response. I also address these below:

1. Curriculum: *The review team recommended that an interdepartmental committee comprised of representatives from each of the life science departments be formed to evaluate the possible development of “common core” of life science courses. The review team proposed this suggestion for a number of reasons, most of which are rebutted in the Department's response. The core of these rebuttals appears to be that such a ‘common core’ of life science courses is unnecessary. This is because: 1.) “the basic principles of Zoology...generally apply to all living things,” and 2.) students and faculty have existing avenues through which breadth and interdisciplinary interactions (for students) and cross-disciplinary collaborations (for faculty) occur. Regarding the first point, I agree that this is true. Thus, it is unclear to me how the use of all living things as examples when teaching these basic principles would not be beneficial to someone learning them for the first time. The Department admits that “non-animal topics are not necessarily avoided” in their core courses; indeed, while in foundational courses, would it be valuable for students first learning these basic principles to purposefully be exposed to them in the context of a variety of living things so as to convey the pervasiveness of the principles? Regarding the second point, while I agree that there are avenues at the university (e.g., Honors Program, Integrated Studies degree) through which students can be exposed to interdisciplinary concepts, the suggestion that interdisciplinary education is accomplished through student enrollment and/or earning minors in other departments within the college fills this role is inaccurate. With a few exceptions (e.g., Neuroscience, Women's Studies), the vast majority of classes that are taken and minors that are earned are within a single department/discipline and thus are not by their nature interdisciplinary. In fact, based upon student comments made to the review team during lunch, it appears that students in the department recognized their lack of exposure to interdisciplinary topics in upper-level courses. The department notes that it is willing “participate in efforts to investigate the possible development of a ‘common core’ for courses that might have ‘substantial overlap and commonalities,’” and further suggests a number of questions that should be addressed by such a committee. Thus, I concur with the review team and recommend the immediate formation of a life science committee to evaluate the possible*

development of “common core” courses. I am willing to discuss ways in which the college can support these efforts and recommend that the committee report its progress on a semester-by-semester basis for inclusion in the COS annual report to the Provost.

The review team suggested that additional curricular improvements be considered by the department. Among these: 1.) adding Statistics as an option to satisfy the Departmental mathematics requirement, 2.) investigating the feasibility of developing a “Molecular/Cell biology” track within the major, and 3.) offering select upper-division courses less frequently. The department responded to the first suggestion by noting that several statistics courses are already offered elsewhere on campus, yet the possibility of including one of these options as a suitable alternative math requirement as a requirement for the Zoology major was not addressed in their response. I recommend that the department thoughtfully consider this as a possibility. Similarly, the department response did not address the possibility of developing alternative tracks within the major for students interested in varying career options. It is possible that the department has considered these in the past and has discounted them for valid reasons. However, if these options have not yet been contemplated by the department, I would encourage their consideration. Regarding the third specific recommendation, the review team apparently did not fully appreciate the frequency with which some upper-level elective courses are offered. Given the department’s desire to align their mission with that of the University – namely to focus considerable effort on General Education, Introductory-level, and service courses – I support the department’s inaction on this recommendation.

Finally, although not noted specifically in the reviewers report, the WSU Office of Institutional Effectiveness has indicated that the Zoology assessment plan needs attention in a variety of areas. Having reviewed this plan as presented in the self-study, I agree that significant improvements to the department assessment plan are warranted and recommend that weaknesses in the assessment plan be addressed not later than the end of the Fall, 2013 semester.

2. Strategic Planning: The review team recommended that “the department undertake a strategic planning effort to refine its curriculum and to determine what courses should be offered, how often, and how large they should be.” The team further suggested that this effort “should be informed by community need and student demand.” To the suggestion that a strategic planning effort be undertaken, the department responded that it currently has a strategic plan in place and, in fact, already employs the plan when making curricular decisions. I am pleased that the Department currently employs a strategic plan when making decisions about its curriculum. I have asked other departments within the college to develop strategic plans during the 2013-2014 AY, and thus encourage the department of Zoology to share their plan with other departments within the college so that it might be used as a model. However, it should be noted that, while the review team focused their recommendation for strategic planning on curricular issues, I see the process of strategic planning to include more than simply “what courses should be offered, how often, and how large they should be.” Rather, I believe that a strong strategic plan considers what the department currently is, and what it hopes to be in the distant future. This includes the types of programs it hopes to develop, the areas of expertise of future faculty members, and future employment opportunities for students/graduates, among other things. If the department does, indeed, have such a plan, I request that it be submitted to the dean for immediate review. Given what I see as the broader definition of a strategic plan, however, if it is necessary for the department to revise its current plan, I recommend that such a revision begin immediately, and be completed by the end of the 2013-2014 AY, at which time it should be submitted to the dean for review.
3. Resources: Limited resources were suggested by the review team to constrain course offerings and/or research opportunities by both current and future new faculty. The review team noted several limitations, including those for field work, teaching, and research (e.g., the teaching and research labs, transportation resources), as well as a paucity of institutional financial support of new and early-career faculty. Many of the limitations placed upon the department by the physical facilities will be addressed through construction of a new science building, as indicated in the department’s response. The department argues that each of its recently-hired faculty have been granted tenure and thus asserts that the status quo is sufficient. I acknowledge that there is limited funding for new and early-career faculty, and will continue seeking sources to increase this funding. In the meantime, to counterbalance the financial limitation, I recommend that new faculty encourage their research students to submit funding proposals to the Office of Undergraduate Research, and that faculty seek funding through the Research, Scholarship, and Professional Growth Committee. Further, I reiterate my offer to provide support, in

*the form of course buyouts (or, as warranted, stipends in support of professional growth activities), to any faculty (including early-career) who engage in external grant writing.*

*The review team recommended institutional support for pedagogical development of all faculty as well. I agree with this recommendation and, as the department noted in its response, have consistently offered support to the University's Teaching and Learning forum, as well as financial support to faculty wishing to attend short courses and/or workshops to develop or improve teaching. I remain willing to discuss additional means of supporting faculty in their efforts to improve student learning or research.*

- 4. Workloads: Faculty workloads were suggested by the review team to be too heavy to allow for provision of sufficient research opportunities, and course reductions, alterations to teaching credit, and/or the development of a research class ("Investigative Biology") were recommended. Similarly, it was suggested that additional staff could alleviate some of the burden currently assumed by the department's laboratory manager. The departmental response states that "not all students have adequate interest, dedication, or time to participate" in research, and asserts that the vast majority of students with interest in engaging in research are provided with sufficient opportunities. "There is substantial research activity within the department and we are unaware of any demand for research opportunities that is unmet." Therefore, the department contends that no change in their current research program is required. I agree with the review team that one of the strengths of the Zoology Department is its "thriving program of undergraduate research [that] provides high quality contact with faculty for those students who participate, and produces tangible outcomes: published papers, participation in conferences, etc. by students." I also agree with the department that it is not economically feasible at this time to alter teaching credit and/or reduce course loads. However, I think that it is reasonable to suggest that by adopting best practices and pedagogies utilized successfully elsewhere, the department may be able to extend research opportunities to a greater number of students. Moreover, while the department has collected adequate data on its student researchers (e.g., numbers of students who have acquired funding, numbers who have presented and/or published), I would encourage them to collect additional data (on interest among students to pursue research) to determine whether their understanding of interest relative to available opportunities is accurate. Regarding the recommendation that additional staff are necessary, I agree with the department that there is no indication that the current staffing situation, namely a full-time lab manager supervising three student workers, is unsatisfactory.*
- 5. Advising: Academic advising was suggested to be made more equitable so that student retention might be increased. The department noted no knowledge of inadequate or inequitable advising, yet admitted to having limited information on student retention, particularly relative to non-premedical students. Because pre-professional students generally receive advising elsewhere, it is imperative that those students not in pre-professional programs enjoy similar access to advisement. My recommendation is that the department should develop an advising rubric for non-pre-professional students in the major. Using this, the advising load should be spread out among the faculty, beginning in AY 2013-14. Implementing a required annual or even semester-by-semester advising visit of all majors can help keep students "on-track" toward successful graduation in a more timely manner and should also be made a priority. This system would also enable better monitoring of students through the program and thus data on retention could be more easily collected. The college advisor can be engaged to assist in developing stronger advising skills among the department faculty.*
- 6. Outreach: The review team recommended that the department adopt a more active role in community outreach by cultivating relationships with local high schools and the community college, by developing more online courses, and by engaging in more strategic marketing so as to enhance both recruitment and Development efforts. I agree fully with these suggestions, and recommend that the department consider increasing its activities in these areas. Moreover, I recommend that the department reach out to local businesses and agencies to assemble an advisory board whose members might help disseminate information about the strengths of the Zoology program to the greater community, and also help the department to identify opportunities related to its strategic plan.*

*The review team specifically suggested that the department consider working with local high schools to develop concurrent enrollment courses to enhance articulation between the department and feeder high schools. Although this was not addressed directly in the departmental response, it is implied that this would increase faculty workload or require additional faculty. While it is true that offering courses at local high schools would require, minimally, time to train high school teachers in this content, it is not necessarily true that additional*

*faculty would be required. In fact, I agree with the review team that offering these courses as Concurrent Enrollment (CE) options at local high schools could yield significant positive outcomes such as introducing students to the life sciences at an earlier age and engaging them to consider the life sciences as future career options. I consider this to be another opportunity for interdisciplinary cooperation among the life science departments at Weber State. Consequently, I most strongly recommend that the life science committee (noted above) also be charged with establishing an interdisciplinary BIO 1010 course that could be offered 1) through CE for concurrent enrollment, and 2) as a General Education course on WSU's campuses. In working towards this goal, I highly recommend that the life sciences committee also investigate the possibility of developing this course as a hybrid, or blended course to take advantage of existing technologies and to increase its usefulness and appeal to a broader student audience. As noted above, I am willing to discuss ways in which the college can support these efforts and recommend that the committee report its progress on a semester-by-semester basis for inclusion in the COS annual report to the Provost.*

- 7. Foster Community: While the review team acknowledged difficulty in doing so given university demographics, they recommended that the department take steps to foster a sense of community among its students. The department does not address this recommendation specifically in its response, but implies that additional faculty and/or resources would be necessary to achieve this goal. It is certainly true that resources would likely be necessary, but they do not necessarily need to be large. The reviewers suggested a seminar series (although their suggestion was for credit, which I do not think is required) – this might be coupled with a lunch for Zoology students to enable interactions between students in a non-classroom setting. Or perhaps a Zoology day-planner (or academic year calendar) with suggestions or information specific to Zoology could be given to those who declare Zoology as a major. Has the department considered developing a Zoology 'Ap', making a Zoology Group on Facebook, or opening a Zoology Twitter account on which Zoology concepts or thoughts could be shared? I agree that the maintenance of these require resources, but they may be worthwhile if students develop a sense of 'home' in the department. Therefore, I recommend that these options be considered, and am willing to discuss ways through which these efforts might be supported.*

Finally, I recommend that the Zoology Department undergo a full program review again during the 2015-2016 Academic year. Beyond that, a return to the five-year cycle is anticipated.

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