

Program Review: Department of Botany
Dean's Response
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I would like to thank the program evaluation team, Dr. Exequiel Ezcurra (Chair), Dr. Eric Ribbens, and Dr. Marjukka Ollilainen for their efforts and critical assessment of the College of Science (COS) botany program at Weber State University. I would also like to acknowledge Dr. Sue Harley (Department Chair) and the faculty members in the Department of Botany for their thorough self-study and their detailed and thoughtful response to the review team's report.

I have thoroughly reviewed the departmental self-study, the program review team's report and the Department of Botany's response to the review team's report. The review team highlighted the exceptional aspects of the botany program and also delineated a few areas of concern. I will focus the majority of my response on the areas of concern raised by the review team and to the departmental response to these areas of concern. But, I will begin by emphasizing the outstanding aspects of the botany program as highlighted by the review team.

Program Strengths

The review team praised the department's strong emphasis on field botany, geospatial analysis and ecosystem-level training, which fills an increasingly vacant niche nationally. I agree and recognize that the botany program will be a strong component of our new environmental sciences degree because of these areas of strength. The botany faculty members have been smart in incorporating core skills into their field botany certificate that will meet the job skills requirements of federal and state agencies. The review team cites the remarkable COS facilities including the "new state of the art microscopes and an outstanding teaching greenhouse with a remarkable live collection of extremely rare plants." I could not agree more. The review team compliments the department on the outstanding revised curriculum, which covers, in equal measure, the three major sub-disciplines in botany. The team commends the COS advisors and highlights the COS librarian, Miranda Kispert for the "remarkable web resources" that she has developed for undergraduate student research. The team also commends the GIS program faculty members in Earth and Environmental Sciences who host numerous botany students in their applied GIS courses. The acquired GIS skills coupled with in-depth ecosystem knowledge put our botany students in a position of "leading the field" when they are competing for jobs in the natural resources arena.

Program Weaknesses and Departmental Response

The team notes that the term "weaknesses" is too strong given their overall very positive evaluation of the botany program. However, given that caveat they do have some concerns.

Herbarium: The team notes that the curator of the herbarium is retiring in July of 2020. They have concerns that the herbarium, though well curated, has not been digitized and is therefore not able to be utilized by other organizations and institutions unless they physically visit the herbarium. The Department of Botany responds that they recognize the critical importance of digitizing the flora in the herbarium and that that process has already begun. To this end, students have expressed interest in the process and avenues through which training can be implemented and student participation tracked are already being developed. I commend the department for moving quickly to digitize the herbarium plants and making them available to other institutions and organizations through national flora

databases (Intermountain Regional Herbarium Network etc.) and for involving our students in this process.

Evaluation of teaching performance: The review team was concerned that student assessments of faculty teaching was not being done at a level that could be meaningful to the faculty members. The Department of Botany responded by noting that university policy requires student evaluations each semester and that the department has redesigned their student evaluation forms that were piloted this academic year. The department has also been conducting exit interviews (during which they gain curriculum insight from the graduates) both face-to-face and online for several years. They have found that face-to-face exit interviews are much more effective than online and will be conducting face-to-face exit interviews in the coming years.

Greenhouse: The review team was told that the greenhouse takes up 1/3 of the total energy consumed for Tracy Hall Science Center (THSC). Understandably, this raised a major concern for them. The Department of Botany, in response, notes that after the self-study was written an energy audit was conducted that demonstrated that the greenhouse consumed no more than 15% of the energy used by THSC; the university's Operations unit suggests that energy utilization by the greenhouse is actually less than 10% of that of the science building. The energy audit team identified a few fixes that would improve the energy efficiency of the greenhouse, and are continuing to investigate additional options as the university's Facilities Management is acutely aware of the need to address energy needs here and across campus to meet their 2050, "carbon neutral" goal. The dean is willing to discuss, prioritize and assist with finding the funds necessary to take care of these "fixes," as will, I am sure, Facilities Management.

Curriculum: The team expressed concern regarding the bi-modal distribution of the faculty members in the department as that relates to the newly revised curriculum, which will be put in place during the upcoming academic year. I do not share this concern, as the young faculty members will have completed the tenure process before Dr. Harley and Dr. Wachocki retire. The new curriculum revisions will be implemented and will have been in place for 2-3 years before the retirements of the senior members of the faculty. The department has pointed this out in their response. I would like to commend the department for their curriculum revisions which takes into account faculty turnover, streamlines the course requirements for majors, and builds in flexibility in those course requirements to facilitate degree completion. I encourage the department to work hard to ensure that the new curriculum will go through the curriculum process during 2019/2020 and will be ready for fall term 2020, consistent with their goal.

I compliment the Department of Botany for their commitment to the Davis campus and their collaborative efforts on that campus with the Nutrition program in the Jerry and Vickie Moyes College of Education (COE). At this time, the greenhouse and community garden (collaborative effort between the COS and the COE) need to be moved to make way for the new engineering building on the Davis campus. I am optimistic that the university will cover these moving expenses.

Pressures on tenure-track faculty and the sustainability of the current workload model: The review team raised this as an issue and I agree that this is a significant concern across the COS. The review team was clearly impressed by the "remarkable work" of the tenure-track faculty members in botany, but felt that, "they are feeling pressure to maintain an active research agenda, obtain external funding, teach courses, contribute to service requirements, and obtain tenure...this may not be sustainable in a teaching institution with a 4/4 load." I have appointed (on special assignment), Dr. Laine Berghout, chair

of the Department of Chemistry and Biochemistry to be a workload “guide” for all of the tenure-track faculty in the COS and to be a liaison with the Office of Sponsored Projects as a first step towards mitigating this issue. The academic leadership team will also be assessing alternatives to the current workload model over the coming year.