

**Program Review: Department of Microbiology**  
**Dean's Response**  
**June 2019**

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College of Science

I would like to thank the program evaluation team (Dr. Sue Merkel, Dr. Juliette Tinker, and Dr. Leigh Shaw) for their critical assessment of the College of Science (COS) microbiology program at Weber State University. I would also like to recognize Dr. Matthew Domek (Department Chair) and the faculty members in the Department of Microbiology for their comprehensive self-study and their 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 Microbiology's response to the review team's report. The review team highlighted many exceptional features of the microbiology program and also delineated a few areas of concern. The dean's response provides commentary on observations made by the program evaluation team as well as the microbiology faculty response. The dean's response follows the organizational structure used by the program evaluation team in their program review report.

**Standard A. Mission Statement and Standard B. Curriculum:** The review team was impressed by the skills list in the mission statement, the strong set of core courses in the curriculum and the many laboratory activities available to students. The review team was also impressed with the flexibility of the curriculum. The team felt that the curriculum was thoughtful and purposeful and could make the COS microbiology program distinctive in the university and in the nation. The team was also impressed that the microbiology students feel "cared for" by the microbiology faculty and staff and they commended the "open door" policy that most faculty members have. Flexibility in the curriculum coupled with approachable, engaged faculty members are key components of student retention and success. I would like to thank the microbiology faculty and the chair for their outstanding efforts in these areas. The results of these efforts are clear in the department's relatively short time to graduation.

Based on a suggestion from the review team, the department intends to examine the frequency and format of current and future course offerings to ensure that they will be providing appropriate coverage and flexibility. The department also intends to offer independent research to students earlier in their programs. I support both strategies as long as faculty workloads are taken into consideration. The review team did recommend the college consider revising workload policies regarding teaching credit for course-associated laboratories. While the credit given for teaching labs is outside of the purview of the college (it is mandated by the State Board of Regents), I support the department's investigation of creative scheduling methods, such as integrated lecture/lab, to address this issue.

**Standard C. Student Learning Outcomes and Assessments:** The review team positively noted that the curriculum learning outcomes are based on national standards and that they reflect the core concepts in microbiology. The team was impressed that the learning outcomes had been mapped to specific courses in the curriculum ensuring all learning outcomes were covered. I concur and would like to thank Dr. Domek and other faculty members for their assiduous attention to this aspect of curriculum development and learning outcomes assessment. The team did feel that more communication was needed between faculty members regarding learning outcomes (especially faculty teaching different sections of the same courses) and that additional work needed to be done to close the "assessment

outcomes loop". I agree with the department that this needs to be an action item in their strategic plan, and would like to see as short a timeline as possible for implementation. I will also note that the Microbiology department is not alone with respect to deficiencies in assessment. I recommend communicating with the chairs of other departments to identify ways that departments can work together to improve assessment, and possibly to also identify ways that the dean's office might better support assessment efforts.

**Standard D. Academic Advising:** The review team thought that the new Biology AS degree was fantastic and would effectively improve the advising of students into the appropriate general education and lower level courses. I am fully supportive of this new AS degree and am also excited about the potential of this degree to bring additional majors to all COS departments. I agree with the review team that this AS degree will facilitate improved advising and time to completion for many COS majors. The review team and the department recommend release time for faculty who advise students and also suggest the use of peer advisors. Release time for faculty advising will be a dedicated, college-wide discussion and will be taken up when the academic leadership team tackles the issue of workload in the COS.

**Standard E. Faculty:** The review team recognized that the faculty members in the department were extremely dedicated to the students, the field of microbiology and the mission of the department, college and university. They also were impressed that the Chair "noted several times how the faculty rarely decline a request to do more." The review team made special note of Dr. Daniel Clark as being particularly dedicated to teaching and learning. (Note: the review team mistook Dr. Clark for an adjunct faculty member, but Dr. Clark is a new, tenure-track faculty member.) I agree and certainly support any professional development of current COS faculty in the area of inclusive pedagogy so that the diverse student body we serve can continue to feel welcomed.

The review team noted that faculty does not receive sufficient credit for teaching and designing lab courses. They noted that there had been no reduction in faculty SCH loads (past program review recommendation), and that the credit load for lab contact hours is below the national standard.

The review team also raised the issue of pressures on young, tenure-track faculty and questioned sustainability given the current workload model. I agree and note that this is a significant concern for all departments across the COS. 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 new, 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.

As mentioned above, the review team specifically suggests that the COS consider revising workload policies regarding credit hours for laboratory courses and undergraduate research mentoring. The dean appreciates this recommendation, recognizing that undergraduate research is a high impact practice and should be supported as such and that these kinds of faculty efforts can pay off financially for the university through increased student retention. The dean also appreciates the comments of the department regarding workload issues and as the department notes, the academic leadership team will be assessing alternatives to the current workload model over the coming year. The academic team will need to be creative with respect to workload issues and with respect to incorporating more undergraduate research into the curriculum possibly creating greater opportunities for course-based undergraduate research (CURES) in lower-level classes.

The review team also recommends a new faculty line in this department. Unfortunately, that will not be possible in the near future. The department will be dealing with two retirements in the next couple of years and these faculty lines will be retained within the department. The Department of Microbiology is the second largest department in the COS and demonstrates promise for continued future growth.

**Standard F. Program Support:**

The team recognized administrative assistant, Katie Nelson as clearly being a significant asset to the department. The team also commented on the importance of the recently implemented monthly COS staff meetings (organized by Dean's Office Administrative Associate, Mrs. Donna Wollman) as providing Katie with critical information. The team was also very impressed with the level of support provided by Lab Manager, Karen Mann. The review team recommended salary increases for both of these staff members. Due to cost of living and merit funding received by the university, the dean's office was able to provide all administrative assistant/associate staff with salary increases of 4% and the lab managers received at least 3.5%.

The team also remarked on the spacious beauty of the new COS Tracy Hall Science Center (THSC), the fantastic facilities and the remarkable equipment (noting the confocal microscope) available to the microbiology faculty members. The review team did note a paucity of research space that might be beneficial in attracting new faculty with strong research agendas. I agree that the new building was constructed with a shortsighted view with respect to space for future growth, but this predicament provides an opportunity for innovative approaches, similar to the one adopted by the Microbiology Department. Shared spaces with specified uses (e.g., a 'pathogen lab', an 'anaerobic lab', a 'molecular lab') provides clear avenues for collaboration, as well as offers efficiency (e.g., no unused spaces when faculty take sabbatical leaves) in contrast to the historical approach of providing each Principal Investigator with his/her own lab space. I do certainly recognize the need for a 'Pathogen lab' near or adjacent to the autoclaves. The College recently supported a request for funding submitted by the department to the Provost for support in modifying an existing space to create this Pathogen lab. While we're currently still awaiting a response to our request, I will certainly consider providing financial support to ensure that this lab is created within the near future.

**Standard G. Relationships with External Communities:**

The team notes that the microbiology advisory board (specifically highlighting the efforts of Dr. Bruce Keswick) is a significant strength for the department and that the BUILD dairy program is valuable for many reasons including support of undergraduate research and internships. The dean concurs and will support the outstanding undergraduate research efforts (including support of internships) that occur in this department and will attempt to facilitate these efforts via different avenues including donor funding, support of the advisory board and facilitating academic leadership team discussions of alternative workload models that include support for undergraduate research and internships.

**Standard H. Program Summary:**

The review team commends the department for providing clear evidence that they have been responsive to the previous program review. However, the team noted that there did not seem to be any increased collaborations with other COS departments. The dean disagrees with the review team here, noting that the Department of Microbiology has been very engaged in the cross-college strategic planning sessions that have occurred recently in the college. They have agreed to be fully engaged in the four collaborative, college-wide strategic initiatives that emerged from that strategic planning process. Their involvement with the Biology AS degree development and implementation also demonstrates collaborative efforts with other COS departments.

I appreciate and concur with the department's four areas of focus that they have abstracted from the review team's report. While I cannot offer any new faculty lines (at this time), I do intend to fill faculty lines that come open due to retirements (over the next year) in this department. I appreciate and commend the department for being committed to maintaining the "important balance between a strong research agenda and teaching excellence."