

External Review of the Department of Biology

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External Review Committee

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Executive Summary

The Biology Department at the University of Victoria is a vibrant and thriving academic community, with research and teaching strengths in Marine Biology, Forest Biology, and Neuroscience. The university's mission is effectively supported by Biology in their emphasis on equity, diversity, and inclusion (EDI) in teaching and research, as well as producing fundamental knowledge that underpins the University of Victoria's strategic emphasis on Sustainability and Health. The University of Victoria is uniquely situated on the traditional land of the Lək'wəŋən (Songhees and Esquimalt) Peoples, adjacent to the marine environment and forest ecosystems, providing strong context for the discovery and applied biology research within the unit.

There is a vibrant research environment in the Biology Department, with multiple award-winning faculty and strong research outputs. Robust research funding increases since the last review reflect successful Canada Foundation for Innovation grants as well as more variable Tri-Council funding. The new environmental simulation facility in the Bev Glover greenhouse complex offers exciting opportunities for studying biological systems in a changing world. The aquatics research facility remains an area where aging research infrastructure requires attention. Despite infrastructure challenges, Biology is clearly a high-performing unit with research strengths in the three focus area and strong research productivity.

The Biology undergraduate program is the largest in the Faculty of Science, and Biology teaches students from all over campus in courses and laboratories. Biology prides themselves on their passionate teaching and dedication to student-centred learning through hands-on laboratories, field experiences, undergraduate research, and co-op placements. Undergraduate students reported that the experiential learning in Biology, such as laboratory offerings and field trips, were life-changing as they were exposed to forest ecosystems or marine biology research that inspired them. They were enthusiastic about the unique opportunities offered by UVic Biology in place-based learning and gaining real-life experience in biology. Fully 50% of students in the UVic Biology program are getting co-op or other forms of undergraduate research experience, providing them with important skills and experiences for their future careers.

The strengths of the UVic Biology program are outstanding, and it is definitely among the top Biology programs in Canada, yet there is immense pressure on the faculty and staff offering these courses and research experiences. Across the department, faculty and teaching staff are stretched thin due to increasing student numbers, decreasing faculty and teaching staff numbers, and increased workload due to student accommodations. Many stakeholders acknowledge the need to take a step back and assess how they are using their resources and

how courses can be redesigned without negative impact on student learning. There is a backlog of ideas about updating courses and labs, but time for pedagogy has been absorbed by administrative tasks. An urgent priority of the department will be providing resources like course buy-outs to free up time for strategic planning in the undergraduate program. Note that in the recommendations below, we do not address recommendations or strategies at the departmental level to address the increased work load associated with student accommodations as this is an urgent university-wide issue.

List of Recommendations

1. Plan for planning. Make a schedule for strategic planning retreats and regular engagement of the strategic planning committee to assess and implement recommendations 2-4 below for teaching and recommendations 5-8 below for research.
2. Focus resources on required courses. Undergraduate students reported taking longer to completion due to the inability to get some required courses and co-op students would benefit from more summer offerings. As an example, a 1.0 FTE teaching stream faculty member would support the very popular Marine Biology concentration.
3. Re-evaluate the TA allocation in the context of curriculum goals. The experiential learning in this unit is a huge strength, and lack of TA resources is compromising this by not having the ability to serve the 100-level students who require labs for developing skills for upper-level courses or co-op positions.
4. The dedication of teaching-stream faculty and staff is very impressive, but their workload is unsustainable. Provide instructors, SLIs, and SAs time for planning and updating.
5. Perform a needs assessment for aquatic research facilities. Consider appointing a scientific director for the aquatic research facility who will have responsibility for promoting and advocating for the facility.
6. To get MSc projects on track in a uniform and timely fashion, require MSc students to defend a thesis proposal within the first 6-8 months.
7. Implement a letter of expectations and agreements for all grad students and supervisors within the first 3 months of the first semester. This letter should provide discussion points on course planning, outside work, publication, authorship, working hours, vacation time, pay structure, and a commitment to regular meetings.
8. Use one-time funding to set up a graduate students body/club and grad student representative, e.g. one TA buy-out the first year, then maybe an honorarium going forward for the grad student rep/advocate. Responsibilities of the graduate student representative should include facilitating communication between the department and students, including by attending regular department meetings.
9. For biennial Merit assessments, a rotating advisory committee should review faculty CVs and provide feedback to the department Chair.