

Graduate Programs in Biology, Joint Institute with University of Ottawa
Update on Unit Response to External Reviewers' Report & Action Plan
Programs Being Reviewed: Graduate Programs, Biology, Joint Institute with University of Ottawa
Completed by: Bruce McKay, Chair of Biology and Andrew Simons, Associate Chair Graduate Studies in Biology
Approved by Dean: Dr. Maria DeRosa, Dean, Faculty of Science – December 6, 2023

Note: This document is made available for public posting on the Vice- Provost's website.

***** Denotes items that SQAPC would like the unit to pay particular attention to based on their past review of the original action item.**

External Reviewer Recommendation	Original Action Item	Owner & Timeline	Progress Update June 2023	Have calendar changes been initiated or completed (Not applicable/Yes/No), if Yes, when
<p>1. We recommend that the OCIB website, which was operated by the Univ. Ottawa and recently taken down, be reinstated and appropriately supported by both departments.</p>	<p><i>We have tried to have a combined website in the past and it was hard to maintain and update. The difficulty with having one OCIB site for both Institutions is that U. Ottawa must always have an equivalent French version, so historically we have had to rely on U. Ottawa's template and staff to maintain the site. Also, because the two institutions have different policies for coursework, research requirements, it is not feasible to have a single website. Therefore, our plan of action is to make a one-page website that is bilingual, and this will provide links to independent departmental sites at both institutions.</i></p>	<p><i>The administrative assistant at Carleton is able to produce this single-page website, but it needs to be in the Carleton format. The Grad Chair at Carleton will discuss with the Grad Chair at U. Ottawa how they would like to contribute. We could also make this one page site bilingual.</i></p>	<p><i>An OCIB page is now linked from Carleton Biology and this will be updated as required by our Administrative Assistant.</i></p>	<p><i>Not applicable</i></p>

<p>2. We recommend that the Department consider approaches to improve engagement and participation in the annual OCIB meeting. This may simply include re-emphasizing the importance of the meeting to students and perhaps even providing awards for best talks or posters.</p>	<p><i>We have tried a number of different ways to increase participation in the OCIB symposium, including reducing the time from 1.5 days to 1 day, giving prizes for best talks and posters, and providing excellent funding for the student committee to bring in invited speakers, rent a venue, and provide lunch. One of the issues is that the symposium comes right at the end of the school year (end of April or early May), at a time when some students are heading out to the field for research, and many faculty and students are just 'burned out' after a long year. While we have tried to come up with another time, the end of April/early May still appears to be the best. As this is a student-run symposium, it is agreed that neither Carleton U. nor Ottawa U. faculty members will get too involved in the administration of the symposium. The roles of the faculty and administrative staff are to provide logistical support. The student committee self organizes each year, and passes information from one committee to the next. One thing that we will do is to create a timeline for important stages in the formation of the committee and symposium. For example, in September the committee will be formed and consult with the Director of the OCIB Institute on the plans and timelines for the year. This would include things like having the website set up, contacting groups such as the Biology Graduate society, and plans for sending reminders to students and faculty. We can also plan to have an</i></p>	<p>The current Director of the OCIB, in collaboration with the Grad Chair at the other university, and their respective grad administrators, will make a checklist of goals and timelines in the fall of each year.</p>	<p><i>The 2023 meeting was in person in the Richcraft building. There were 212 registered attendees which likely underestimates the total number because non-registered individuals attended. We estimate that between 1/3 and 1/2 of the graduate students in the joint institute attended. There is room for improvement and we will continue to encourage widespread participation.</i></p>	<p><i>Not applicable</i></p>
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	<p><i>OCIB committee representative present at our Departmental meetings about a month prior to the event to ensure that faculty are informed and encouraged to get their students to participate.</i></p>			
<p>3. We recommend that the Department work with Alumni Affairs to develop a mechanism to maintain contact with and track the success of program graduates.</p>	<p><i>The current Grad Chair in Biology at Carleton informally inquired about obtaining assistance from Grad studies and their professional development team to follow student paths. The current Dean of Science indicated that this information was difficult to obtain. We believe that the best way to track students is through the faculty members in the Department, who can provide anonymous data about their previous students. This information will be more convenient for faculty members who have NSERC grants, as this information is provided in the HQP tables.</i></p> <p><i>As this task requires additional resources beyond what our current graduate administrator can provide, we will ask for financial support to hire a part time student (perhaps a recently graduated graduate student) to collect these data and prepare a report.</i></p>	<p><i>The Graduate Chair in Biology in consultation with the Departmental Chair will request funds from the Dean of Science to hire a student. The Graduate Chair will also consult Alumni Affairs to request assistance in tracking previous students.</i></p>	<p><i>An initiative to track success of graduates, and make it publicly available to incoming and current graduate students, is underway. Given the difficulties in obtaining data from FGPA or Alumni Affairs, this initiative is to collect data directly from Biology faculty members at the request of the Associate Chair, Biology. This list is being assembled using anonymized HQP tables from NSERC Discovery and CIHR grant applications with the aim of updating the list at each grant application. So far, career/employment post-graduation data have been</i></p>	<p><i>Not applicable</i></p>

			<i>collected for 58 graduates within a 6-year window. The aim is to have a complete list by January 2024, and create a page (linked to Biology web pages) curated from this list.</i>	
4. We recommend that the Department prioritize the hiring of a new staff member who is capable of developing and maintaining the website, and who can also address basic IT issues.	<p><i>We agree with this completely, but the problem goes beyond computer support for graduate students, and therefore there are a number of different issues that may require different solutions. We have several perceived deficiencies in our department with respect to computer support. For example, we require help with the following:</i></p> <ul style="list-style-type: none"> <i>- departmental website requires more frequent updating</i> <i>- individual faculty research websites are not easily created or maintained; faculty require help in building and maintaining their sites</i> <i>- computer software and hardware maintenance for administration and research (this is a big one)</i> <i>- OCIB website (see point 1 above)</i> <p><i>Following the retirement of Jim Logan, who provided computer software and hardware maintenance to the Faculty of Science, we are left with little computer</i></p>	As this requires hiring a new staff member and changing the job descriptions of existing positions in Biology, the Chair of Biology and Departmental Administrator will work on this problem. This should be done in consultation with the grad chair and faculty members so that the needs of the department are considered.	<i>We have included webpage maintenance in the job description of our Department Administrative Assistant. However, there is no budget for an internal IT specialist; we obtain assistance from University IT or access the Science-level Information Technology Officer and his team.</i>	<i>Not applicable</i>

	<p>support in the department. We require salary support to fill this major gap.</p> <p>Plans include the following:</p> <ul style="list-style-type: none"> - Conduct a survey amongst Biology Faculty to itemize computer and website needs - Change the job description for the Admin Assistant in Biology to make website management a larger percentage of the duties. We would hire someone with strong communication and computer skills - Request funds from the Dean of Science to hire somoni who could provide help to professors with their lab computers and research websites - Discuss the option of changing the job description of the Departmental Technician to include computer assistance and maintenance 			
<p>5. Our recommendation at this time is nothing more than to ask that the Department remain vigilant and proactive in their support of EDI as it pertains to the recruitment and retention of students, staff, and faculty.</p>	<p>EDI policies are being implemented at the level of the University, and as the External Reviewers pointed out, the Biology Department is already vigilant and aware of the importance of including visible minorities at all levels of our department.</p>	<p>Continue with current practices</p>	<p><i>A four-member Biology Department EDI committee has been in sitting since 2020, and generally meets monthly. The committee initiated a journal club, and reports to the Department monthly through an "EDI Spotlight" report during</i></p>	<p><i>Not applicable</i></p>

			<p><i>Departmental meetings. The mandate is similar to that of the Science-level committee (multi-page document), but also advises hiring committees. In addition, there is a departmental representative on the Faculty of Science EDI committee.</i></p>	
<p>6. We recommend that as part of the revision process all guidelines relevant to Carleton be examined to ensure that they are consistent between the Department and the FGPA. In addition, if not already done so, the report generated from each student's annual advisory committee meeting could include an explicit statement of upcoming deadlines.</p>	<p><i>The OCIB handbook is currently being revised and will function as an important information source for both students and faculty in Biology at Carleton. We tried years ago to have a single handbook for the two universities, but due to ever-changing policies that are linked to those of upper administration at each university (particularly FGPA), we decided that we required separate handbooks. This should be updated on a yearly basis.</i></p> <p><i>Also, we are in the process of updating forms for committee meetings, fast-tracking and thesis defenses, in order to clarify terminology and make wording consistent with that used in the handbook. We will update on, preferably, an ongoing basis, but at least once a year.</i></p>	<p><i>Grad Chair, Departmental Chair, Grad and Departmental Administrator</i></p>	<p><i>Several Departmental-FGPA inconsistencies have been noted, and the Associate Chair (Graduate Studies) will update the CU version of the OICB handbook over the summer of 2024. At that time, committee report forms will also be modified accordingly.</i></p>	<p><i>Not yet but adjustments that require calendar changes could arise.</i></p>

<p>7. We recommend that the Department consider implementing the use of pre- and post-surveys to assess student perceptions of their career aspirations and how these have been impacted by their graduate program. Access to this information should help with tailoring professional development activities to maximize their effectiveness.</p>	<p><i>While we completely agree that implementing measures to facilitate career development for our students is very important, we do not have the resources to survey students about their career aspirations before and after they fulfill their degree requirements. That said, we are in agreement with working with FGPA and Alumni Services (see comments associated with recommendation 3 above) to collect data on career paths taken by our previous students, and, working with FGPA and Biology Faculty to assist students with their career development. One key practice already in place is our extensive networking with local, provincial and national government agencies and private industry through adjunct faculty, who act as supervisors and advisors. The Biology Faculty will continue to promote collaborations and facilitate networking with local, provincial and national government agencies and private industry through adjuncts, who act as supervisors and advisors.</i></p>	<p><i>Biology Faculty will continue to promote liaisons with government and private industry to facilitate networking for students.</i></p>	<p><i>Although we cannot survey students as suggested (see original response), data on career paths of graduates is now being collected (point 3), and will be made available to incoming and current students. Furthermore, several new Adjunct Research Professors have been appointed.</i></p>	<p><i>Not applicable</i></p>
<p>8. The completion of a worksheet following each student's advisory committee meetings is a reasonable and accepted approach for evaluating PLOs, and the sample Advisory Committee Structured Feedback rubric will be an effective and useful guide.</p>	<p><i>As written in the Cyclical Review document, a pilot trial for assessing LOCs is now in place. The Grad Chair is currently following up with the team who developed the LOCs, and the grad administrator, who is collating the information. The plan is to complete the trial after one year and then to solicit feedback from faculty, adjunct faculty, and grad students on the value of these assessments for students, and where improvements can be made.</i></p>	<p><i>Pilot is being administered by the Learning Outcome Committee, and Grad Chair, and data are being tabulated by the Grad Administrator</i></p>	<p><i>The worksheet and rubric is being adapted based on feedback from the pilot. This remains in progress.</i></p>	

<p>9. We recommend the Department ensure that the Biology Graduate Student Association is appropriately funded and is strongly encouraged to play an active role in the life of the Department.</p>	<p><i>We have already acted by connecting with the Biology Grad Society to ask what we can do to help out. We are able to provide funding for activities and will continue discussions with the committee to discuss their goals for the upcoming year.</i></p>	<p><i>Chair and Grad Chair. Action already taken.</i></p>	<p><i>We provide funding to the BGSA for events. The pandemic interfered with some of those plans but BGSA held an event in October 2023 and we anticipate further events. In addition, we include the BGSA in our annual graduate orientation day, funded by the Department directly, and a BGSA representative attends our monthly Departmental faculty meetings.</i></p>	
<p>10. We recommend that students be actively engaged in the process of enhancing existing PLOs or defining new ones. This could occur by ensuring that at least two students are represented on the Departmental learning outcomes team.</p>	<p><i>We will consult with the existing committee to discuss how we can incorporate graduate students into modifying the existing PLOs and defining new ones.</i></p>	<p><i>Grad Chair and Grad Assistant, with faculty running pilot Departmental learning outcomes.</i></p>	<p><i>We solicited feedback from students involved in the piloting of the LOC document. This feedback will form part of the assessment of the pilot Structured Feedback Rubric in April, 2024.</i></p>	

Graduate Programs in Biology, Joint with University of Ottawa
Update on Learning Outcomes Assessment Activities
Programs Being Reviewed: M.Sc. and Ph.D.
Completed by: Bruce McKay and Andrew Simons

1. Who is responsible for the assessment of program learning outcomes?

- Learning Outcomes Assessment Committee
- Undergraduate/Graduate and/or Curriculum Committee(s)
- All faculty in unit
- Other: Department Graduate Studies Committee and the Learning Outcome subcommittee

2. Which program learning outcomes have been assessed since your last CPR? If no assessment activities were undertaken, please provide a rationale and describe what is required in order for assessment to take place moving forward.

Our unit has developed an *Advisory Committee Structured Feedback Rubric*. Specific rubrics were developed for all learning outcomes in our graduate programs. It is our goal to provide students with more clear expectation and information on their progress towards each of our learning outcomes. This was piloted with MSc students so far and we are assessing the approach. Once the MSc structured feedback pilot is assessed, we will 1) phase in its regular use, and 2) begin a pilot for the Advisory Committee Structured Feedback Rubric at the PhD level.

3. Did you follow your assessment plan? If not, how did your assessment plan change and why?

yes

4. What methods have been used to assess the program level learning outcomes? (check all that apply)

- Reviews of examples of student work
- cuPortfolio
- Student surveys or focus groups
- Faculty retreats or discussion sessions
- Reviews of program curricula and courses (*includes efforts to align course and program learning outcomes*)
- Other through advisory committee reports

Provide additional details if necessary:

See #2 above

5. What assessment activities are planned between now and your next CPR? Provide specific LOs and timeframes.

The first version of the *Advisory Committee Structured Feedback Rubric*, was piloted for students in the MSc program, and was deemed by student advisory committees to be unnecessarily complex. A new version is now

being piloted. This version of the pilot will be assessed jointly by the Curriculum Committee and the Associate Chair (Graduate Studies) of Biology in April 2024. Pending recommendations of this assessment, the Rubric will become a regular component of all Graduate Advisory Committee meetings at the MSc level in Biology beginning in September 2024. Also based on the assessment, a pilot at the PhD level will be launched in September 2024.