

Cyclical Program Review of Academic Programs offered by the Department of Biology Progress Report on Implementation Plan: 4-year

Date: 3/2/2022

Contact: Brian Cumming cummingb@queensu.ca

Programs	Degrees
Biology	BScH, MSc, PhD
Biology and Mathematics	BScH
Biology and Psychology (with the Dept. of Psychology)	BScH
Biotechnology	BScH

Table 1 Add/delete rows as required

At the conclusion of the cyclical program review, a final assessment report and implementation plan was agreed by the Teaching and Learning Office and the Deans of the Faculty of Arts and Science and the School of Graduate Studies. These deans are responsible for monitoring the implementation plan. This report is an important step in the overall cycle of continuous improvement and is an opportunity to reflect on, and document, the progress made on incremental improvements to address recommendations in the implementation plan.

Please complete the table below to report on progress made in the past 4 Years against the implementation plan. Add further explanation, if necessary, in the *additional notes* section.

Please complete this report and return it to qugap@queensu.ca by 2/25/2022. The Teaching and Learning Office will review this progress report. It will then be appended to the Deans' annual reports for the 2021-22 academic year, filed in the Office of the Provost and Vice-Principal (Academic). Please note that monitoring reports will be posted on the University web site.



Digitally signed by Brian Cumming
DN: cn=Brian Cumming, o=Queen's
University, ou=Biology,
email=cummingb@queensu.ca, c=CA
Date: 2022.03.07 14:04:59 -05'00'

Signature of Unit Head

Date



March 18, 2022

Signature of Faculty Dean

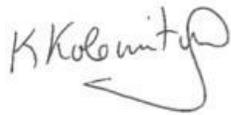
Date



March 28, 2022

Signature of Dean (SGS)

Date



March 29, 2022

Signature of Associate Vice-Principal (Teaching and Learning)

Date

Recommendations 2a, 3b, 3d, 3e, 6a, 6b, and 10 were not supported by the Provost and Vice-Principal (Academic) and are not included in this report.

Recommendation 1: Reviewers recommend that the Unit communicate with undergraduate students regarding efforts to integrate course outcomes, program outcomes and career outcomes	
Proposed follow-up	Enhance Biology DSC representative involvement in undergraduate committee meetings and departmental meetings. Enhance direct communication with undergraduates by improving departmental website and adding monitor in the atrium
Responsibility for leading follow-up	Department Head
Timeline for addressing recommendation	By December 2018 – this was an overly optimistic estimate on my behalf.
Are there additional deliverables associated with the proposed follow-up?	Yes
Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')	N/A
What is the current status of the follow-up?	In process
Include a completion percentage	>50%
Please provide a brief description of the current, completed or planned work	As mentioned in our original feedback, representatives of the Biology DSC have always been on our UG Committee and have representation and a voice at our department meetings. Regular communications have been ongoing through Newsletters from the Undergraduate Chair, Major's

nights, and DSC-organized 'Chat with Profs' events. The Head of the Department, prior to COVID, has met with the incoming DSC at the beginning of each academic year, to hear their plans and encourage interactions and events. The pandemic has reduced these interactions and I am concerned that the strong DSC culture has faded as student-faculty-staff interactions have declined.

Our pre-pandemic 'Sense of Place' initiative (led by W. Nelson and P. Martin) involved on multiple fronts including such as the establishment of research news features, enhanced tweeting activities, re-designing the delivery of departmental news on the website, solicitation of news from across the department, and improvements to communication traffic with students and other groups. These were possible by the creation of term TAs to promote regular communication, a position overseen by the UG Committee.

A subset of the UG committee (led by W. Nelson) worked Allen Graphics with plans for upgrading the entrance of Biology on the second-floor landing of Biology. To date, our 'Walrus' display was moved to the atrium with improved signage, to make room for a more prominent entrance for Biology and establishing a social-electronic presence. Coupled with the construction of a 'state-of-the-art' Biology lab (with a new hands-on laboratory course; and funded by FAS) and an upgrade to the 2nd floor hallway, immediately inside our 2nd-floor entrance.

Plans for a screen at the second-floor entrance is still in the works which will help promote a stronger social-electronic presence. Delays in this project occurred as the result of the pandemic a large university class-room renovation project (1102-1103, and associated renovations of classrooms 2109, 2111, and elimination of the staircase) adjacent to our second-floor entrance.

Recently (W2022), the 'Sense of Place' Committee has been reinvigorated under the leadership of P. Martin (M. Aristizabal, A. Little, J. Monaghan, D. Davis, and in collaboration with the Program Associates). Monitors and displays have been ordered for the entrance of Biology and along with other plans to enhance communication with students in our main teaching wings in collaboration with our courses, clubs, and research opportunities.

	<p>Related initiatives include the redevelopment of the Departmental Website, an ongoing initiative that was started initially with a broad and representative committee involving all stake holders in October 2020 (initially chaired by W. Nelson, and currently chaired by R. Colautti), including undergraduate and graduate representatives.</p> <p>The Graduate Studies Committee, under the leadership of the Associate Co-ordinator of Graduate Studies, J. Monaghan, has started creating a Graduate Newsletter to celebrate our achievements more broadly within the department. This initiative started in the Fall of 2021 with the 2nd Newsletter in February 2022. There are also several other initiatives ongoing to promote, attract, and celebrate graduate students.</p>
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<p>Recommendation 2b: Reviewers recommend that the Unit and the School of Graduate Studies identify academic and non-academic career opportunities and focus on professional development training for both academic and non-academic careers.</p>	
<p>Proposed follow-up</p>	<p>Unit to continue to promote student awareness of resources provided by School of Graduate Studies</p>
<p>Responsibility for leading follow-up</p>	<p>Department Head</p>
<p>Timeline for addressing recommendation</p>	<p>Ongoing</p>
<p>Are there additional deliverables associated with the proposed follow-up?</p>	<p>No</p>
<p>Which support units have been engaged as collaborators in supporting additional deliverables?</p>	<p>School of Graduate Studies; The Biology Graduate Student Council</p>

(If no, please indicate 'N/A')	
What is the current status of the follow-up?	In process
Include a completion percentage	Choose an item.
Please provide a brief description of the current, completed or planned work	<p>Continuous progress is will always be necessary on this important issue and putting a percent complete does not make sense. As mentioned in our initial feedback Graduate Studies has taken the lead in helping students manage the challenges of graduate student life. These initiatives are listed under the 'Expanding Horizons' Professional Development website (https://www.queensu.ca/exph/) and are widely accessible to all graduate students. Our website includes links to important resources, and this website is currently undergoing a major reorganization (R. Colautti, Chair website committee) to better reflect the needs of our students. Faculty, staff, UG and Graduate Students are represented on this committee.</p> <p>We will continue to support and promote awareness of the resources available through the Graduate School, and support BSGS activities that promote career development, and leadership skills including our annual Biology Research Symposium and other activities (e.g., OE3C symposium, S2022)</p>

Recommendation 3a: Reviewers recommend that the Unit develop and articulate a strategic plan and vision on both number and discipline-specific diversity of professoriate.	
Proposed follow-up	Develop strategic plan by engaging all members of the department. Organize departmental retreat
Responsibility for leading follow-up	Department Head
Timeline for addressing recommendation	By September 2019

<p>Are there additional deliverables associated with the proposed follow-up?</p>	<p>Yes</p>
<p>Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')</p>	<p>Lockhart Facilitation and the Queen's Executive Decision Centre, School of Business</p>
<p>What is the current status of the follow-up?</p>	<p>In process</p>
<p>Include a completion percentage</p>	<p>50%</p>
<p>Please provide a brief description of the current, completed or planned work</p>	<p>We have been striving to create a departmental vision and strategic plan for quite some time. In April 2017, we held a retreat to decide on priorities for new faculty hires. At this there was universal support for four areas out of 12 that were discussed. These included positions in: Computational and/or Systems Biology; Biology and Management of Rapidly Changing Environments; Animal Physiology; and Integrative Ecology of Vector-borne Diseases, and strong support for spousal hires in the department. We successfully recruited J. Friedman for the Biology and Management of Rapidly Changing Environments and G. diCenzo for a position in Computational and Systems Biology, with both starting their positions in July 2019. Dr. S. Yakimowski was also hired into a three-year position in 'Plant Evolutionary Ecology' in August 2019, an initiative to help support retention and spousal hires.</p> <p>At our Department Retreat in April 2019 (Elbow Lake) we discussed several topics including: a) identifying a shared vision for our department; b) agreeing on a priority position for an off-cycle hire; c) agreeing on a position for our next on-cycle hire; d) identifying other priority positions; and e) gathering ideas, suggestions, and processes that are relevant to our departmental vision and relevance (e.g., the structure of our seminar series; undergraduate and graduate teaching; outreach; departmental processes, operations). There was general agreement that an Integrative Animal Physiologist was our highest priority, a position that we had previously submitted for an on-cycle</p>

position. We also agreed that we needed to define a departmental vision, and then work out what positions could build on our vision and strengths. Departmental strengths were discussed and the importance of computation biology, especially related to the expertise to analyse and interpret genetic data, gene analysis, gene regulation and genotype-phenotype analysis. Following our retreat, we learned that we had received an on-cycle position to advertise for an Integrative Animal Physiologist (F2019 search), allowing us to submit for an off-cycle position for an Integrative Genomic Biologist, which also received support from FAS. With the permission of FAS, the Integrative Genomic Biologist was changed to a position in Molecular Genetics (W2020 search), given the retirement of V. Walker. A. Little and M. Aristizabal were both successfully recruited and began their positions in July 2020. In all these searches many recommended processes to enhance attracting diverse candidates was followed and documented. These procedures were recently formalized by our RTP and Appointments Committee and circulated along with recommendations for further changes to our appointments process to further improve our Appointments process. These recommendations will be discussed at an upcoming special Staff Meeting in mid May.

Due to the complexities with COVID, our next department retreat on our departmental vision and hiring priorities didn't occur until May 2021. Since our initial discussions in 2017, we now had five new faculty members (but six retirements: P. Boag, L. Ratcliffe, R. Robertson, R. Montgomerie, W. Plaxton and V. Walker). The importance of recent documents relevant to our departmental vision now included the Principal's emerging strategy and the FAS Strategic Plan (launched in the fall of 2019). At our May 2021 on our departmental vision, we discussed our core values and departmental vision. By the end of the meeting, it was agreed that more discussion was necessary to define our values, mission, and vision statements, but there was strong support for a faculty position in Molecular Evolution, and a proposal was developed and then modified for consideration in an on-cycle (F2021) and off-cycle (W2022) competitions (unfortunately we were not successful with either of these submissions).

Following the May 2021 Retreat, a smaller vision committee was formed that included faculty, staff, and students (C. Eckert, B. Cumming, J. Friedman, D. Orihel, H. Thompson, R. Cross, A. Little and A. Rooke) with the goal of bringing our statement of our core values and shared vision back to the department. In June 2021 we met to discuss a draft vision statement crafted by C. Eckert. The committee agree that we should seek the assistance of a professional facilitator. On February 23-24, 2022, four facilitated workshops were held to provide information to help finalized our core values,

	vision, and strategic priorities. The results of these sessions will be discussed by the vision committee in March to craft our core values and departmental vision, that will then be shared with the department for feedback. This process has taken a long time, but we continue to make positive progress.
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Recommendation 3c: Reviewers recommend that the unit create a “new faculty” mentorship program at the Unit level.	
Proposed follow-up	By seeking input from cognate departmental heads and the faculty office, department head to create and implement a faculty mentorship program
Responsibility for leading follow-up	Department Head
Timeline for addressing recommendation	By July 2019
Are there additional deliverables associated with the proposed follow-up?	No
Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate ‘N/A’)	Faculty of Arts and Science
What is the current status of the follow-up?	Completed
Include a completion percentage	Choose an item.

<p>Please provide a brief description of the current, completed or planned work</p>	<p>The lead on new faculty orientation has been the Faculty of Arts and Science (https://www.queensu.ca/artsci/staff-and-faculty/new-faculty), and includes information on new faculty training, teaching, Faculty Board, forms and important dates and deadlines. This support is much appreciated. The Department of Biology has developed an OnQ (Welcome to the Department of Biology at Queen’s University!) page that is the hub of information about our department for faculty, staff, and research personnel). Our OnQ page contains general information and has sections relevant for faculty, staff, students, and PDFs. The faculty pages are edited and updated by the Head, and the other sections by the Departmental Manager and various staff and faculty. J. Monaghan was the driving force behind getting our OnQ page started. We also maintain a TEAMS faculty site for distribution of important files that may be of interest to faculty (e.g., the minutes of Staff Meetings, old Internal Academic Reviews, etc.), a site that originally formed to provide access to information on Return to Campus (Biology) forms and protocols during COVID and served as a platform to track individuals in the building during COVID, a requirement of the university.</p> <p>In Biology, we also provide informal mentorships, by matching new faculty members with a willing experienced faculty member. This in addition to the new centralized Faculty Mentorship Program of FAS certainly has provided more resources for our new faculty.</p>
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<p>Recommendation 3f: Reviewers recommend that the University accelerate the rate of faculty replacements and new hires.</p>	
<p>Proposed follow-up</p>	<p>Department to develop a well-articulated, long-term strategic hiring plan</p>
<p>Responsibility for leading follow-up</p>	<p>Department Head</p>
<p>Timeline for addressing recommendation</p>	<p>September 2019</p>

<p>Are there additional deliverables associated with the proposed follow-up?</p>	<p>Yes</p>
<p>Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')</p>	<p>Faculty of Arts and Science</p>
<p>What is the current status of the follow-up?</p> <p>Include a completion percentage</p>	<p>In process</p> <p>50%</p>
<p>Please provide a brief description of the current, completed or planned work</p>	<p>Please see item 3a above. We have successfully recruited 5 faculty members over the last five years and have held several retreats to discuss our values, mission, vision, and strategic priorities. As mentioned in 3a, we have recently sought help in forming our vision and our strategic priorities. Our next step is to tackle a longer-term hiring plan based on our shared vision. A five-year hiring plan comes with many challenges as it is exceedingly difficult to project our faculty retirements.</p> <p>The Biology Department wishes to remain a holistic department, with interests ranging from genes through the ecosystems, with integration along this spectrum. As such, we do have specific teaching needs to maintain our program including courses in cell, molecular, population, community, and ecosystem biology. Our department has recognized strengths in plant and aquatic biology, and have outstanding programs in ecology and evolution, and a world-class field station. We also need to maintain specialized and innovative courses for our Biotechnology program.</p> <p>Like other departments, we have experienced issues with faculty retention because spousal appointments are challenging. Despite the challenges with the activity-based budget model, this model did allow for departmental planning. We are likely to lose one of our newly faculty (A. Little,</p>

	<p>hired in July 2020) due to the progressive spousal hiring practices at McMaster. Since I was appointed Head, we are currently down a faculty member, and this July, will be down two due to another retirement. Additionally, two of our faculty members have reduced faculty teaching loads as they now serve important roles as Associate Deans in the Faculty Office. We have faced one challenging demographic challenge with faculty hiring, but another demographic challenge is looming. We currently have ten faculty members over 60 and four of these faculty are over 65 years of age. Projections of our teaching plan two years out, suggests many shortfalls on our teaching loads even if we manage to hire two new faculty in the next two years. Our Biotechnology Program is the program under the most stress due to our demographics and likely retirements.</p>
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<p>Recommendation 4a: Reviewers recommend that the Unit include non-academic staff at all departmental retreats.</p>	
<p>Proposed follow-up</p>	<p>Department Head to extend invitation to non-academic staff to departmental retreats. Ensure non-academic staff feel welcomed and their participation valued</p>
<p>Responsibility for leading follow-up</p>	<p>Department Head</p>
<p>Timeline for addressing recommendation</p>	<p>Next departmental retreat</p>
<p>Are there additional deliverables associated with the proposed follow-up?</p>	<p>No</p>
<p>Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')</p>	<p>N/A</p>
<p>What is the current status of the follow-up?</p>	<p>Completed 100%</p>

Include a completion percentage	
Please provide a brief description of the current, completed or planned work	This is an ongoing effort, and especially important as we now have many new staff in the department. As mentioned in our original response, we welcome and invite participation of faculty, program associates, staff, and graduate and undergraduate student representative at our retreats and workshops. Diversity of perspectives is important. We will continue to look for ways to better integrate our staff in departmental events.

Recommendation 4b: Reviewers recommend that the Unit include staff at faculty and graduate student social events and to create an annual Staff Appreciation Event	
Proposed follow-up	Ensure non-academic staff and graduate students are invited to social events. Initiate departmental staff appreciation events.
Responsibility for leading follow-up	Department Head
Timeline for addressing recommendation	Ongoing
Are there additional deliverables associated with the proposed follow-up?	No
Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')	N/A

<p>What is the current status of the follow-up?</p>	<p>Completed</p>
<p>Include a completion percentage</p>	<p>Choose an item.</p>
<p>Please provide a brief description of the current, completed or planned work</p>	<p>We will continue to look for ways to involve our staff in departmental functions.</p> <p>Our department holds both academic and non-academic events. This includes a day-long Graduate Research Symposium, typically following the end of classes.</p> <p>Pre-pandemic, we have also organized occasional morning breakfast events, featuring a maple syrup tasting event (several faculty and staff make their own syrup), and typically a spring and fall departmental BBQ on our courtyard. Everyone is invited to these events.</p> <p>In 2021-22 we integrated our seminar series into a single series to help promote community and integration. Everyone is invited to these events, but the attendance by graduate students has been lower than we had expected.</p> <p>Our DSC holds an annual year-end banquet. I routinely encourage the DSC to invite all members of the department.</p> <p>Queen's also hosts a yearly Staff Appreciation Day, a time for us to recognize the staff for their valued contributions to our programs.</p> <p>Pre-pandemic, the Departmental Manager and the Head take our staff out for lunch just prior to the break in December. This is an enjoyable experience, but the pandemic has not allowed this event to occur. During the pandemic, gift cards of appreciation were given to our staff as a small token of our appreciation.</p> <p>The Graduate Students also host an annual holiday celebration, and students, faculty and staff are invited. We will continue to encourage an active and inclusive environment, and certainly hope that we can return to normal in-person activities.</p>

Recommendation 5: Reviewers recommend that the Head of the Unit define the role of Program Associates in order to create a positive working environment	
Proposed follow-up	Review job descriptions of Program Associates. Consider expanding PA resources to non-lab courses
Responsibility for leading follow-up	Department Head
Timeline for addressing recommendation	By July 2019
Are there additional deliverables associated with the proposed follow-up?	No
Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')	Human Resources (Melissa Morrison, and many others)
What is the current status of the follow-up?	Completed
Include a completion percentage	Choose an item.
Please provide a brief description of the current, completed or planned work	In W2020, a Program Associate (PA) Workload document was developed by W. Nelson in consultation with the PAs. This was done to delineating responsibilities (faculty vs PA) and balancing workload. However, an important part of this initiative was to also improve the professional work

	<p>environment of Program Associates. Job descriptions were also revised in W2020 and circulated for comments, before being submitted for re-evaluation by HR. The PA documents (title now Laboratory Curriculum Developer) were received and then signed by the PAs in F2020. The position summaries of the LCDs were updated once again in W2021 and re-evaluated in the summer, resulting in an increase in one grade for the junior and senior LCD position. Importantly, a new PA position was developed to help provide support in the department, a Program Associate in Blended Learning and Accommodations. This person was hired to support blended and online learning, maintaining best practices, learning technologies, and help manage academic accommodations and considerations.</p> <p>Following the recommendations of HR, we have changed the reporting process of the PAs/LCDs to a performance dialog process (PDP) and changed the oversight to both the Departmental Manager and the Associate Head. There continue to be challenges, and discussions are ongoing, and were made more complex because of COVID.</p>
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Recommendation 7: Reviewers recommend that the University attend to the physical infrastructure of the Department of Biology	
Proposed follow-up	Meet with representatives of Campus Planning and PPS to identify and prioritize physical infrastructure needs
Responsibility for leading follow-up	Department Head in conjunction with Associate Dean, Arts and Science
Timeline for addressing recommendation	By Spring 2019
Are there additional deliverables associated with the proposed follow-up?	No

<p>Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')</p>	<p>Faculty of Arts and Science PPS</p>
<p>What is the current status of the follow-up?</p> <p>Include a completion percentage</p>	<p>In process</p> <p>Choose an item.</p>
<p>Please provide a brief description of the current, completed or planned work</p>	<p>There will always be ongoing communication between the Department of Biology and PPS. Regular meetings are held between the Area Manager and our Departmental Manager. The space occupied by the Department of Biology in the BioSciences Complex is large (8,700 m², or almost forty 2,000 sq ft. homes) and involves many complex issues. There has been talks of a yearly regular shutdown to deal with regular maintenance, but although we have agreed to this several times, this is still in the planning phase. Regular roof leaks continue to occur, despite these being issues for years (e.g., rm. 4410, and directly beneath on the third floor). The heating is at best not properly controlled but has been ongoing for decades. Issues with our cooling towers and maintenance issues are regular ongoing issues, and excessive water anomalies seem difficult find and fix.</p> <p>Progress has been made (improvements in our the Phytotron Infrastructure (lighting, floors), in the animal care facility, and in a major overhaul of one of our teaching labs (2305 and 2311) and the 2nd floor hallway. Also, the large 1102/1103 renovation run by PPS went smoothly and communication with occupants of the BioScience Complex was organized and professional, and any minor issues were quickly solved.</p> <p>I am recently encouraged the recent move to a standardized lock system being instituted in our building and at Queen's, and the Strategic Laboratory Fume Hood Revitalization Project, but both projects seem to have drifted from their original timelines. The later will be challenging as it will involve almost all our research spaces and needs to be done without causing delays to research in our building, that have already been severely hampered by COVID.</p>

Recommendation 8a: Reviewers suggest that the Unit invite the embedded librarian staff member to attend Unit's council and become integrated at all levels into the Unit.	
Proposed follow-up	Seek advise from embedded librarian staff member when redesigning labs, tutorials and courses
Responsibility for leading follow-up	Department Head
Timeline for addressing recommendation	Ongoing
Are there additional deliverables associated with the proposed follow-up?	Choose an item.
Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')	Library
What is the current status of the follow-up?	Choose an item.
Include a completion percentage	Choose an item.
Please provide a brief description of the current, completed or planned work	Our librarian was involved in preparing search materials which are still being used in BIOL102 and BIOL212, and before 2018 was involved in giving presentations about literature searches in BIOL103 and BIOL202. She was always eager to help and let our PAs know she was there to help. More recently she has been on leave for prolonged periods over, and the pandemic has made collaboration more difficult.

Recommendation 8b: Reviewers recommend that the Unit involve the librarian in second year programming to assist with undergraduate training.	
Proposed follow-up	Oversight committee to seek advice from embedded librarian staff member during redevelopment of second-year labs

Responsibility for leading follow-up	Department Head, Oversight Committee, LCDs
Timeline for addressing recommendation	Ongoing
Are there additional deliverables associated with the proposed follow-up?	No
Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')	Library
What is the current status of the follow-up?	Completed
Include a completion percentage	Choose an item.
Please provide a brief description of the current, completed or planned work	The development of our 2 nd -year labs has been complex, especially during COVID. As mentioned above, we have not had much involvement with the science librarian over this time (please see 8a). We hope to be able to resume contact with the librarian post COVID. We appreciate the accessibility of the online resources that have been developed by the library.

Recommendation 9: Reviewers recommend that the Unit focus on community and morale regarding longstanding divisions between EEB/PEARL and MCIB	
Proposed follow-up	Encourage community building and boost morale by focusing on faculty renewal, diversity, mentorship, communication, institutional support, and the revival of a shared departmental vision of success
Responsibility for leading follow-up	Department Head
Timeline for addressing recommendation	Ongoing

Are there additional deliverables associated with the proposed follow-up?	No
Which support units have been engaged as collaborators in supporting additional deliverables? (If no, please indicate 'N/A')	N/A
What is the current status of the follow-up? Include a completion percentage	In process Choose an item.
Please provide a brief description of the current, completed or planned work	<p>We have made progress, but it is hard to specify a percentage at this time. This will require a continued effort. Many meetings have been undertaken to develop a shared vision (summarized in 3a) and faculty renewal (3f). Our shared vision involves a strong commitment to equity, diversity and inclusion, and educational initiative and policy changes to help us succeed, both at the University and department level. Our Sense of Place Initiative is an ongoing process (see 1, 3a, 3f). In a bold move, it was proposed by C. Moyes, J. Monaghan, S. Arnott and others that we integrate our seminar series into a single seminar series in 2021-22. This Departmental Seminar Series have been well attended and was setup to emphasize the breadth and diversity of biology. However, the turnout of some faculty has been low, and graduate student attendance has not been as high as we had hoped. More effort will be necessary to continue this effort of integration into 2022-23.</p> <p>An example of an ongoing initiative concerning integration, is our CFI initiative (led by S. Lougheed) for critical infrastructure to develop an 'Ontario Network for Interdisciplinary, Multi-scale Research on Anthropogenic Environmental Impacts'. This involves research on drivers of biological systems (from molecules to ecosystems), in aquatic and terrestrial environments, involving biologists, engineers, social scientists, and indigenous peoples, with the common goal of developing long-term solutions to protect our environment.</p>

Additional Notes:

Please note any additional issues affecting progress, if applicable.