Western UNIVERSITY · CANADA

Biology

Final Assessment Report & Implementation Plan

April 2026

Faculty / Affiliated University College	Faculty of Science	
Degrees Offered	MSc, PhD	
Date of Last Review	2017-2018	
Approved Fields	Cell and Molecular Biology Ecology and Evolution Physiology and Biochemistry	
External Reviewers	Dr. Kathreen Ruckstuhl Department of Biological Sciences University of Calgary	Dr. Nicholas Provart Department of Cell & Systems Biology University of Toronto
Internal Reviewers	Dr. Anabel Quan-Hasse Associate Dean, Faculty of Information & Media Studies	Desmond Oklikah PhD Student, Geography and Environment
Date of Site Visit	January 19 and 20, 2026	
Date Review Report Received	February 3, 2026	
Date Program/Faculty Response Received	Program Response: February 19, 2026 Faculty Response: February 20, 2026	
Evaluation	Good Quality	
Approval Dates	SUPR-G: April 20, 2026 ACA: May 5, 2026 Senate (for information): May 15, 2026	
Year of Next Review	2033-2034	
Progress Report	June 2029	

Overview of Western's Cyclical Review Assessment Reporting Process

In accordance with Western's Institutional Quality Assurance Process (IQAP), the Final Assessment Report (FAR) provides a summary of the cyclical review, internal responses, and assessment and evaluation of the Graduate Biology Program, delivered by the Faculty of Science.

This FAR considers the following documents:

- the program's self-study brief;
- the external reviewers' report;
- the response from the Program; and
- the response from the Dean, Faculty of Science.

This FAR identifies the strengths of the program and opportunities for program enhancement and improvement, and details the recommendations of the external reviewers – noting those recommendations to be prioritized for implementation.

The Implementation Plan details the recommendations from the FAR that have been selected for implementation, identifies who is responsible for approving and acting on the recommendations, specifies any action or follow-up that is required, and defines the timeline for completion.

The FAR (including Implementation Plan) is sent for approval through the Subcommittee on Program Review - Graduate (SUPR-G) and the Senate Committee on Undergraduate Curriculum and Awards (ACA), then for information to Senate and to the Ontario Universities' Council on Quality Assurance. Subsequently, it is publicly accessible on Western's IQAP website. The FAR is the only document from the cyclical review process that is made public; all other documents are confidential to the Graduate Biology Program, the Faculty of Science, the School of Graduate and Postdoctoral Studies (SGPS), and SUPR-G.

Executive Summary

The Department of Biology was established at Western University from the merger of the Department of Plant Sciences and the Department of Zoology in 2003. This was accompanied by the merger of the Plant Sciences and Zoology graduate programs into the Biology graduate program, which graduated its first student in 2005. The Biology graduate program is a thesis-based research graduate program that prepares students for success in academic and non-academic scientific settings. Total enrolment (with new admits) in the MSc program in 2023-2024 was 82 students. Total enrolment in the PhD program in the same academic year was 84.

The self-study was informed by two focus groups as well as a student survey organized by the Society of Biology Graduate Students (SOBGS). To deliberate and draft the self-study section on EDIDA, a dedicated committee was put in place.

The external reviewers shared a positive assessment of the Biology Graduate Program. They offer four recommendations with considerations for further enhancement.

Strengths and Innovative Features Identified by the Program

- Access to unique research facilities. The Biotron for Environmental Research and the Advanced Facility for Avian Research which houses the only hypobaric wind tunnel in the world.
- Integration within the multidisciplinary Centre for Animals on the Move (CAM), offering students access to cross-disciplinary research networks, specialized seminars (“Movement Mondays”), and collaborative research culture.
- Strong external research partnerships, particularly with Agriculture and Agri-Food Canada (AAFC) and Birds Canada, enabling supervision and training that expand applied research opportunities beyond campus.

Concerns and Areas of Improvement Identified and Discussed by the Program

- Recent loss of faculty members in conjunction with the slowing/freezing of hiring research faculty in the short term, could extend to the long term and have consequences for the department.
- Reduced funding and support from Agriculture and Agri-Food Canada (AAFC) will reduce the proportion of students trained at AAFC.
- Persistent concerns about the effectiveness and usability of the department website, particularly for clearly communicating supervisors’ research areas and opportunities to prospective students.
    - Administrative and staff capacity pressures, including the loss of key staff positions and limited ability to replace them, resulting in challenges with graduate program administration and website maintenance.

- Recruitment risks looking forward, including reduced capacity to admit students due to fewer funded supervisors, uncertainty around international student visas.

Review Process

As part of the external review, the review committee, comprising two external reviewers, one internal reviewer and a graduate student reviewer, were provided with Volume I and II of the self-study brief in advance of the scheduled review and then met in-person over two days with the:

- Vice-Provost, Graduate & Postdoctoral Studies
- Associate Vice-Provost, Graduate & Postdoctoral Studies
- Director, Office of Academic Quality and Enhancement
- Administrative Coordinator, School of Graduate and Postdoctoral Studies
- Head, Collections & Content Strategies
- Teaching and Learning Librarian, eLearning
- Dean, Faculty of Science
- Associate Dean, Graduate & Postdoctoral Studies, Faculty of Science
- Department Chair
- Graduate Chair
- Graduate Education Committee Members
- Program Faculty Members
- Graduate Program Staff
- Graduate Students

Following the site visit, the external reviewers submitted a comprehensive report of their findings which was sent to the Program and Dean for review and response. Formative documents, including Volumes I and II of the Self-Study, the External Report, and the Program and Decanal responses form the basis of this Final Assessment Report (FAR). The FAR is collated and submitted to the SGPS and to SUPR-G by the Internal Reviewer with the support of the Office of Academic Quality and Enhancement.

Summative Assessment – External Reviewers' Report

External reviewers shared that they *"observed a Biology Graduate Program at Western that is well structured and well run, with strong student support and a high level of engagement from both faculty and graduate students".*

Strengths of the Program:

- Collegial, supportive culture with high levels of faculty and student engagement.
- Highly competent, research-active faculty with strong supervisory capacity, characterized by high-impact publications, effective graduate supervision, and consistent involvement of students as co-authors or lead authors.
- Attractive three-stream program structure (Cell and Molecular Biology; Ecology and Evolution; Physiology and Biochemistry), highlighted by reviewers as a strength that supports breadth, choice, and sustained student demand across the program.
- Clear, comprehensive Graduate Handbook and robust progress-tracking framework, providing well-defined milestones, expectations, and assessment mechanisms that support timely completion and student success.
- Research-intensive training environment supported by world-class facilities and infrastructure.

Prospective Areas of Improvement for the Program to Consider

- Reliability of infrastructure i.e., Power Outages, and a Biotron-wide failure which disrupted research and student progression and timely communication of infrastructure disruptions.
- Accessibility limitations in older buildings i.e,, narrow lab spaces and limited entry points.
- Need for additional technical training in the areas of statistics, bioinformatics AI/Machine learning, grant writing and other skills needed for modern biological research and non-academic careers.
- Incentives or scholarships to attract indigenous graduate students.
- Prioritize increasing numbers of racialized faculty in future hiring plans.
- Outdated and difficult-to-navigate departmental website.
- Limited cohort cohesion and community formation, attributed to the program's dispersion across multiple buildings and the three-stream structure.
- Perceived inequities and lack of transparency in TA funding adjustments, especially for students holding major external scholarships, where reductions in TA allocations were experienced as stressful and difficult to understand.

Summary of the Reviewers' Recommendations and Program/Faculty Responses

The following are the reviewers' recommendations in the order listed by the external reviewers.

Reviewers' Recommendation	Program/Faculty Response
Recommendation #1: Curriculum and professional development. Biology graduate students expressed strong demand for additional technical training—especially in statistics, bioinformatics, AI/machine learning, grant writing, and other skills. a) Many comparator graduate programs have moved to providing focused 0.25 credit courses. To cover specific laboratory skills, data analysis, and statistics. b) Potentially reach out to other departments or universities to have Biology graduate students be able to take courses at those locations, in a reciprocal manner. c) Work with the SOBGS, SGPS, and/or CTL to provide structured grant writing training workshops. d) Consider organizing additional events to improve cohort building.	**Program:** The Program does offer two courses on a regular near-annual basis. The number of technical training courses may increase with the ability to offer 0.25 credit courses; for example, a short course on Microscopy. a) At the Biology departmental meeting held on February 12, 2026, two straw polls were held. The two polls suggested a strong interest by the faculty members present at the departmental meeting in offering 0.25 credit courses starting Sept. 1, 2027. b) Courses offered at other universities: The Program already has an underutilized mechanism (forms and a procedure) to do this and do have students taking our courses and our students taking courses at other universities and units within Western. This option will be better circulated among the graduate students and their supervisor starting in the Fall of 2026. c) The students have organized popular writing workshop sessions this year and writing courses have been offered in the Biology Graduate Program. The Biology Program would welcome participation of its graduate students in courses offered by SGPS and/or CTL. d) SOBGS does organize a biannual Biology Graduate Research Forum where students present their research. After the orientation for new graduate students in September of every year, there is a social gathering at the Graduate Lounge which is also open to existing graduate students for the development of comradery among graduate students. The Biology Social Committee, which is composed of both faculty and graduate students, is coming up with different ideas for departmental cohort building. The first Bio Brews is being held on February 18, 2026 in the late afternoon which features short talks to spark conversations. **Faculty:** a) The Dean's office will support the Biology program for any major or minor program modifications required to introduce new 0.25 credit courses. In our faculty the Chemistry program has a good selection of 0.25 courses that have allowed them to provide a diverse set of course topics. In the winter 2026 term, the Faculty of Science offered a new graduate course (Science 9424) on the use of AI in Science, that is accessible to Biology graduate students.

	b) The Dean's office supports graduate students that want to take courses at other universities through the Ontario Visiting Graduate Student (OVGS) program. c) The Biology program has provided many in-house professional training opportunities for their students and they seem willing to offer more and encourage their students to participate in Own Your Future (OYF) and Center for Teaching and Learning (CTL) programming. Allowing students to earn a 0.25 credit for taking some of these professional development courses is a great way to incentivize participation. d) The Dean's office agrees with the program's plan to immediately introduce more events that encourage interaction among students, staff and faculty to develop a stronger sense of community.
Recommendation #2: Address infrastructure concerns. a) A University-wide review of aging infrastructure might be considered, especially in light of failures of "red line" generator-powered outlets. b) Consider installing a physical key system for locations that need to be accessed if power goes down. c) Establish clear lines of communication for graduate students as to what to do in an emergency. d) For power outages that disrupted research timelines and pushed some students into unfunded "Year X" status, consider providing GSAs (partial financial support).	**Program:** Controlling power outages and initial communication of power outages is not an issue that the Biology Graduate Program can easily address. A plan will be developed to disseminate emergency information to graduate students when the power goes out at night, weekends and holidays. This information will be presented to students at the orientation meeting held in September. Funding year X students affected by the power outage: The portion of the biology budget that supports graduate students is not large enough to fund a large number of students who may have been affected by the power outage delaying their progress potentially and putting them in year X. **Faculty:** a) The Dean's Office acknowledges that recent power outages affected research and training and has taken steps to mitigate future risk. PIs have been reminded about the parameters of backup power, a Science Lab Safety Committee will address training gaps, and the Faculty is working with Facilities to assess aging generator capacity and plan upgrades based on lab-identified needs. b) The Dean's Office is agreeable to Biology exploring changing the means by which facilities allocated to them (such as the Biotron) are accessed. c) The Faculty of Science tasked its Technology Team (STS) to create an "in-house" tool that alerts units to potential power outages. d) Student research delays can arise from circumstances beyond their control, and no dedicated funding exists for these cases. As the power outage occurred in August, affected students were

e) Address accessibility to buildings and lab space, where needed.	likely mid-program. Students should meet promptly with their supervisory committees to discuss impacts and identify timely paths forward. e) The Dean's office welcomes discussion with Biology on their accessibility needs and encourages them to report anything that is not AODA compliant.
Recommendation #3: Improve TAships. a) Investigate funding adjustments tied to major scholarships that reduce a student's TA allocation. There should indeed be some reward. b) Ensure that students receiving split TAships (two 70 hour assignments) aren't overworked and that loads throughout the term are evenly spaced. c) Address concerns with TA assignment mismatches and management issues with the first year Biology course TAships. d) Attempt to assign proctoring duties by mid-term so that students can plan their schedules in a timely manner during exam periods.	**Program:** a) Presently non-scholarship holders are offered up to 280 hours of TAing per annum and scholarship holders up to 140 hours per annum. Scholarship students may opt to reduce hours per annum below 140 hours which is in-line with the GTA collective agreement section 13.04. Major scholarship holders may refuse TA opportunities presented to them if they want. b) The Program cannot in all cases guarantee that no student will receive a 70 hour split TA as there are courses that only have a 70 hour TA allocated. The personnel responsible for organizing the TA assignments is undergoing change and this split TA issue will be taken into consideration as much as possible in this new organization. This will also hopefully also reduce TA assignment mismatches. c) First year Biology management issues: The Chair and Associate Chairs (Undergraduate and Graduate) have discussed this with the SOBGS executive. We understand that there is an issue and appropriate channels are being consulted with to solve this issue. d) The suggestion of assigning proctoring hours by mid-term may only apply to some larger courses and we will see if proctoring can be assigned by mid-term across all courses. If the graduate budget situation has improved enough proctoring may be able to be removed from the TA contract and be available for all graduate students to apply for. **Faculty:** a) The Dean's office supports Biology's efforts to distribute their TA budget fairly while respecting the requirements of the TA collective agreement. b) Biology has made plans to examine how TAs are assigned, and we hope this will relieve some of the pressure on students. Because some students might find it awkward to discuss overtime with instructors, the program should also make instructors aware of the strict limitations to total hours and weekly limits.

	c) The reviewers identified that TAs across first year courses were not receiving fair or equal treatment. The department has already consulted with their graduate student group (SOBGS) and the undergraduate chair to resolve this issue. d) Section 17.06 of the TA collective agreement stipulates that TAs "shall be advised of their scheduled proctoring duties no later than five (5) business days prior to the scheduled exam." It is commendable that Biology stated they are willing to try to assign proctoring for larger courses by the middle of the term (e.g. 6 weeks before the exam period) for larger courses, but it is not required and often not possible if exam schedules are not set.
Recommendation #4: Increase numbers of racialized faculty/faculty diversity and support indigenous students The goal here would be to better reflect the composition of the student population at Western. Similarly, special incentives or scholarships could be put place to attract and support indigenous graduate students.	**Program:** When Biology has searches ongoing in the future, this is definitely an issue that the appointments committee is sensitive to. The Western Biology Program, like other Canadian Biology Programs, presently graduates many racialized students into the job applicant pool which is likely to increase the racialized hires at Western University and at other Canadian institutions in the future. The Program would support any initiative that creates funding opportunities for Indigenous students, but the department does not have the financial resources to create these awards. **Faculty:** Biology attracted a Western Research Chair holding faculty member through a strategic hiring plan at Western several years ago. Currently Western is seeking faculty applicants for the CIRC programs and this can be an immediate way for Biology to recruit someone from an equity deserving group. The Dean's office values the reviewer's suggestion to provide funding incentives specifically for indigenous graduate students and will explore ways to develop these, and other awards for equity deserving groups through the Faculty of Science. In addition, the Faculty of Science will endeavor to advertise external funding opportunities for indigenous students to our programs like Biology.

Implementation Plan

The Implementation Plan provides a summary of the recommendations that require action and/or follow-up. In each case, the Graduate Program Chair, in consultation with the SGPS and the Dean of the Faculty are responsible for enacting and monitoring the actions noted in Implementation Plan.

Recommendation	Proposed Action and Follow-up	Responsibility	Timeline
Recommendation #1: Curriculum and professional development. a) provide focused 0.25 credit courses. b) Support students to increasingly take courses in other Units or at other Universities. c) Provide structured grant writing training workshops. d) Consider organizing additional events to improve cohort building.	a) Develop a proposal for introducing 0.25 credit technical courses in the Fall of 2027. b) This option will be circulated among the graduate students and their supervisor starting in the Fall of 2026. c) Explore options of extending current in-house offerings with the support of the SGPS and other campus units, which could be 0.25 credit courses in the future. d) Develop different ideas for departmental cohort building. The first Bio Brews is being held on February 18, 2026 in the late afternoon which features short talks to spark conversations.	Graduate Committee Graduate Chair Biology Social Committee	By Sept 2027 By Sept 2026 By Sept 2026 By Sept 2026 and ongoing
Recommendation #2: Address infrastructure concerns. a) Review of aging infrastructure in light of failures of “red line” generator-powered outlets. b) Consider installing a physical key system for locations that need to be accessed if power goes down. c) Establish clear lines of communication for graduate	- Plan to be developed to disseminate emergency information to graduate students when the power goes out at night, weekends and holidays. This information will be presented to students at the orientation meeting held in September. - Devise a plan for infrastructure upgrades. - Create an “in-house” tool that alerts units to potential power outages. - Establish a Science Lab Safety Committee that will explore (among other things) formalized refresher	Dean’s Office The Faculty of Science Technology Team (STS)	By Sept 2026

students as to what to do in an emergency. d) For power outages that disrupted research timelines, consider providing GSAs (partial financial support). e) Address accessibility to buildings and lab space, where needed.	training for all PIs to ensure gaps in understanding are closed. - Collaborate with Facilities to assess current generator capacity and its ability to respond to increased demand from researchers and graduate student trainees. - Report any accessibility needs to the Decanal Office.		
Recommendation #3: Improve TAships. a) Investigate funding adjustments tied to major scholarships that reduce a student's TA allocation. b) Ensure that students receiving split TAships (two 70-hour assignments) aren't overworked. c) Address concerns with TA assignment mismatches and management issues with the first year Biology course TAships. d) Attempt to assign proctoring duties by mid-term so that students can plan their schedules in a timely manner during exam periods.	- Continue ensuring that all graduate students, including major scholarship holders, be assigned some TA teaching, as per the collective agreement. - Work with the new personnel responsible for organizing the TA assignments regarding the split TA issue. - Issues related to TA assignment mismatches are being resolved with the support of the SOBGS executive. - Explore if proctoring hours can be assigned by mid-term across all courses.	Graduate Chair	By Sept 2026

Recommendation #4: Increase numbers of racialized faculty/faculty diversity and support indigenous students	- Explore ways to develop and provide incentives specifically for Indigenous graduate students, and other awards for equity deserving groups through the Faculty of Science. - Advertise external funding opportunities for indigenous students for our programs, including Biology. - Examine opportunities for more diverse Faculty hires as part of upcoming recruitments.	Dean's Office	By Sept 2026