Pathology and Laboratory Medicine
Final Assessment Report & Implementation Plan
May 2026

Faculty / Affiliated University College	Schulich School of Medicine & Dentistry	
Degrees Offered	Bachelor of Medical Sciences (BMSc)	
Date of Last Review	2017-2018	
Modules Reviewed	Honours Specialization in Pathology Honours Specialization in Medical Bioinformatics Honours Specialization in One Health Major in Pathology Major in Medical Bioinformatics Major in One Health	
External Reviewers	Dr. Bruce McKay Professor, Department of Biology Carleton University	Dr. Donna Slater Professor, Department of Physiology and Pharmacology University of Calgary
Internal Reviewers	Dr. Andrew Nelson Department Chair, Anthropology	Olivia Matthews, Undergraduate Student Sociology
Date of Site Visit	February 11-12, 2026	
Date Review Report Received	March 11, 2026	
Date Program/Faculty Response Received	Program Response: March 20 2026 Faculty Response: March 23, 2026	
Evaluation	Good Quality	
Approval Dates	SUPR-U: June 16, 2026 ACA: September 8, 2026 Senate (for information): September 18, 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 Undergraduate Pathology and Laboratory Medicine program delivered by the Schulich School of Medicine & Dentistry.

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, Schulich School of Medicine & Dentistry

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 - Undergraduate (SUPR-U) and the Senate Committee on Academic 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 Undergraduate Pathology and Laboratory Medicine program, the Schulich School of Medicine & Dentistry, and SUPR-U.

Executive Summary

The Bachelor of Medical Sciences (BMSc) program at Western University was introduced in 2001 as a joint venture between the Schulich School of Medicine & Dentistry and the Faculty of Science to provide students with training in the basic medical sciences. From its inception in 2001 with approximately 30 students, the program grew in popularity to 300 students by 2010 and to over 1100 students in 2024-2025. The office of Basic Medical Sciences Undergraduate Education (BMSUE) oversees the delivery of the modular programs within the seven basic medical sciences departments, including Pathology and Laboratory Medicine.

The Department of Pathology and Laboratory Medicine at Western University offers three Honours Specialization modules and three Major modules in the BMSc program across three disciplines of study; Pathology, Medical Bioinformatics, and One Health. The primary objective of the Pathology and Medical Bioinformatics disciplines are to equip students with a deep, specialized understanding of human health and disease at the molecular, cellular, and organismal levels. The objectives of the One Health discipline are to prepare students to address complex health challenges from a broad, interdisciplinary perspective. The program's core objective is to cultivate an understanding of how human health is inextricably linked to animal health and the environment. Total program enrollment (in year 3 and year 4) was at 179 in 2024-2025.

The self-study was informed by a multi-day student focus group and a faculty focus group, supplemented by institutional enrolment data, curriculum mapping, alumni surveys, and teaching effectiveness metrics. The Undergraduate Education Committee, Module Leads, along with key faculty and staff, held a series of meetings in support of the development of the self-study brief.

The external reviewers shared a positive assessment of the Pathology and Laboratory Medicine Program. They offer five recommendations with considerations for further enhancement.

Strengths and Innovative Features Identified by the Program

- The trio of disciplines offered by the department allows for a broad spectrum of modern medical challenges with curriculum extending from the traditional study of disease (Pathology) to cutting-edge computational analysis (Medical Bioinformatics) and the interdisciplinary connections between human, animal, and environmental health (One Health).
- Strong capstone research experience and departmental Research Day – All Honours Specialization students complete a year-long, individual research thesis under faculty supervision. Mandatory participation in the Annual Pathology and Laboratory Medicine Research Day provides students with professional presentation experience and published abstracts.

    - Medical Sciences 4000E: *Partnering for Impact in Medical Sciences*, is being introduced as a capstone course for students taking an Honours BMSc degree with a double major. Previously, capstone courses were limited to Honours Specialization students.
- Proactive community-building and equity initiatives – The department hosted its first-ever HSP Welcome and Orientation event in September 2025 (with ~75% attendance), established the "Pathology Commons" as a learner-centered wellness and collaboration hub, created a departmental EDI Award and initiated an alumni network.
    - The creation of an internal “EDID Taskforce”, to make recommendations on how to apply an EDI lens to selection committee processes at all levels to ensure fairness and promote diversity in hiring and admissions.
- Substantial program growth over the past decade – Total upper-year enrolment grew from 63 students in 2015-2016 to a peak of 210 in 2022-2023. The Honours Specialization in Pathology demonstrates stable demand (20-25 students annually), while Medical Bioinformatics and One Health show dynamic growth trajectories.

Concerns and Areas of Improvement Identified and Discussed by the Program

- Low international student enrollment requires analysis and development of program-wide strategies to increase the admission of international students.
- Fostering inclusive research environments with the implementation of a formal laboratory code of conduct, idea sharing sessions, training for research supervisors on subjects such as conflict resolution and ethical supervision, as well as a research project EDI checklist to guide students in considering the ethical implications of their work.
- Consideration of more diverse assessments i.e., scaffolded assignment approaches, open book or process based assignments.
    - Students identified an absence of dedicated laboratory or practical skills courses in Year 3 as a gap that left them feeling unprepared for their capstone research.
- Resources stretched thin despite program growth – The faculty and operating staff complements have remained flat over the past decade even as student enrolment nearly tripled.
- The dispersed nature of research sites, large class sizes in foundational courses, and limited undergraduate-specific events contribute to a more fragmented student community.
    - Strengthen the engagement with students and the Western Pathology Association

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, Academic Programs
- Vice-Provost, Academic Planning, Policy & Faculty
- Director, Office of Academic Quality and Enhancement
- Vice Dean, Basic Medical Sciences
- Associate Dean, Basic Medical Sciences
- Assistant Dean, Program Review and Development
- Department Chair
- Undergraduate Chair
- Incoming Undergraduate Chair
- Program Faculty Members
- Program Administrative Staff
- Teaching and Learning Librarian
- Collections & Content Strategies Librarian
- Undergraduate Students
- Alumni/Graduate Teaching Assistants

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 SUPR-U by the Internal Reviewer with the support of the Office of Academic Quality and Enhancement.

Summative Assessment – External Reviewers' Report

External reviewers noted that the *"Pathology and Laboratory Medicine undergraduate program is highly sought after; providing undergraduates with excellent foundations in science and pathology, plus excellent opportunities for experiential learning within the honours thesis in state-of-the-art research laboratories mentored by successful researchers."*

Strengths of the Program:

- Excellent faculty expertise spanning both clinical pathology and basic science research.

- Strong and dedicated administrative staff who demonstrate collegiality, passion, and responsibility for the program.
- Highly competitive program attracting exceptional students, with the vast majority of graduates gaining positions in medical school, research-based graduate programs, law, and other health professional programs.
- Strong experiential learning through the fourth-year honours thesis, which was praised by students and alumni as the highlight of their program experience.
- Modernization of the foundational Pathology 3500 course, incorporating team projects, comprehensive case studies, and the PULSE (Pathology Undergraduate Laboratory Skills Enhancement) project.
- Positive new community-building initiatives, including the September 2025 HSP Welcome and Orientation event, which was much appreciated by students and represents a meaningful step toward fostering a sense of belonging in the program

Prospective Areas of Improvement for the Program to Consider

- Graduate Teaching Assistants lack compulsory, department-specific pedagogical training. (Associated with Recommendation #1)
- Students reported a limited sense of cohort identity or community within the Department until their fourth year; the Western Pathology Association does not appear to engage undergraduate students, and there is no undergraduate club or society for PALM students. (Associated with Recommendation #2)
- Small course sizes in Pathology, Medical Bioinformatics, and One Health courses mean that formal student questionnaire (SQCT) feedback, including written comments, is often withheld due to insufficient response numbers. (Associated with Recommendation #3)
- The multi-instructor design of Pathology 3500 has led to inconsistencies in presentation styles, assessment expectations, and exam question authorship, contributing to student concerns about fairness and lower grade averages. (Associated with Recommendation #4)
- Students reported that academic advising in Years 1 and 2 was insufficient for making informed decisions about module selection. (Associated with Recommendation #5)
- Several courses risk not meeting Western's minimum enrolment thresholds (30 for 3000-level; 15 for 4000-level), particularly in the smaller Medical Bioinformatics and One Health modules.
- Admission to the program is based primarily on grades. It may be worth revisiting admission criteria to consider factors such as research interest, relevant experience, or equity considerations.
- Consider developing a team-teaching model for key or required courses to ensure teaching sustainability during sabbaticals or faculty departures.

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: Graduate Teaching Assistant Training Consider a short required formal training workshop to help new teaching assistants excel in this new and challenging role. Develop pedagogical training for GTAs specific to the requirements of this undergraduate program.	**Program:** The Undergraduate Chair will lead a collaborative initiative involving all course coordinators across Pathology, Medical Bioinformatics, and One Health. Specifically, a supplemental document will be prepared for each course to highlight the key technical and pedagogical skills required and provide a comprehensive list of detailed responsibilities. This will ensure that expectations are transparent and that GTAs are matched effectively to their roles. Furthermore, the program will take proactive steps to enhance the professional development of our graduate students. To complement centralized training, the program will mandate formal orientation meetings between course coordinators and their assigned GTAs prior to the start of each term. These meetings will ensure alignment on course objectives, grading standards, and laboratory protocols, fostering a more cohesive and supported teaching environment for the 2026-2027 academic year and beyond. **Faculty:** The Decanal team supports the program response.
Recommendation #2: Facilitate a Student Cohort Consider strategies to encourage their undergraduate students to engage with their cohort through some cohort strategy.	**Program:** We acknowledge the reviewers' concerns regarding the historical challenges of cohort building within the two-step BMSc program design. As the program has now moved towards assured progression to Year 4, we are in an ideal position to cultivate a strong, integrated community of Year 3 and 4 students. We recognize that while the Western Pathology Association (WPA) exists to promote interaction across the department, undergraduate participation has been a noted gap that we are committed to bridging. To address a lack of student cohort, we held our first Welcome Event in September 2025 to bring Year 3 and 4 students into the departmental fold. The event was received extremely well by students, confirming a high demand for cohort-based engagement. We will now formalize this Welcome Event as an annual staple. This initial touchpoint will serve as the foundation for a unified identity among all students within our modules, regardless of their specific year or specialization. Furthering this strategy, the department will implement a structured annual calendar of engagement to ensure students remain connected beyond the first week of classes. This includes a new mid-term check-in event every December to provide support and a formalized final celebration and reflection event in April to recognize students' hard work over the year. We will launch a formal partnership with the WPA to create undergraduate-specific social and networking

	events. **Faculty:** The Decanal team supports the program response.
Recommendation #3: Mechanism for Regular Student Feedback If written responses can't be shared from SQCT data given small course sizes, the Department should encourage alternative forms of feedback. In class informal anonymous polling could be one solution.	**Program:** To ensure our course coordinators and instructors receive actionable feedback without compromising student anonymity or data integrity, we will implement a multi-tiered strategy to encourage alternative and ongoing forms of assessment. Starting in the 2026-2027 academic year, the department will formally encourage and provide resources for instructors to utilize mid-term informal feedback mechanisms. We will recommend the adoption of anonymous in-class polling tools and stop-start-continue surveys, which allow students to provide immediate, constructive input while the course is still in progress. These informal touchpoints not only provide instructors with the individual student perspectives the reviewers highlighted but also foster a culture of transparency and responsiveness that can lead to higher engagement in formal year-end evaluations. Furthermore, we will work with course coordinators to standardize a Feedback Reflection period during the final week of classes. This dedicated time will be used to explain to students how their specific qualitative comments directly influence curriculum design and course delivery for future cohorts. **Faculty:** The Decanal team supports the program response.
Recommendation #4: Pathology 3500 Students reported inconsistencies in presentation styles and assessments in Pathology 3500, contributing to low satisfaction and grades. The course is being modernized with team projects and case studies; we encourage continued attention to these concerns.	**Program:** The Program is fully committed to modernizing our foundational course: Introduction to Human Pathology (Pathology 3500). The Program recognizes that while the diversity of clinical expertise from Pathologists is a significant asset, it has historically led to inconsistencies in presentation and assessment. Significant work has already begun to modernize the course structure, lectures, and content. This included a shift toward team-based assignments and application-of-knowledge projects, such as comprehensive case studies, to move beyond rote memorization. To address the specific concerns regarding assessment (GTAs assisting in drafting questions), the next phase of this update involves a rigorous cross-check by the course coordinator with each individual lecturer to ensure that all test and exam questions accurately reflect the specific points of emphasis delivered in class. To further ensure a cohesive student experience, the course coordinator will design a uniform lecture slide template and provide this resource to all instructors, including our clinical faculty, to standardize the delivery of information and reduce the cognitive load on students caused by varying presentation styles. Beyond the changes to Pathology 3500, the department will gather deeper data across all 3rd-year entry courses within other modules in the BMSc program.

	Faculty: The Decanal team supports the program response.
Recommendation #5: Academic Advising - Send program representatives to attend sessions in the now compulsory Medical Sciences 1000Y course; to highlight and give earlier insight into the Pathology programs; - Place the 'pathways' to Pathology and Laboratory Medicine modules on the department website and guide attention to these specific pathways in the first year Medical Sciences 1000Y course; - Offer to advise interested students in years 1 and 2 to ensure that they meet requirements. This could be in the realm of a small group session one or two times per year, the key being to assist those who are likely to apply.	**Program:** It is important to note that the reviewers' findings were based on consultations with current Year 4 students. Because these students would not have experienced the Medical Sciences 1000Y course, some of their concerns may have already been addressed through the introduction of this new compulsory curriculum. However, we agree that early-year navigation remains a critical period for students. To further bridge this gap without overextending centralized academic advising resources, we will implement a series of targeted outreach initiatives designed to capture student interest as early as Year 1. In Medical Sciences 1000Y, departmental faculty representatives will introduce students to a wider support network, including upcoming information sessions, newly appointed Western Pathology Association (WPA) undergraduate Year 3 and 4 student representatives, and integrated social and academic events. The Program will host specialized information sessions, distinct from the standard Intent to Register events, Fall Preview Day, and Spring Open House, tentatively titled Discover Pathology and Discover Medical Bioinformatics. During these sessions, faculty members will present the academic and career potential of these fields and reinforce the wider support networks and events. We are also committed to enhancing our digital presence by placing clear, visual pathways to our various modules on the department website; these resources will be explicitly highlighted during our Medical Sciences 1000Y presentations to ensure students can visualize their academic trajectory early on. Finally, to assist those students most likely to apply to our modules, we will offer small-group advising sessions once or twice per year for interested students in Years 1 and 2. These sessions will focus on ensuring prerequisite requirements are met while fostering an early sense of belonging within the department, ensuring that by the time students reach. **Faculty:** The Decanal team supports the program response and would like to point out that there may be some confusion by the reviewers around Academic Advising support. All the BMSc modules have an opportunity to discuss their offerings in the Medical Sciences 1000Y course. The information sessions include a faculty member, typically the lead for the module, as well as a student that is currently enrolled in the module or recently graduated from the module to provide both perspectives. The excellent response and commitment from PaLM will certainly help increase the robustness and awareness of academic advising for students 2026-2027 interested in Pathology and Medical Bioinformatics modules.

Implementation Plan

The Implementation Plan provides a summary of the recommendations that require action and/or follow-up. In each case, the Program Chair, in consultation with 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
1: Graduate Teaching Assistant Training	- Prepare a supplemental document for each course to highlight the key technical and pedagogical skills required and provide a comprehensive list of detailed responsibilities. - Recommend various GTA training sessions offered centrally. - Mandate formal orientation meetings between course coordinators and their assigned GTAs prior to the start of each term.	Undergraduate Program Chair; Graduate Program Chair; Undergraduate course coordinators	By September 2026
2: Facilitate a Student Cohort	- Formalize the Welcome Event piloted in September 2025 to bring Year 3 and Year 4 students into the departmental fold. - Implement a structured annual calendar of engagement to ensure students remain connected beyond the first week of classes o Integrate a new mid-term check-in event every December to provide support and formalize a final celebration and reflection event in April to recognize student's work.	Undergraduate Chair; Module Leads; WPA	By September 2026
3: Mechanism for Regular Student Feedback	- Develop a multi-tiered strategy to encourage ongoing forms of assessment. - Formally encourage and provide resources for instructors to utilize mid-term informal feedback mechanisms via anonymous in-class polling tools and stop-start-continue surveys. o Consult with the Centre for Teaching and Learning on best practices. - Standardize a Feedback Reflection period during the final week of classes.	Course Coordinators; Undergraduate Education Committee	By December 2026

4: Pathology 3500	- Cross-check each individual lecturer to ensure that all test and exam questions accurately reflect the specific points of emphasis delivered in class. - Design a uniform lecture slide template and provide this resource to all instructors, including clinical faculty, to standardize the delivery of information and reduce the cognitive load on students caused by varying presentation styles. - Gather data across all 3rd-year entry courses within other modules in the BMSc program (e.g., course grade averages, student perceptions of the courses, modules and the field).	Pathology 3500 course coordinator; Undergraduate Program Chair; Undergraduate Education Committee	By October 2026
5: Academic Advising	- Implement a series of targeted outreach initiatives designed to capture student interest as early as Year 1. For instance, in Medical Sciences 1000Y, departmental faculty representatives will introduce students to a wider support network, including upcoming information sessions, newly appointed Year 3 and 4 student reps, and social and academic events. o Consider textual and graphic roadmaps that make clear the links between Years 1 and 2 and Years 3 and 4. - Host specialized information sessions, tentatively titled Discover Pathology and Discover Medical Bioinformatics. - Enhancing digital presence by placing clear, visual pathways to various modules on the department website; these resources will be explicitly highlighted during Medical Sciences 1000Y presentations. - Offer small group advising sessions once or twice per year for interested students in Years 1 and 2.	Medical Sciences 1000Y faculty (from the department); Undergraduate Education Committee; Program Staff; WPA	By September 2027