

Two-Year Progress Report

Doctor of Optometry (OD) and Vision Science (MSc, PhD)

June 2022

Background

In accordance with the University of Waterloo's Institutional Quality Assurance Process (IQAP), reviewers appraised the self-study documentation and conducted a site visit to the University on February 13-14, 2018.

Work has been ongoing at the School of Optometry & Vision Science to address the recommendations, and the review has been helpful in aligning and supporting the objectives in the strategic plan and updates.

Enrollment over the past two years

	General	Honours	OD	Grad*
2021-2022 (CURRENT YR)	n/a	n/a	352	30
2020-2021 (LAST YR)	n/a	n/a	354	35

* data source Quest

Progress on Implementation Plan Recommendations

1. We recommend that the graduate program be allocated financial resources to modernize laboratory space, increase student recruitment success, and build an environment that facilitates high-quality research and improved success with funding.

Status: completed

Details

Research funding is included in the operations budget to continue to provide support for activity in alignment with the School's strategic plan. The Associate Director, Research in consultation with the Graduate Studies and Research faculty committee, identify priority areas for funding on an annual basis. In 2022, summer research assistants are the priority

as we resume and ramp up activity post-covid. In parallel, we are implementing promotion strategies to raise awareness about the career pathways provided by a degree in vision science including recruitment for joint OD/MSc degrees.

We are continuing discussions at the Faculty level to establish a long-term plan for laboratory modernization. Laboratory space is under review with a view to optimising the use of the existing research footprint, to provide collaborative research space and, where necessary, investing in upgrades to meet compliance requirements. Biomedical Science space has been designed within the proposed Waterloo Eye Institute. The proposed Canadian Vision Imaging Centre is part of a CFI application (due summer 2022), that includes design plans for research space at the School with funding included in the [Seeing Beyond 2020](#) campaign.

2. We recommend that the OD program commit to a comprehensive review and revision of its teaching curriculum in order to minimize redundancy, improve student engagement, modernize class material, and rejuvenate faculty and student motivation and enthusiasm for the program.

Status: in progress

Details

The curriculum committee continues work to implement a modern student-centred curriculum for the contemporary practice of optometry following the standards outlined by the Accreditation Council on Optometric Education ([ACOE](#)). The second phase is to review the implementation of clinical experience and aligned clinical teaching assessments with program outcomes.

Implementing clinics earlier within the curriculum have enabled 3rd and 4th year students the clinical proficiency to see a larger number of patients, specifically in our specialty clinics. Other anticipated benefits to assess include shorter patient appointment times and increased student to faculty ratios without compromising the quality of instruction.

Regrettably, progress was paused with the onset of the COVID-19 pandemic. Resources were devoted to adapting to on-line delivery of content and assessments. Similarly, re-tooling of clinical labs to minimize in-person contact time was emphasized. Fortunately, the Ministry of Health and Ministry of Colleges and Universities recognized optometry as a health care profession permitted to continue operating in-person clinical laboratories as essential health care workers. Faculty, staff, and students demonstrated incredible

perseverance and resiliency in being able to adapt and graduate on time. Our sister school at Universite de Montreal had their graduating class delayed by several months.

A priority for the curriculum committee this year will be to reflect the increased demands in the depth and breadth of contemporary optometric practice. In particular, advanced procedures to address the growing medical eye care needs of an aging population are evolving in North America. Areas to consider will be the addition of a term between 2nd and 3rd year of the program in order to keep pace with peer accredited programs in the US.

Advanced scope of practice: Optometric practice in North America is the most advanced in the world. In states such as Oklahoma, Louisiana, and Kentucky, optometrists are licensed to provide minor surgical procedures as well as laser surgery for refractive correction and glaucoma treatment. A model curriculum developed by an American Optometric Association workgroup has been shared with the curriculum committee to affirm areas already being taught, to identify gaps, and to begin the process of implementing additional education and training opportunities to extend, where needed. In addition, several of our faculty are certified in advanced procedures and preparing to integrate learning outcomes in the OD program.

The Alberta College of Optometrists endorsed the School of Optometry & Vision Science Advanced Procedures Course certification in 2021. With the mantra of “education before legislation,” the School is recognized as a key partner in expanding scope of practice to help address the growing medical eye care needs of a growing elderly population. Alberta has the highest level for scope of practice in Canada making the School course the anticipated standard for Canada. The plan is for an Advanced Procedures certification course in April 2022 barring public health guidance to the contrary.

Investing in technology: The School has benefited from a sizeable donation from Fyidocors to create a state-of-the-art simulation laboratory to enhance student training on diagnostic skills and techniques. We are anticipating the latest module for gonioscopy in early 2022, a clinical technique important to the diagnosis and management of glaucoma. Simulation technology has been an essential resource to support clinical training during the covid pandemic. Continued investment and innovation in simulation technology is a key priority identified in the School strategic plan.

Objective Structured Clinical Examinations (OSCE) are the standard for assessing integrative clinical skills in medical education. The School will seek to develop an OSCE for senior years in the OD program, to assess outcomes and allow the students to prepare for licensing examinations which adopt an OSCE assessment.

OSCEs were paused at the School in response to the pandemic, and efforts to reduce room occupancy and prolonged contact within 2 m distance. Post-pandemic, we anticipate being able to re-introduce OSCEs to support the curriculum, and our students' preparation to challenge the OEBC, national exams.

The development of the **Waterloo Eye Institute** as a national resource for the profession and public fits neatly within the goal to develop the capabilities to deliver an integrated and coordinated model of eye and vision care. In particular, an ambulatory surgical center will enable a new paradigm of optometry-ophthalmology collaboration and coordination being developed in conjunction with the Waterloo Wellington Local Health Integration Network (LHIN; now KW4 Ontario Health Team), and area hospitals.

3. We recommend the program commit to an assessment of faculty workload with the aim of implementing efficiencies that will enable a stronger focus on research and practice-based scholarship. We recommend that consideration be given to rationalizing workload while respecting the need to build excellences in both professional and research training programs.

Status: in progress

Details

Work was paused due to efforts to adapt teaching and patient care to the covid-19 pandemic restrictions. In 2022, the School will establish a working group on faculty workload to ensure that workloads associated with research, teaching, clinical duties and service are distributed appropriately and that research active faculty are provided with appropriate time for grant writing and the execution of their research programs. In addition, graduate supervision and graduate course teaching will be counted as teaching activity within workload assessments with an appropriate time allocation. The activity will be timely as we map onto processes for the next iteration of the university budget model.

Recent faculty retirements have led to workload pressure within the School. Two SACAs (School Advisory Committee on Appointments) have been established and tasked with 1) the hiring of clinical lecturers to address high clinical teaching loads within the School and, 2) the hiring of two regular tenure track faculty members with internationally recognised research programs or the potential for such programs. Both SACAs were successful resulting in the recruitment of highly qualified faculty – Drs. Julie Shaloub, Clinical Lecturer, William Ngo, Assistant Prof., and Jennifer Hunter, Assoc. Prof. An additional 2 SACAs have been struck in 2022 – 1 for a clinical lecturer in contact lens and myopia control, and another for 2 regular professoriate. The hiring process will directly address

workload concerns raised by the review committee and enable an acceleration of clinical innovation, research/scholarship and graduate supervision activity within the School.

4. We recommend that the Director initiate discussions with senior administration about the structural deficit carried by the program, with the goal of formulating a sustainable financial plan that will enable growth of the OD and graduate programs. Such discussions could include a consideration for growth of both OD and graduate programs.

Status: in progress

Details

Response

Budget discussions with the Dean of Science identified a significant gap of approximately \$962,000 between historical continuity budget and an allocation based on the WBM (Waterloo Budget Model). Strategic priorities were identified and a number of pathways to investigate were suggested to help develop a sustainability plan.

Some options to explore include:

1. Increasing enrollment
 - a. Satellite campus model – increase number of available seats at remote locations and leverage distance learning and partner infrastructure. Deferred until completion of the Waterloo Eye Institute.
 - b. Increase available seats at UW – difficult with existing capacity constraints but anticipating an increase of 6 seats with the implementation of the Waterloo Eye Institute.
 - c. Aggressive recruitment of graduate students (domestic >> international)
 - d. The Advanced Standing Optometry Preparatory Program (ASOPP) is a sustainable plan to integrate up to six (6) qualified, internationally graduated optometrists into the 3rd year of the OD program as the International Optometric Bridging Program winds down. Start date summer 2022.
2. Increasing tuition revenue
 - a. Admit international students to the existing complement of 90 seats in the OD program – premium tuition but likely to be unpopular with the profession given the unique situation as the only Anglophone Canadian School. Recommendation: not feasible.
 - b. Increase tuition – no indication that the MCU-mandated tuition freeze for 2019/20 will be lifted in 2020/21/22. Notwithstanding the foregoing, a strong case can be made that the cost of optometric education is not adequately

reflected in current funding levels. Benchmark to average tuition of \$51K at US Schools and Colleges of Optometry – while unlikely to be popular with students, it does reflect the truer cost of education.

The concept of increased tuition has been socialized with the profession, which recognizes the chronic underfunding of clinical education and training. A proposal to increase tuition has been endorsed by the Dean along with a plan to add an additional term to the program curriculum. The additional term is essential to keep pace with the expanding scope of practice of optometry and to match accredited US competitors who already have had the additional time for many years. Recognition of the cost of delivering clinical education and training is critical with parallels to be made with dentistry being most germane.

3. Increasing non-tuition revenue
 - a. Student technology and innovation fee for additional educational services – clinic consumable, equipment purchase and planned replacement, support for new simulation technology, and assessment models such as OSCE.
 - b. Continuing professional development – certification programs (e.g., advanced procedures), specialty recognition, continuing education (live and distance learning).
 - c. Clinical services – specialty areas of care are a strength for academic health centers and may provide a significant revenue stream for patient care services such as dry eye/ocular surface disease, myopia control (epidemic amongst the Asian population), and vision rehabilitation.
 - d. Waterloo Eye Institute – adding ophthalmological services and partnering with the Waterloo Wellington Local Health Integration Network (LHIN, now KW4 Ontario Health Team) may open up revenue streams for medical eye care and surgery. Can be initiated in the short-term utilizing existing space or in partnership with TLC on-site. Progress still ongoing with the Waterloo Eye Institute.

4. Budget requested to support the graduate program and research initiatives are a top priority as evidenced by the consensus process developed through the School Administrative Council (AC). The AC consists of the School Director, Associate Directors, Clinic Director, graduate officer, undergraduate officer, administrative officer, and 2 faculty members-at-large (1 research/1 clinical). The AC is a deliberative body that represents a cross-section of stakeholders to help inform and advise the School Director.

Additional funding support from the Faculty and University are critical in the short term. For example, GSPA-based budget for scholarships and initiatives will be pursued at every opportunity.

Changes in organization, policy or governance that is necessary to meet the recommendations:

The Waterloo Eye Institute (WEI) is a strategic imperative for the School that will encompass advantages in patient care for the region, enhanced clinical education, and increased research opportunities and impact. In addition, the WEI will serve as a national resource in support of the public and advancement of the profession as optometry strives to translate cutting edge research into effective, quality patient care outcomes.

Explain any circumstances that have altered the original implementation plan

The COVID-19 pandemic has been disruptive to the multiple missions of the School in education, research, and patient care. Faculty have had to adapt courses to on-line delivery, and incorporate safety measures into in-person clinical labs. Similarly, our patient care services have followed directives from Public Health and the College of Optometrists of Ontario to ensure the safe and effective delivery of care and clinical training. Human participant research was significantly curtailed resulting in adverse circumstances for career progress, and also the ability to compete and complete contract industry research (e.g. Centre for Ocular Research and Education, CORE).

The multi-faceted stressors have been recognized throughout the institution. We continue to be amazed by the resiliency and perseverance of our students, staff, and faculty. In spite of the unanticipated hurdles, we continue to move forward together with a clear vision for our collective future.

Address any significant developments or initiatives that have arisen since the program review process, or that were not contemplated during the review

The Waterloo Eye Institute (WEI) emerged as a “Moonshot” initiative as part of our School strategic planning exercise in 2017. From concept to development, we have now reached the threshold for realizing the dream of a centre of excellence in eye and vision care education, research, and patient services.

The Rt. Hon. David Johnston is our Seeing Beyond 2020 campaign chair, and we have close to \$24M raised/pledged towards the \$35M target. Most notably we received \$1M from the Region of Waterloo in December 2021. The WEI will expand regional eye care services AND

catapult forward our research capabilities from fundamental biomedical science through translational efforts to clinical applications and trials.

The review process has complemented our strategic planning, and our most recent update ([May 2021](#)) reflects the incorporation of much of the guidance to strengthen the program. Similarly, the School is well aligned with the University of Waterloo strategic commitment to “lead nationally and globally at the interface of society, health, and technology.”

The World Health Organization published its’ first ever [report on vision](#), and issued a call to action to address a global public health crisis. With an estimated 2 billion people worldwide suffering from vision impairment, it is clear that we have a duty to address the gaps in care with new treatments, innovative delivery models, and new data systems to provide improved outcomes. The WHO report is equally applicable to the Canadian context in individual cost as well as adverse economic impact.

Report on anything else you believe is appropriate to bring to Senate concerning this program

We acknowledge that the timing of reporting has been delayed. However, the intent, planning and implementation has progressed on many fronts in alignment with our strategic plan. We will continue to work diligently to strengthen our School, and reinforce our role as a national resource for the profession and public.

Updated Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading and Resourcing (if applicable) the Actions	Timeline for addressing Recommendations
1.	We recommend that the graduate program be allocated financial resources to modernize laboratory space, increase student recruitment success, and build an environment that facilitates high-quality research and improved success with funding.			Complete
2.	We recommend that the OD program commit to a comprehensive review and revision of its teaching curriculum in order to minimize redundancy, improve student engagement, modernize class material, and rejuvenate faculty and student motivation and enthusiasm for the program.	<u>Curriculum:</u> (a) Staged learning objectives for clinical experience; Corresponding review of assessment strategies to ensure alignment; Review of alignment of preparatory clinical courses and reorganization (if required); (b) Implementation of changes & incorporation of advanced scope of practice training.	Prof. Natalie Hutchings, Associate Director Academics & Student Affairs	<u>In progress</u> <u>Curriculum:</u> (a) initiating summer 2022; (b) In progress; to be completed 2024



		<p><u>Teaching Innovation:</u> (a) continued expansion of simulator modules for slit lamp and anterior segment techniques, including integration into curriculum; (b) fully intergrated and an essential resource as patient care services scaled back in response to COVID restrictions. Simulators have been able to help students maintain skills and develop competencies.</p> <p><u>Advanced Scope of Practice:</u> (a) integrate into OD program and offer training to external optometrists.</p> <p><u>Objective Structured Clinical Examinations (OSCEs)</u> (a) Develop business and curricular case for multiple OSCE offerings</p>	<p>Dr. Lisa Christian, Associate Director Clinical Education;</p> <p>Dr. Sarah MacIver, Director of Continuing Education;</p> <p>Dr. C. Lisa Prokopich; Director of Continuing Professional Development</p> <p>Dr. Patricia Hrynychak, Clinical Professor</p>	<p><u>Teaching Innovation:</u> (a) expanded gonioscopy module 2022Q1 for slit lamp biomicroscope simulators; (b) complete</p> <p>Advanced Scope of Practice: (a) integration with curriculum (see above); external training scheduled spring 2022.</p> <p><u>Objective Structured Clinical Examinations</u> (a) Planning in progress for multiple OSCE deliveries in progress. Delayed because</p>
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		<u>Waterloo Eye Institute</u> Development of infrastructure to support multiple missions for research, patient care, and clinical education/training.	Dr. Stanley Woo, Director	of COVID and shift to on-line activities. <u>Waterloo Eye Institute</u> Strategic priority and fundraising for this initiative continues with plans to break ground in 2022.
3.	We recommend the program commit to an assessment of faculty workload with the aim of implementing efficiencies that will enable a stronger focus on research and practice-based scholarship. We recommend that consideration be given to rationalizing workload while respecting the need to build excellences in both professional and research training programs.	(a) establish faculty workgroup to assess workloads associated with research, teaching, clinical duties and service; (b) faculty recruitment in alignment with School strategic plan	Dr. Stanley Woo, Director Prof. Natalie Hutchings, Associate Director Academics & Student Affairs	In-progress (a) initiating workgroup summer 2022; post-pandemic for increased bandwidth; (b) ongoing searches for Clinical Lecturer, and 3 Regular Professoriate
4.	We recommend that the Director initiate discussions with senior administration about the structural deficit carried by the program, with the goal of formulating a sustainable financial plan that will enable growth of the OD and graduate programs. Such discussions could include a consideration for growth of both OD and graduate programs.	Budget Meeting	Dr. Stanley Woo, Director	In-progress Annual budget meeting and discussions Feb/March each year with Dean's Office reviewing agreed upon priorities in alignment with School strategic plan (2018-2023).

		<p>US Schools and Colleges of Optometry and for accreditation.</p> <p><u>Increasing non-tuition revenue</u> (a) Student technology and innovation fee. Fees are presently collected, and may be increased for curriculum enhancement.</p> <p>(b) Continuing Professional Development</p>	<p>Dr. Stanley Woo, Director</p> <p>Dr. Sarah MacIver, Director of Continuing Education;</p> <p>Dr. C. Lisa Prokopich; Director of Continuing Professional Development</p>	<p>gauge timing for submission to MCU.</p> <p><u>Increasing non-tuition revenue</u> (a) Working to set fees such as OSCE, simulation equipment, clerkship support. May roll out in coordination with approved tuition fee increase, but ideally sooner (2023). Aligned with policy.</p> <p>(b) Continuing professional development has been established with additional programming planned in spring and fall 2022. Certification course for glaucoma offered for Atlantic Provinces in late 2021. Advanced Procedures certification course scheduled for spring 2022.</p>
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		<p>(c) Clinical Patient Care Services are an opportunity to deliver exceptional patient care, enhance clinical education and training, as well as drive revenue (especially for specialty services)</p> <p>(d) Waterloo Eye Institute. Major initiative to expand specialty clinical services and provide integrated eye and vision care including surgery (e.g. cataract)</p>	<p>Dr. Andre Stanberry, Clinic Director</p> <p>Dr. Stanley Woo, Director</p> <p>Andrea Carthew, Associate Director, Advancement</p>	<p>(c) Clinical patient care services have undergone a substantive review with periodic fee increases. Additional specialty care services including myopia control and vision therapy expanding but impacted by covid. Addition of UW vision benefit introduced in 2021 and potential for increase in OHIP fees will be beneficial.</p> <p>(d) “Seeing Beyond 2020”. Campaign with Rt. Hon. David Johnston as Honourary Chair coordinated effort with UW Advancement ongoing through 2025.</p>
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The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for monitoring the Implementation Plan.

Date of next program review: _____ **2024-25**
Date

Signatures of Approval:



15 February 2022

Director

Date

AFIW Administrative Dean/Head (For AFIW programs only)

Date



August 29, 2022

Faculty Dean

Date

Note: AFIW programs fall under the Faculty of ARTS; however, the Dean does not have fiscal control nor authority over staffing and administration of the program.

Associate Vice-President, Academic
(For undergraduate and augmented programs)

Date



16 June 2022

Associate Vice-President, Graduate Studies and Postdoctoral Affairs
(For graduate and augmented programs)

Date