

Final Assessment Report (FAR) and Implementation Plan

Periodic Program Review (PPR)

Graduate Program in Molecular Science (MSc, PhD)

Last Updated: May 8, 2024

FINAL ASSESSMENT REPORT

In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the graduate program in **Molecular Science (MSc, PhD)**. This report identifies the peer review identified strengths of the program, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.

The report also includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the final assessment report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

EXECUTIVE SUMMARY

Molecular Science focuses on the investigation of events that occur at the molecular level and is, at its core, interdisciplinary, operating at the interface of biological and chemical subdisciplines. The Molecular Science Graduate Program offers students the opportunity to pursue MSc and PhD degrees at TMU, contributing to the number of Canadian-trained highly qualified personnel. The MSc and PhD programs are relatively new, and this is the first Periodic Program Review for the combined MSc and PhD Programs. Year-to-year data of student entrance and graduation shows that the MSc program is highly popular and competitive within the Greater Toronto Area group of graduate programs. The PhD program offers quality education that is still assembling name recognition and growing in strength. Many Molecular Science PhD candidates are direct transfers from the MSc program; however, a recent trend in PhD candidates admitted through applications again points to maturation of the PhD program and its attractiveness for students wishing to pursue doctoral level training.

Research in three broad fields is conducted within the Program: Chemistry, Life Sciences Biology (Ecology, Evolutionary Biology, etc), and Biomedical Science (Cell Biology, Biochemistry, Genetics). Significant increases in research-directed faculty funding have occurred each year. Research spaces are adequate in Chemical and Life sciences streams, although student-led research is frequently impeded by access to equipment/facilities or by facility problems in the aging Kerr Hall building. Biomedical Science research is largely conducted at the TMU MaRS Research Facility, a state-of-the art facility that allows easy access to research opportunities and infrastructure. Some research is at the newest TMU building, the Centre for Urban Innovation (CUI) or at nearby St Michael's Hospital. Both CUI and hospital facilities are improved over facilities in Kerr Hall. Faculty, staff and students promote resource sharing and attempt to ensure that colleagues who are in underserved areas are assisted; but this gap is too wide and will continue to threaten Chemistry and Biology-Life Sciences within the Program.

A key issue identified by students and faculty is that the requirement to take 3 elective courses does not really contribute to achieving the program's learning outcomes, and is a burden on students' time, detracting from their ability to carry out the research activities central to the program. It is hoped that this review will precipitate a reduction in the number of elective courses to 2.

Another key issue is that the name "Molecular Science" does not represent the research interests of the program. Consequently, many students are likely discouraged from applying to the program because they do not know what it means. This is particularly true for Chemistry and Biology-Life Sciences

applicants. We suspect that this branding issue coupled to resources have caused the number of Chemistry and Biology-Life Sciences applicants to decrease significantly. Most applicants are sourced from TMU undergraduate programs housed within the Department of Chemistry and Biology.

We propose that a Program Advisory Council (PAC) is formed to help build the program and develop its brand. In addition to reconsidering our brand and name, Molecular Science should use its greatest resource to better effect- our trainees. Increased alumnus tracking and involvement would help show outcomes and spread the program's reputation. Further, alumni involvement offers opportunities for career training, student mentoring, and later job opportunities.

A third critical issue is that of funding. Molecular Science graduate students carry one of the highest tuition burdens in Canada, at approximately \$10,000/year. Students are provided with minimum total funding packages of \$22,700/year MSc, \$28,000/year PhD. However, this level of funding is incompatible with the cost of living. Tremendous student issues have been identified in the course of preparing this PPR self-study including lack of family care resources; inability to live within the GTA requiring long commutes; having to take off-campus jobs, increasing time to completion; lack of support for students with families. It is imperative that we work to improve student financial support for the good of our students, and to improve our competitiveness with comparator programs.

Moving forward, the survival of Molecular Science depends on strengthening the perception of its program, improving funding for all members, and dealing with infrastructure constraints. The COVID-19 pandemic revealed our flexibility and resiliency in the face of challenge; in response we became more collaborative and more interdisciplinary between Chemistry, Biology-Life Science, and Biomedical Science streams. The outlook is bright as Molecular Science continues to increase enrolments and successfully graduate students on time, reinforcing our growing role as a Canadian training program of thinkers and high-skill-level scientists,

PERIODIC PROGRAM REVIEW AND PEER REVIEW TEAM

The graduate program in **Molecular Science (MSc, PhD)**, FOS, submitted a Self-Study Report to the Yeates School of Graduate & Postdoctoral Studies that outlined program descriptions and learning outcomes, an analytical assessment of the program, program data including data from student surveys and the standard data packages. Course outlines and CVs for full-time faculty members were also appended.

Two external and one internal arm's-length reviewers were selected from a set of proposed candidates. The Peer Review Team (PRT) for the Periodic Program Review (PPR) of this graduate program consisted of Dr. Reinhart Reithmeier, Department of Biochemistry, University of Toronto; Dr. Jennifer van Wijngaarden, Department of Chemistry, York University; and Dr. Claire Oswald, Department of Geography & Environmental Studies, Toronto Metropolitan University.

The PRT site visit was conducted on-site on January 10th and 11th, 2024. The visit included interviews with the University and Faculty Administration including the Provost and Vice-President Academic, Faculty Dean, Faculty Associate Dean, Vice-Provost and Dean Yeates School of Graduate & Postdoctoral Studies (YSGPS); Associate Dean Programs YSGPS, Graduate Program Director of the Graduate Program, Director Graduate Program Administration, and meetings with Faculty, a group of current students, administration, and support staff. The PRT report was communicated to the Associate Dean, YSGPS on Feb 16, 2024, and the response to the report from the graduate program and Faculty Dean was communicated on April 7, 2024.

PROGRAM STRENGTHS, WEAKNESSES, AND OPPORTUNITIES

The Peer Review Team identified program strengths, weaknesses and opportunities for program improvement and enhancement, outlined below.

Strengths

- Molecular Science graduate students are immersed in a highly interdisciplinary learning environment of learning across Chemistry, Environmental and Molecular/Cellular Studies.
- Strong skills and professional development are key components to the Program.
- The breadth of TMU researchers under the MS umbrella providing students with access to wide range of expertise, research tools, etc.
- Established and blended sources of funding from YSGS and FOS plus commitments from faculty members provide financial support to graduate students.
- Dedicated technical support staff provide expertise and coordinate shared spaces and equipment.
- Access to and proximity to world-class research facilities in downtown Toronto (e.g., St. Mike's MaRS) facilitates collaborations both within and outside TMU.
- Most research space is modern with state-of-the art equipment.
- Access to resources like Science Discovery Zone provides opportunities for entrepreneurial-minded students to build business models for their research.

Weaknesses

- Limits on student intake particularly at PhD level may impact research productivity.
- Student funding levels are well below local and national averages especially given the high cost of living in GTA and higher graduate tuition at TMU compared to nearby institutions.
- No substantial endowments or funding for scholarships.
- No established baseline funding or plans for equipment renewal (e.g., aging NMR upon which multiple researchers depend); poor facilities in KH where a number of biology and chemistry faculty have labs; limited space in KH for student offices and gatherings (e.g., lounge); no dedicated conference/meeting room for Department.
- Kerr Hall research facilities are not up to the high standards of other sites.

Opportunities

- The creation of a new medical school at TMU provides the opportunity to engage with community-driven and inclusive medical practices and the use of innovation and technology to improve quality of care and patient outcomes.
- Provide high quality research space to all graduate students.
- Empower the MS Graduate Student Union to lead activities like orientation, invited seminar series, and social cohesion events.
- Track and engage alumni in program activities.
- Strengthen brand to align with TMU mission "Advancement of applied knowledge and research to address societal need and the provision of programs of study that provide a balance between theory and application and that prepare students for careers in professional and quasi-professional fields."

SUMMARY OF PRT RECOMMENDATIONS, GRADUATE PROGRAM AND YSGPS RESPONSES, AND IMPLEMENTATION PLAN

A report on the progress of these initiatives will be provided in the Follow-up Report which will be due in one year from the date of Senate approval.

PRT Recommendations	PRT Rationale	Molecular Science Program Response	Dean of Faculty of Science Response	Proposed Program Action	Program Timeline and Responsibility/Lead	YSGPS Response
<p>Recommendation 1:</p> <p>Molecular Science employ a more holistic approach in the admission process, including more emphasis on the statement of interest and life experience and developing clear admission guidelines to evaluate diverse applications.</p>	<p>To remove barriers and increase diversity of student population.</p>	<p>Currently, admissions are managed by the Program Director (GPD) and Program Administrator (GPA) with review of documents by the Admissions and Awards Committee. However, significant differences have emerged in scoring applications in recent years and this is an issue that was identified in our initial self-study report. In 2023, GPD Sarah Sabatinos attended a holistic admissions seminar through YSGS for initial training and to consider program actions. We also note that applicants may not have the experience or understanding of graduate studies applications to highlight relative skills and accomplishments that are valuable (yet which may not fall under academic or research excellence).</p>	<p>The Faculty of Science agrees with the program response.</p>	<p>The Admissions & Awards Committee will solicit opinion from faculty and students to determine how best to consider applications. More emphasis will be placed on faculty consultation with prospective applicants during the process to ensure that diverse applicants feel welcome and that their applications are taken seriously.</p> <p>We propose that applicants continue to provide a statement of interest, CV, transcripts, and reference letters. The GPD will develop a template for an</p>	<p>Admissions were discussed April 17, 2024, and will be developed in Program Council meetings over Spring/Summer 2024. The background description in the self-study, and the PRT suggestion, were provided to Council members for comment. This consultation will be ongoing in 2024.</p> <p>Council will vote on the use of a new admissions SOI template document with an aim to implement this for the 2025-2026</p>	<p>The YSGPS supports the Program's efforts to introduce a more holistic admission process that will encourage a diverse pool of applicants in line with one of TMU's core principles of integrating EDIA throughout our activities and policies.</p>

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				<p>admissions Statement of Interest (SOI) document that helps applicants to capture their life experiences in addition to academic qualifications.</p> <p>INTENT- to reassure applicants that life experiences are valuable to graduate studies, and that all paths are not the same.</p>	admission cycle.	
<p>Recommendation 2: YSGS change its Guidelines to allow PhD candidates to complete a Masters degree if they do not proceed in the PhD Program.</p>	<p>To increase number of direct entry PhD students and flexibility of program.</p>	<p>The Program has investigated the possibility of MSc completion for students who previously transferred to the PhD program. We understand that this can become an option for students who find they cannot complete the PhD program in the upcoming revisions to policy 170(b). However, the current guidelines and process are unclear. Further, the availability of this as an option is largely unknown.</p>	<p>We will work with the program to define the specific conditions when this would be appropriate, and to develop a policy and procedure consistent with the revised Policy 170(b).</p>	<p>The Program commits to clarifying this option for students and ensuring that it is reflected in all relevant documents and policies for the Program.</p>	<p>The Program will work with the Associate Dean of Graduate Studies for FOS to clarify procedures through YSGPS to allow MSc completion out of a PhD program, once the revisions to policy 170(b) are in place.</p>	<p>While noting that this option is meant to be for unusual circumstances, the YSGPS will work with the Program GPD and FOS Graduate Associate Dean to clarify processes and policies related to this recommendation.</p>

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<p>Recommendation 3: Molecular Science eliminate the written examination and reduce the length of the research proposal to say, a maximum of ~11 pages plus appendices for the PhD Candidacy Exam.</p>	<p>To decrease time to complete candidacy exam and align with course requirements in other Ontario universities</p>	<p>We agree that it is prudent to take steps to align the candidacy process with similar programs at other Ontario Universities, especially if this may decrease the burden on PhD students. The Program will review this recommendation in consultation with graduate students, the MolSci Curriculum Committee, and the MolSci GPC.</p>	<p>The Faculty of Science agrees with the program's approach.</p>	<p>The Program will discuss the current forms and guidelines for PhD candidacy to identify ways by which we might implement this recommendation if we move forward after consultation with key stakeholders.</p>	<p>This recommendation will be discussed with the MolSci Curriculum Committee in Spring 2024, as well as with the MSGSU (MolSci Graduate Students Union). The GPC will also consider the matter during our April 2024 Council meeting, with further discussion to take place during a summer 2024 retreat or at the fall 2024 Council meeting. If the MolSci GPC agrees, we could move forward with a change starting in Fall 2026.</p>	<p>The YSGPS supports Program efforts to align the PhD candidacy process with comparator programs and is available to consult on this.</p>
<p>Recommendation 4: The Program reduce the course requirement for MSc students to one and PhD students to two.</p>	<p>To better align with the goal of creating research-based degree programs and more timely completion.</p>	<p>The Program supports this recommendation as we recognize that student research, creative, and scholarly activities (SRC) are critical to their thesis and program learning outcomes and</p>	<p>The Faculty of Science agrees with the program's approach, and confirms that the change will not impact the program's future</p>	<p>We will consult with the Molecular Science Curriculum Committee and MolSci GPC about implementing this recommendation.</p>	<p>A motion in support of this recommendation was passed at a MolSci GPC meeting on April 18. The</p>	<p>YSGPS supports Program efforts to adjust course requirements so that students can better balance these with their SRC activities and is able</p>

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		<p>yet require substantial time. Molecular Science Faculty members have previously conveyed strong support to reduce the student course burden.</p> <p>Consultation and consideration must balance any reduction in elective course number with core skills in Molecular Science (i.e. communication, research skills, analysis, etc)</p>	<p>funding or department hiring.</p>	<p>Specifically, we expect to vote on a motion at the April 18, 2024 GPC meeting to reduce the number of elective courses to 1 for a MSc student, and to 2 for PhD students.</p>	<p>Curriculum Committee will prepare the major curriculum change proposal over Spring/Summer 2024 to reflect this change, including a strategy for assuring the curriculum maintains a rigorous breadth and depth of education that develops core scientific skills essential for research and scientific employment. This proposal will be approved by MolSci GPC over the Summer and brought forth to YSGPS PPC in Fall, with an aim for full implementation by the 25-26 academic year.</p>	<p>for consultations with the GPD to implement this recommendation should it move forward.</p> <p>YSGPS notes that such low course requirements are unusual at TMU and emphasizes that our Graduate Degree Level Expectations (as defined in Policy 110) require learning outcomes that cover both breadth and depth of knowledge. The coverage of the revised curriculum in delivering and assessing competency in all its learning outcomes will need to be considered.</p>

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<p>Recommendation 5: MSc and direct entry PhD students take the enhanced MS8201 Seminar Course in their first year and MS8202 in their second. PhD students take a re-imagined MS9201 in the year after their qualifying exam.</p>	<p>To avoid repetition in the Fall term, MS8201 focuses on developing the skills for success in graduate school, MS8202 on student presentations, while MS9201 focus on the tools required for success after graduate school in line with TMU's mission to <i>"prepare students for careers in professional and quasi-professional fields."</i></p>	<p>We appreciate the suggestions to avoid repetition and enhance the student experience. However, the current structure of the seminar course reflects logistical constraints based on the need to provide structured content while providing an opportunity to practice communication skills. The PRT noted that the seminar is essential in exposing students to a breadth of current topics in interdisciplinary Molecular Sciences. To reduce the attendance requirement, or split the course into smaller more focused courses would diminish this exposure.</p> <p>Nevertheless, we note that there is room for improvement in the way the seminar courses are run, and we will undertake a review and make necessary changes.</p> <p>Regardless of the eventual outcome, any potential changes to the seminar course must ensure that students do not face additional burdens or hurdles.</p>	<p>The program's response highlights the complexity of issues surrounding the seminar course, and that a blanket acceptance of the PRT's recommendation would likely cause more problems than it solves. We note that many minor changes related to how the course is administered can be made without official curriculum modification, while some other beneficial changes may require the generation of new course codes and calendar descriptions. In any case, we support the program's consultative and thoughtful approach to overhaul of the seminar course.</p>	<p>We will meet with the MolSci Curriculum Committee to initiate discussion about changes to the graduate seminar course(s), as well as consulting with previous instructors of the seminar courses (R Botelho, L Campbell, A McWilliams, S Sabatinos). Possible changes will then be further explored at a GPC meeting through a SWOT/SOAR-style session to document ideas and challenges. If there is sufficient interest, a GPC <i>ad hoc</i> committee will be established to assist and direct course development. The Department of Chemistry and Biology and Faculty of Science will be actively involved in these</p>	<p>Discussion about seminar course changes and their implementation will continue throughout Spring/Summer 2024, with an aim to incorporate minor practical improvements for Fall 2024, and if any curriculum changes are deemed necessary, they will be advanced through the necessary approvals in Fall 2024, with an aim of implementation for Fall 2025.</p>	<p>The YSGPS supports the Program's plans to explore these changes to the seminar course(s) in order to meet student needs and is available for consultation regarding curriculum changes.</p>

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				developments since they administer all resource-related matters related to teaching.		
<p>Recommendation 6: That the benchmark expectation for MSc students to contribute 1 SRC finding, and PhD students 3 findings indicate that the research should be of sufficient quality to be externally peer-reviewed.</p>	<p>To ensure high standards of research quality as although not explicitly required, external review of research (e.g., peer review of publications) remain the gold standard for the dissemination of knowledge.</p>	<p>The Program agrees that this is an expectation. During the COVID-19 pandemic, and with recognition of holistic milestones that accommodate different research paths, the definition of “finding” was expanded to include all works that are judged by a committee to be sufficient. We could add the description of “research should be of sufficient quality to be externally peer reviewed” to ensure that this is clear.</p>	<p>The Faculty of Science agrees with the recommendation in principle, but notes that due to the subjective nature of what constitutes a “finding”, and the various possibilities for exceptional circumstances make it difficult to put into policy. We will work with the program to come up with the best ways to convey research productivity expectations to students.</p>	<p>We will look to include this statement of expectation in documents and guidelines.</p> <p>We also look to train supervisory committee members to support student success by helping to create bridges that build quality SRC findings.</p> <p>The Program notes that publications are not a degree requirement. While publications may be important currency for scientific careers, students should not be withheld from progress or graduation because their work is</p>	<p>We will discuss this at a Spring 2024 Council meeting.</p>	<p>The YSGPS supports the Program’s response to this recommendation.</p>

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				not published.		
<p>Recommendation 7: Consider dropping the Materials, Surfaces and Interfaces and Molecular Biosciences fields and unify under Molecular Sciences.</p>	<p>To better align with the program objectives and eliminate confusion and redundancy in the course requirements.</p>	<p>The Program recognizes that the “Fields” of study documentation is not used extensively within Molecular Science degree programs.</p>	<p>The Faculty of Science agrees with the program’s approach.</p>	<p>We propose dropping “Fields” designation and implementing this in line with rebranding of the Program.</p>	<p>We will discuss this at a Spring 2024 GPC meeting and vote on a motion to remove Fields from the curriculum. This curriculum change would then be sent to the YSGPS Council for approval.</p>	<p>The YSGPS supports Program efforts to remove the Fields from the curriculum if desired and is available for consultations with the GPD to implement this recommendation should it move forward.</p> <p>It notes that removing fields from a program is an example of a major curriculum modification in Policy 127.</p>
<p>Recommendation 8: Graduate students should be involved in organizing activities like Orientation, the Visiting Speaker Program, the Summer Conference Day, and other professional networking activities.</p>	<p>To enhance meaningful engagement of graduate students in program activities and help develop their organizational and leadership skills.</p>	<p>The Program recognizes the importance of student participation in these activities. This is important for learning and professional development.</p>	<p>The Faculty of Science agrees with the program’s approach.</p>	<p>The Program will consult with the MSGSU regarding strategies to increase student participation.</p> <p>Each year, Molecular Science Graduate Students are always welcome to participate in the summer conference (SATI - Science at the Interface), and emails are sent multiple</p>	<p>We have already moved ahead on this recommendation. In Winter 2024, graduate students played a role in organizing and coordinating with invited speaker seminars. A plan to improve opportunities will be generated for Fall 2024 and then</p>	<p>The YSGPS supports the Program’s response this recommendation and commends its commitment to increasing student participation in Program activities.</p>

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				times to encourage participation. However, student organizing participation for the SATI research day dropped during the pandemic and has not been common since.	ongoing. The plan will include opportunities listed here, as well as those identified by the Molecular Science Graduate Student Union	
<p>Recommendation 9: YSGS significantly increase the minimum MSc (\$22,700) and PhD (\$28,000) funding package to cover tuition and other fees plus a living allowance.</p>	<p>To provide competitive stipends to attract top students and support their cost of living.</p>	<p>The Program agrees with this recommendation but will need to consult with the Faculty of Science and faculty supervising students in this program in order to explore feasible ways of doing so.</p> <p>A student funding emergency meeting was held in Summer 2023; additional discussion is required to find options</p>	<p>The Faculty of Science agrees that the state of graduate student funding at TMU is inadequate. At the faculty level, we are taking steps to ensure fairness and consistency in the administration of current funds (TAsip, supervisor support, and program funds), and always advocating for more support.</p>	<p>This is a complex topic that will require extensive and ongoing consultation with the Faculty of Science and with Faculty members in the Program.</p>	<p>This recommendation will be raised at a Spring/Summer GPC meeting. Funding will also be discussed in a summer retreat.</p>	<p>Such resource-related matters are outside the purview of the YSGPS, but it will continue to support efforts and initiatives to increase graduate student stipends.</p> <p>It should be noted that such funding has increased over the past several years through the addition of funding for 4th year doctoral students, the introduction of TMGS scholarships, and the new international tuition revenue sharing model.</p>
<p>Recommendation 10: Interviews of graduate student parents should be</p>	<p>To ensure a smooth transition back to graduate studies and</p>	<p>The Program recognizes that parental leave is an important and vulnerable time in graduate</p>	<p>The Faculty of Science has been piloting a parental leave program</p>	<p>This topic will be discussed with the Molecular Science</p>	<p>This will be discussed at a summer 2024 GPC meeting. We</p>	<p>Such resource-related matters are outside the purview of the YSGPS, but</p>

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<p>carried out before and after parental leave. Supervisors continue to provide a stipend (\$8,000 for MSc/\$10,000 for PhD) during parental leave in addition to the \$15,000 provided by the Program.</p>	<p>completion of the degree and that additional living costs do not burden new parents.</p>	<p>studies. Contributing to parental leave is a workplace obligation that has not been fully implemented in studies. We commit to finding ways that this can be improved.</p>	<p>for about two years. We will take this recommendation under advisement to improve practices and visibility of the program.</p>	<p>GPC. Low funding levels have previously meant that faculty are not always able to support parental leave. Tri-Council funding allows for parental leave reimbursement, which might be supported by helping faculty to apply.</p>	<p>will draft a statement and/or action item after consultation and discussion. We will work to implement action for Fall 2024.</p>	<p>it will continue to support efforts and initiatives to ensure that graduate students do not face undue hardship by taking parental leave.</p>
<p>Recommendation 11: Funding continue to be provided beyond normal completion times subject to good progress.</p>	<p>To provide support and ensure timely completion of the degree.</p>	<p>Institutional funding for students (both the YSGPS Scholarship budget, and FOS funds) are tied to head counts of students within their funding window as currently defined for MSc (2 years) and PhD (4 years). Under this model, any support to students outside this window would dilute the support to students within the window. Ideally, when good progress is being made, students should complete on time. But the program can do more to communicate with students, supervisors, and supervisory committees to ensure that this is the case. Also, in some cases,</p>	<p>The Faculty of Science agrees in principle that graduate students need adequate financial support for the duration of their studies. However, given the funding models in place, it will be more effective to promote timely completion through communication with both students and faculty.</p>	<p>We are consulting with Molecular Science GPC members and will have a discussion of this issue during a Spring/Summer GPC meeting.</p>	<p>This will be discussed during a Spring/Summer 2024 GPC meeting. Problem solving and a SWOT/SOAR analysis will be employed to encourage active thinking and creativity. We will develop options and ideas for discussion during the summer, aiming to implement possible changes to funding requirements in this</p>	<p>Such resource-related matters are outside the purview of the YSGPS, but it will continue to support efforts and initiatives to ensure that graduate students do not face undue financial hardship if they do not complete their degree within the current timelines with guaranteed funding.</p> <p>We note that supervisors do not have the authority to keep students in a program longer than what it takes for the student to</p>

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		students and supervisors may agree that longer time in the program may be mutually beneficial in order to achieve certain research milestones, and in these cases, supervisors must be willing to financially support these students.			context in Fall 2024.	complete all degree requirements. If such a practice exists, this should be addressed right away.
<p>Recommendation 12: Create an EDIA committee that conducts a climate survey and organizes activities to address identified needs.</p>	<p>To align with goals of Dimensions Program and core values of EDI to create a healthy lab environment.</p>	<p>The Program agrees with Recommendation #12, and a survey is currently underway. Furthermore, it will be beneficial to strike a committee including program students to address graduate student-centered EDIA issues.</p>	<p>The Faculty of Science agrees with the program's approach.</p>	<p>EDIA was raised in an April 2024 GPC meeting. An EDIA climate survey has been released by the Dimensions Project (NSERC; Costin Antonescu) within FOS.</p> <p>We will consult with students and Dimensions to build a committee that best serves students and the program, by defining the roles, structure, and election of an EDIA committee.</p>	<p>We will organize a Molecular Science student Town Hall for May 2024 for their feedback and input. We will develop options and ideas for an EDIA committee during the summer to facilitate discussion and planning for earliest implementation in Fall 2024 or Winter 2025.</p>	<p>The YSGPS supports the Program response to this recommendation and commends its efforts to specifically consider EDIA as it pertains to graduate student concerns and needs through the formation of such a committee.</p>
<p>Recommendation 13: Develop resources and guidelines for best practices</p>	<p>To create a healthy lab environment aligned with</p>	<p>The Program is actively collaborating with the Faculty of Science Dimensions Leader</p>	<p>The Faculty of Science agrees with this recommendation and is</p>	<p>Sarah Sabatinos will reach out to the MSGSU to identify key</p>	<p>We will make the GPC aware of initiatives related to</p>	<p>The YSGPS supports the Program response to this recommendation and</p>

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in graduate student supervision and to deal with student issues.	the EDI principles of the Dimensions initiative.	(Costin Antonescu) to institute mandatory Code of Conduct agreements with lab heads, supervisors, and all members of research laboratories. In addition, we recognize that supervisors may require training and support for best practices. We will work with a GPC sub-committee and an independent group of graduate students to identify key issues and required resources/guidelines.	working with the Dimensions leader and programs to develop these guidelines, as well as a strategy for their implementation and gaining buy-in from faculty members.	concerns and points that should be included in guidelines. These will be developed in consultation with faculty and graduate student members, and presented to the GPC in Fall 2024. Ahead of that, GPC members will also have an option to discuss and clarify required guidelines and resources.	this recommendation during a Spring 2024 meeting and explore how best to capture opinions and opportunities for supervision guidelines. Over summer 2024, we will work with graduate students to identify key concerns.	<p>commends its efforts to ensure that graduate students have a healthy lab environment based on shared expectations of conduct for all Program participants, as well as a means by which students can raise concerns in a safe and confidential manner.</p> <p>YSGPS updated its Graduate Supervision Guidelines to meet several of the recommendations in the “Academic Accommodations for Graduate Students Outside of Courses” report to clarify roles, responsibilities and resources related to accommodations for graduate students outside of course work. The updated guidelines may be a helpful resource.</p>
Recommendation 14: Priority be given to a providing adequate financial	To recognize that government grants and	The Program is delighted to support all campaigns that enhance student well-being,	The Faculty of Science appreciates the importance of funding	The Program will meet with Faculty representatives to	Sarah Sabatinos will meet with University, Faculty of	Such resource-related matters are outside the purview of the YSGPS, but

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resources, including a fund-raising campaign to support graduate programs at TMU, student awards, new equipment (e.g. NMR) and maintaining essential research facilities.	tuition fee increases will not meet the growing needs of the Molecular Science graduate students.	success and productivity. Some of the items identified are essential. The Program commits to working with the Faculty of Science and University to fundraise and participate at all levels.	for awards and research equipment and facilities, and commits to doing what it can, given budget constraints.	discuss how fund-raising and support opportunities might occur. The Program has already attempted to develop a CFI proposal (Sarah Sabatinos, OVPRI discussion in March 2024), but was informed that it would not be supported in the current funding allotment/cap. A separate CFI proposal led by Roberto Botelho proposes supporting a new NMR instrument.	Science, student, and Departmental representatives in Spring 2024 to discuss fund-raising for research. We are discussing other avenues toward this end in collaboration with the Council.	it will continue to encourage and advocate for efforts and initiatives that ensure appropriate financial and infrastructure support for graduate students and their SRC activities.
Recommendation 15: TMU commit to providing high quality research space to all graduate students, including possible renovation of Kerr laboratories and expansion of MaRS footprint.	To address health and safety issues flagged in Kerr and to address inequitable resources for students located at different sites.	The Program appreciates and thanks the PRT for this suggestion. CFI discussions in March 2024 were unsuccessful. However, we are committed to working with TMU at all levels to support laboratory-based SRC activities as these are expensive endeavors that require infrastructure and funding above that of non-lab based graduate	See response to #14 above.	The Program is committed to exploring how we can best act on this suggestion through conversations with the Faculty of Science, the Office of the Vice President of Research, and University Advancement, among	This item has been flagged for discussion at the April 2024 Departmental meeting. The discussion is ongoing and will be followed and developed over	Such resource-related matters are outside the purview of the YSGPS, but it will continue to encourage and advocate for efforts and initiatives that ensure appropriate financial and infrastructure support for graduate students and their SRC activities.

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		<p>programs. However, we also believe that the grant success we have enjoyed (and will develop further with adequate research infrastructure) brings reputational awareness and excellence for the MolSci Program.</p>		<p>other key TMU offices and stakeholders. To ensure graduate student opinion, we will also discuss this item during the summer 2024 Molecular Science Retreat (date TBD). The Program will explore opportunities for access to key infrastructure through the new TMU Medical School.</p>	<p>the next several years.</p>	
<p>Recommendation 16: The Program carry out a strategic planning exercise that includes developing a brand, possible name change, and mission and vision statements that align with TMU's mission.</p>	<p>To elevate the Program to higher levels of excellence requires a clear vision, commitment to deliverables, and strong leadership in anticipation of the next PPR.</p>	<p>The Program is eager to carry out this exercise.</p>	<p>The Faculty of Science agrees with the program's approach and can support a retreat/facilitator to do so.</p>	<p>We will discuss this with the GPC during our April 2024 meeting to obtain approval for this as an item during the summer/fall retreat/council meeting. We suggest a 2-part plan to ensure the best representation of all Molecular Science members and adjunct participants. First, we</p>	<p>We initiate discussions at the April/2024 GPC meeting to develop a structure for future talks in summer and fall. The Program will determine whether we might hire a facilitator to assist in a rebranding exercise.</p> <p>The Program will also request support</p>	<p>The YSGPS supports the Program's response to this recommendation and is available for consultation as it undertakes this rebranding exercise to consider the current environment and student needs.</p> <p>YSGPS notes that a change in a program's name is considered a major curriculum modification under Policy 127.</p>

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				<p>will have a SWOT/SOAR discussion and brainstorming session during the Molecular Science Summer 2024 Retreat (date TBD). However, since some faculty and students are away during the summer or otherwise engaged, there will be a second opportunity for discussion in fall 2024. We will also discuss options and outcomes with TMU administration and the YSGPS to determine how a name change and rebranding might impact our interaction with other programs and funding sources at the University.</p>	<p>from TMU branding offices and experts for knowledge and resources.</p>	
<p>Recommendation 17: Track and engage alumni in the MS Program through activities such as annual career panels, workshops</p>	<p>To strengthen relationships with alumni and community leaders to the benefit of future students through their</p>	<p>The Program recognizes the importance of alumni engagement, and also that current tracking and engagement is low. The seminar course this</p>	<p>The Faculty of Science agrees with the program's approach.</p>	<p>To reach alumni, we require better tracking within the Program. Sarah Sabatinos and Sarah Kovacs have</p>	<p>We will initiate a first newsletter and tracking effort in May 2024. We will discuss with the PPC</p>	<p>The YSGPS supports the Program's proposed actions to better engage with alumni and track their activities post-graduation</p>

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<p>and mentoring organized in partnership with the MS Program Graduate Student Union and a Program Advisory Council that includes people external to the program.</p>	<p>mentorship, advice and potential donations.</p>	<p>year has actively developed Alumni relationships with presentations and visits by former students (i.e. Amra Saric, now at SickKids Research Institute; Alexandra Petrova, now at Sixsense). To reach alumni we require better tracking. We found during the self-study that records from the UPO were not helpful or were missing important information that could help engagement opportunities.</p>		<p>committed to recording Alumni information and checking previous records. We will reach out to alumni at least twice per year, perhaps with a newsletter to update alumni about the Program and milestones/highlights. We will also actively write Alumni to return and participate in seminars and other opportunities.</p>	<p>how to reach Alumni (and seek faculty support as former supervisors) during the April 2024 Council meeting.</p> <p>We will contact Advancement support staff in Faculty of Science and at TMU centrally to seek support and knowledge/instruction in how best to proceed.</p>	<p>to highlight their successes and promote networking with current students in the Program.</p>