Toronto Metropolitan University

Graduate & Postdoctoral Studies

Office of the Vice-Provost and Dean
Yeates School of Graduate & Postdoctoral Studies

Final Assessment Report (FAR) and Implementation Plan (IP)

Periodic Program Review (PPR)

Graduate Program in Spatial Analysis (MSA)

Last Updated: October 21, 2025

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 this graduate program**.** 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.

Spatial Analysis (MSA)

EXECUTIVE SUMMARY

The Master of Spatial Analysis (MSA) program at Toronto Metropolitan University is an innovative and academically rigorous graduate program that integrates theoretical knowledge with practical skills in geographic information systems (GIS) and spatial analysis. Offered by the Department of Geography and Environmental Studies, the MSA program provides a comprehensive education that prepares students for diverse careers in government, industry, and academia. The program offers both full-time and part-time study options, with a curriculum that includes core courses, electives, a practicum, and a major research paper (MRP) or thesis.

Background

Established in 2000, the MSA program has evolved to include three specialized streams: business/commercial applications, physical/environmental geography and landscape analysis, and

social/community information analysis. The program's faculty comprises experienced and award-winning scholars who actively engage in cutting-edge research, ensuring that students receive a high-quality education that is both current and relevant. The program has consistently attracted a diverse group of students, including a significant number of international applicants, and has maintained strong graduation and employment rates.

Program Objectives

The MSA program aims to equip students with comprehensive GIS and spatial analysis skills, integrating theoretical knowledge and practical applications. It prepares graduates for professional careers across various sectors by developing critical awareness of fundamental theories, providing depth of knowledge in GIS and spatial analysis tools, fostering professional competence, and promoting practical communication skills. The program's objectives align with Toronto Metropolitan University's academic plan, contributing to student engagement and success, SRC excellence, community engagement, and city building.

Curriculum Enhancement

In response to recommendations from the one-year follow-up report, the MSA program has undertaken significant efforts to enhance the curriculum. The introduction of the "Spatial Seminars" series has been instrumental in integrating cutting-edge research and fostering synergies between supervisors, faculty, and students. These seminars feature guest speakers and workshops tailored to the specific needs of each year's cohort, providing students with exposure to diverse perspectives and the latest developments in spatial analysis. Additionally, more emphasis has been placed on explaining the thesis option, and materials have been added to help pace students with less quantitative understanding.

Student Support and Engagement

The MSA program has implemented measures to increase student support and engagement. Preliminary project proposal workshops, weekly seminars, and outreach to a wider range of undergraduate programs have been introduced to enhance the student experience. Social media platforms and a Flickr

repository have been used to improve visibility and communication. Furthermore, strategies to offer more robust funding packages for graduate students have been developed, prioritizing funding for thesis students and those currently unemployed.

Technological Integration and Innovation

The MSA program has prioritized technological integration and innovation by incorporating state-of-the-art tools and methodologies into both coursework and research projects. This includes advanced GIS software, remote sensing technologies, and spatial data analysis tools. The program has also enhanced its digital infrastructure to support these technological integrations and introduced innovative teaching practices, such as flipped classrooms, virtual labs, and interactive simulations.

Experiential Learning

The transition from a practicum to an internship model has significantly enhanced the MSA program by expanding the pool of potential hosts and enriching the student experience. This change allows students to engage more actively in the process of interviewing and selecting suitable hosts for their internships, thereby gaining valuable professional skills in networking and job searching.

Financial Resources

The MSA program provides substantial financial assistance to its students through various funding sources. Over the years, the program has maintained a robust financial support system, ensuring students can focus on their academic and research pursuits without undue financial burden. This financial assistance enhances the academic experience by allowing students to engage fully in their studies and research activities.

Conclusion

The MSA program at Toronto Metropolitan University meets a significant societal need by preparing graduates for diverse and growing fields that require spatial analysis expertise. The program's emphasis on practical skills, combined with its strong academic foundation, ensures that graduates are well-equipped to address current and future challenges in various professional sectors. The continuous

improvements and strategic initiatives implemented in response to feedback and changing industry needs demonstrate the program's commitment to maintaining its position as a leader in spatial analysis education.

PEER REVIEW

The graduate program in **Spatial Analysis (MSA),** 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.

The Peer Review Team (PRT) for the Periodic Program Review (PPR) of the graduate program in Spatial Analysis (MSA) consisted of Dr. Tarmo K Remmel, Professor, York University; Dr. Marie-Josée Fortin, Professor, University of Toronto; and Dr. Christopher De Sousa, Professor, Toronto Metropolitan University.

The PRT site visit was conducted on June 4-5, 2025. 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, Programs, at YSGPS on June 25, 2025, and a response to the report from the graduate program and Faculty Dean was communicated on August 26, 2025. The responses of the Program and the YSGPS were reviewed and approved during the meeting of the Programs and Planning Committee (PPC) on September 11, 2025. This was then approved by YSGPS Council on October 21, 2025.

PROGRAM STRENGTHS, WEAKNESSES, AND OPPORTUNITIES

The PRT identified the following strengths, weaknesses, and opportunities.

Strengths

The MSA program is unique in the Canadian post-secondary landscape and is becoming increasingly so as some prestigious GIS programs are closed across the country. As a nod to the success of GIS integrations in virtually every facet of the economy and life, coupled with improved user interfaces and ease of accessibility, the programs that focus on purely teaching GIS skills are closing or being partitioned among geography, engineering, computer science, and other disciplines. The MSA program at TMU, however, remains relevant as it offers a healthy mix of skills development, professional training in soft skills. The integration of work internships and research applications provide opportunities to implement and disseminate products and generate knowledge within professional circles while interfacing with the organizations with whom many will eventually find employment.

The niche that is filled by this program stands to become the beacon to which aspiring GIS professionals will align, to gain valuable preparatory experiences that make them valuable in the modern workplaces that develop solutions using, and apply spatial analysis, rather than simply perform spatial database construction and management functions. Students emphasized the tremendous benefit of having to present their work continuously throughout the program, which made interviewing for jobs much less stressful and dramatically reduced anxieties. The MSA is supported by a large number of faculty members with skills and experiences within the areas that they teach and this brings a wealth of knowledgeable underpinning to the program.

Areas in Need of Improvement

While the MSA program fills a necessary niche as a boutique program that integrates theory, skills development, and professional enhancement, the PRT notes that the curriculum has not been updated in many years. The program has mentioned wanting to expand into areas that include data science, programming, Artificial Intelligence (AI), and other emerging areas that intersect with spatial analysis.

However, each of these areas requires strong statistical, mathematical, and programming background that may not exist with incoming students. Further, these are topics that are not learned in a single course or even a term; the program needs to think about what it is that they really want to offer, and which aspects they want to focus on (and similarly, what to exclude from their curriculum). There is a fear that simply adding more topics to an already heavy and busy curriculum, that dilution will occur and the expected completion timelines will extend.

While curricular reviews are critically important, it is suggested that regular (annual curricular retreat) reflection on the curricular deliverables, how they scaffold among courses, and how they are reinforced in multiple courses would be a solid starting point. There may be benefits to laying out all of the components of courses and rearranging them into newly imagined courses that achieve end goals more cleanly than simply relying on courses as they have always been. Similarly, there are courses on "the books" that do not appear to be taught and perhaps should be retired, to simplify listings and to open opportunities to reimagine offerings. The spatial statistics course stands out as one that misses an opportunity to truly offer "spatial statistics" and is more of a collection of disparate statistical techniques.

The internship follows only a single term of coursework and students may not yet feel fully prepared to perform meaningful work. Thinking about program timelines to ensure sufficient hard and soft skills training prior to embarking on an internship or taking up the MRP/thesis are worth consideration. To inform decision making, a structured and formalized feedback and internship exit survey might help identify strengths, weaknesses, and blind spots from the perspectives of both students and their hosts. Optimized alignment and scaffolding of course content will culminate in more effective and positive internship, MRP, or thesis experiences.

The program notes the recent loss of many faculty members for various reasons. Faculty complement is important to fill the necessary teaching requirements of a reviewed curriculum and to ensure sufficient capacity for delivering courses and supervision among sabbatical and leave cycles.

Rather than requesting new hires in areas of data science and AI, the seeking of new hires needs to be aligned with the curriculum after it has been fully assessed and confirmed. With 17 faculty members already supporting the MSA, a deep thinking about curriculum should precede hiring considerations.

Opportunities for Enhancement

Enhancement for a small but niche program is most likely to come from distillation and focus rather than greater breadth. Tapping into emerging markets for strong and dedicated students is an obvious starting point for enhancement. The current situation with program closures elsewhere and a need for the mix of hard and soft skills that the MSA offers, makes this an opportune time to reach into markets where the MSA and TMU may not have previously set their sights. This should increase your applicant pool and offer greater quality and diversity of students entering your program.

The internship is touted by most as a strong selling point of the MSA program. As such, effort needs to be placed into cultivating strong and diverse hosts and ensuring clarity in the communication regarding timelines and expectations to both students and those hosts. With regularly solicited feedback and continued maintenance and expansion of potential internship hosts, the challenges related to finding and placing students should diminish with time. Internship coordination takes tremendous time and energy, but as a central feature in the MSA, this is a necessity.

Think through the curriculum structure (rather than just piece together existing courses), think about what deliverables are wanted and align the curriculum with either adjusted or new courses to achieve goals in the rapidly changing landscape. Consider timing and alignment with internship and MRP/thesis schedules/demands. Clear and set pathways through the program will simplify scheduling, deciding on course offerings, and generally simplify aspects of offering the program. Rather than chase a PhD program for the sake of having a doctoral option, focus energy and attention on the gem that already exists. A PhD program would need a lot of resources, options, and research opportunities that would likely be a detriment to the MSA. Is a PhD program for a handful of possible students worth the investment, particularly since having 2 or 3 degrees from the same institution is often unadvised.

The library resources, access to UAV, the Collaboratory, 360-degree viewing gallery, and maker spaces are all fantastic resources that could be more tightly knit into aspects of coursework and the MRP/thesis to boost experiential learning opportunities and to offer exciting value addons that lectures and regular computer labs cannot. These opportunities stem from a deep rethinking of the curriculum and pathways through it to achieve the end goals of the MSA program.

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

A report on the progress of these initiatives will be provided in the 1 Year Follow-up Report which will be due in one year from the date of Senate approval.

PRT Recommendations	PRT Rationale	Program Response	Proposed Program Action	Program Timeline and Responsibility/Lead	Faculty of Arts Dean Response	YSGPS Response
Recommendation 1: Curriculum Reform	Most urgently, the spatial analysis curriculum requires attention. The lack of comprehensive coverage of spatial statistics and spatial analytical techniques is ripe for updating. Related to this, curriculum planning to ensure even coverage, cross-linking, and scaffolding of knowledge and skill development would be beneficial. Similarly, we stress the opportunity to view the curriculum holistically to ensure that today's modern demands are being met in the best possible way.	Overall, the program agrees with all recommendations related to curriculum put forward by the external program review team and will consequently aim to incorporate all of them. The PRT recommendations are reflective of recommendations put forward by the program in the PPR self-study. PRT recommendation 1 aligns with recommendations 1.1, 1.2, 1.3, and 8 in the self-study identifying a critical need for curriculum refreshing. The program strongly agrees that there is a need to review all elements of the program. More broadly, the PRT visit demonstrated that the program needs to re-evaluate the focus of not only the curriculum, but also the balance between	The program recommends conducting a broader review of the MSA curriculum by revisiting course mapping results in the MSA Executive Committee[1], Department Curriculum Committee, and MSA Council to ensure relevant spatial analysis concepts are covered, identify gaps in the curriculum, and to remove redundancy. The department also recommends cross-listing of certain undergraduate courses as MSA elective courses to increase optionality for students. The program agrees with the need to enhance technical skills, particularly in regard to spatial statistics, and through the integration of programming with R and Python into courses. Finally, as part of this curriculum review, the program will	**Timeline**: Winter/Spring/Summer 2026 for course survey; pilot cross-listing of undergraduate course in Winter 2027; integrate R/Python programming more broadly starting in Fall 2026 **Responsibility for a) leading initiative:** Graduate Program Director (GPD) **b) approving recommendation, providing resources, and overall monitoring:** Department Chair, Executive Committee, Program Council	The Dean agrees that curriculum renewal is a priority for the MSA program. As part of this process, it will be important to ensure that all faculty, especially new members, are familiar with TMU's curriculum structure, enrollment figures, and program offerings in order to foster broad engagement and support. We encourage the cross-listing of select graduate and undergraduate courses with other Arts programs, particularly with Economics, to increase student flexibility, while also supporting varied delivery modes (in-person, hybrid, online) and exploring the development of specializations to attract and retain students. CELT workshops and curriculum grants can further support the adoption of new pedagogical approaches and the integration of experiential	YSGPS commends the program for using the self-study course mapping to identify overlap and gaps in curriculum. As the program intends to "consider current and future needs in the discipline," we encourage the program to begin their curricular revision by (re)considering the current program objectives and learning outcomes, to ensure they remain relevant and forward-looking. Course delivery and as assessment methods are also useful points of conversation and discussion. YSGPS supports the Faculty of Arts' recommendation to explore possibilities to cross-list courses, particularly with other graduate programs. Opening graduate elective courses to students from other programs, such as Economics, Policy Studies, and Data Science and Analytics, may facilitate learning opportunities that

[1] The MSA Executive Committee is a subcommittee of GPC that advises on the operation of the program, consisting of the GPD and three to five faculty members, as outlined in the program bylaws.

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		pedagogy, professional development, and research. The program currently describes itself as "*academically rigorous yet professionally oriented graduate program."* Related to this are opportunities to consider current and future needs in the discipline, for example developing a course that covers advanced data and spatial science techniques such as GeoAI.	explore different delivery modes of courses (e.g., hybrid courses, online, and changes in course scheduling).		learning. We also encourage the department to take advantage of Faculty supports such as external speaker funding and curriculum development grants, and to consult with the subject librarian for guidance on library resources and spaces.	often emerge from transdisciplinary student engagement. YSGPS will provide support to the program for any curricular modifications that are required. As the program approaches consensus on necessary changes, they are encouraged to consult with YSGPS to ensure formal curricular modification processes move forward within the timelines outlined.
Recommendation 2: Curriculum Retreats	Regular meetings of the program are recommended to discuss aspects related to curricular alignment and updates. These meetings will offer opportunities to reflect, modify, and cross-pollinate ideas on an ongoing basis. These touch-points may also offer an ideal time to assess course and internship feedback, share new internship options, and to think strategically about the MSA program. A sufficient block of time to address course content, overlap, scaffolding, skills training, new courses, student	The program strongly agrees with the need for regular communication on the program curriculum.	This will be achieved in two ways. The Department of Geography and Environmental Studies, which hosts the MSA program, will incorporate MSA curriculum discussions into its annual retreat. Second, curriculum discussions can be set as a regular agenda item in Graduate Program Council meetings held once per term. This will provide an opportunity for course and program discussion throughout the academic year among faculty, staff and graduate student representatives.	**Timeline**: Initiate in Winter 2026; ongoing **Responsibility for a) leading initiative:** Graduate Program Director/Council Chair **b) approving recommendation, providing resources, and overall monitoring:** Department Chair; MSA Executive Committee.	The Dean fully supports this recommendation. Curriculum retreats, when held on a recurring basis, provide a valuable opportunity to review scaffolding, reduce overlap, and strengthen program alignment. Again, as part of renewal, it will be important to ensure all faculty, especially new members, are familiar with TMU's curriculum structure, enrollment figures, and program offerings to strengthen buy-in and support.	YSGPS supports the program's initiative to engage faculty through regular meetings, as part of Department-level meetings and through Graduate Program Councils. The Graduate Program Council is an important group to engage, given it includes graduate student representatives, and can ensure student voices are present in curricular discussions.

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	concerns, infrastructure, EDI, employers, industry trends, external relationships, alumni, and other issues would help faculty identify priorities, solutions, and make decisions. This retreat could be aligned with Departmental, Graduate Program Council, Alumni, and other subcommittee meetings to incorporate input from students, alumni, and other affiliated groups.					
Recommendation 3: Equalize MRP Supervision	Develop a process to match students and supervisors to distribute MRP supervision among MSA faculty in a more equitable manner.	The program agrees that there could be greater equity in distribution of supervision within the MSA program and will pursue several opportunities to improve the matching process for students and supervisors as described below. However, program faculty often supervise across a number of graduate programs at TMU so ensuring balance may be difficult.	Several processes will be developed and improved to facilitate greater equity in MRP supervision. First and foremost, this will require the GPD to track supervision and provide regular updates to program members and potentially engage directly with faculty members to encourage supervision. The GPD should also ensure that faculty members with multiple students have the capacity to supervise their MRPs effectively, and that a limit of three MRP supervisions per cohort is	**Timeline**: Initiate in Winter 2026; ongoing **Responsibility for** **a) leading initiative:** Graduate Program Director/Council Chair **b) approving recommendation, providing resources, and overall monitoring:** Department Chair; MSA Executive Committee;	The Dean agrees with the recommendation to promote greater equity in MRP supervision. We also suggest holding earlier discussions about supervision and the incoming student cohort at the Graduate Program Council once acceptances are confirmed.	YSGPS recognizes the vital role that supervisors play in the success of graduate students, while acknowledging that effective supervision requires sufficient time and attention. We commend the program for taking steps to ensure equity in graduate student supervision. YSGPS also recognizes that faculty from the Department of Geography and Environmental Studies are active in a variety of graduate programs, including various interdisciplinary programs (Environmental Science and Management; Immigration and Settlement

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			only exceeded in exceptional circumstances. In these cases, the GPD can meet with MSA students to help guide them to appropriate supervisors. Additional actions to match students and supervisors include improving the departmental website to highlight ongoing research and student opportunities; facilitate stronger participation by faculty at the MSA orientation to meet the incoming cohort and share supervision/research opportunities; hosting events in the early and late fall to further connect students and faculty, and; leverage Research Assistantships to match students with faculty through research (particularly early-career faculty). Combined with GPD oversight, these efforts will help connect MSA students and faculty and equalize MRP supervision.			Studies; Urban Health; Policy Studies). As a result, monitoring graduate student supervision loads can be very challenging. We support the proposed actions to ensure supervisory loads are more evenly distributed, and to ensure students are matched with the most appropriate supervisors. YSGPS provides resources and support to graduate supervisors and has recently initiated a series of graduate supervisor workshops. Faculty are encouraged to make use of these resources.

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Recommendation 4: Faculty Complement	The program, upon reflection, identify critical areas where program teaching needs are at risk due to the recent loss of faculty complement. Having more than one individual able to teach any given course provides necessary redundancy to ensure curricular continuity during sabbatical cycles, leaves, and other possible disruptions. Any identified hires should also target equity-deserving groups.	The MSA program and the Department of Geography and Environmental Studies have lost five faculty members in recent years, only two of which have been replaced, which has impacted supervision and teaching capacity. A new hire would help fill gaps in expertise that have been lost or are needed to better align with the updated curriculum. Focus on geospatial skills will also improve the overall teaching, supervision, and research capacity of the program, in addition to improving the teaching capacity of the Geographic Analysis and Environment and Urban Sustainability undergraduate programs. The program also agrees with targeting equity-deserving groups.	Develop a strategic hiring plan that integrates and balances future needs of the MSA program as well as the Department undergraduate programs.	**Timeline**: Spring/Summer 2026 **Responsibility for** **a) leading initiative:** Department Chair **b) approving recommendation, providing resources, and overall monitoring:** Faculty Dean, GPD, DHC	In general, the Provost, in consultation with the University Planning Office (UPO), determines whether and how many hires are allocated to Faculties, a process that is closely tied to undergraduate enrolment. Should the program receive approval for a hire, the Dean's Office will be supportive of recruitment efforts that prioritize candidates from equity-deserving groups and ensure alignment with the curricular needs of the MSA program.	Faculty hiring decisions related to the Faculty of Arts are outside the purview of YSGPS. However, it supports the program's work to develop a strategic hiring plan that will ensure hiring requests reflect the needs of graduate and undergraduate programs within the department. Alongside this initiative, YSGPS encourages the program to consider extending program affiliation to faculty members outside the department. There are faculty members with expertise in geospatial analysis in other programs and faculties who may be interested in working with MSA graduate students. YSGPS recommends that the program establish a Program Membership Committee as well as membership criteria to facilitate this process.
Recommendation 5: Administrative Support	Additional staff support could help address many of the administrative issues raised in the Self-Study Report and our site visit meetings. Additional	This PRT recommendation aligns with program recommendations 4.1, 4.2, and 6. The program agrees that there is a need for	Solutions include more effective utilization of existing administrative support (e.g., relocating Graduate Program Administrator to the	**Timeline**: Initiate in Winter 2026; ongoing **Responsibility for** **a) leading initiative:**	The Dean supports the department's proposed actions. We encourage the program to explore the development of a formal co-op option, fully administered	YSGPS supports the multi-pronged approach to managing the challenges it is facing. It will be important for the program to prioritize these various initiatives, and to develop a

PRT Recommendations	PRT Rationale	Program Response	Proposed Program Action	Program Timeline and Responsibility/Lead	Faculty of Arts Dean Response	YSGPS Response
	administrative support could help with targeted student recruitment, liaising with alumni, developing program materials that clarify timelines and expectations, organizing orientation and engagement events (e.g., Poster Day), and particularly to help with the gargantuan task of facilitating student internships. This latter task could include outreach, formalization of relationships, handling logistics, and implementing exit interviews/surveys that could lead to continued improvement of this flagship component of the program.	greater administrative support and capacity. The PRT report specifically notes that coordination of the MSA internship is a significant undertaking that demands additional resources. This reflects information in the self-study and recognition by the program that there are opportunities for improvement in the process of matching students with hosts as well as following up on internship activities. Coordination of the internship is resourced as a course assignment for a faculty member, which has been a manageable framework in the past, but the program recognizes the need for a better framework to share information and set timelines with students.	Department), exploring opportunities for additional support as part of the Faculty of Arts administrative reorganization, and leveraging Department service activities. For example, the MSA Executive Committee can play a more central role in organizing events such as the poster day and orientation. This will include more information about the internship at the orientation, a follow-up meeting in the fall semester to lay out expectations and timelines, and the creation of a D2L page to provide resources and information. Clear communication with hosts on expectations for professional development during the internship and opportunities for feedback from both hosts and students are additional actions to address this recommendation.	Graduate Program Director/Council Chair **b) approving recommendation, providing resources, and overall monitoring:** Department Chair; MSA Executive Committee; Program Council; Associate Dean of Arts (Research and Graduate Studies); Dean of Arts	by the Career and Co-op Office in collaboration with the department, which would provide students with paid work experience. In addition, the program could consider hiring a Career Boost student to assist with surveys, alumni engagement, and promotional activities. These approaches would help address the administrative workload while strengthening student and alumni connections.	strategic plan to ensure these actions are implemented and assessed in terms of their impact. With respect to the internship program, YSGPS strongly endorses the Faculty of Arts' suggestion to explore the development of a formal co-op option, ensuring students are offered paid, program-relevant work experience. Such a change would require a major modification to the program, and YSGPS is happy to support this process.

PRT Recommendations	PRT Rationale	Program Response	Proposed Program Action	Program Timeline and Responsibility/Lead	Faculty of Arts Dean Response	YSGPS Response
Recommendation 6: Physical Infrastructure	While computer lab upgrades were seemingly in the works, we emphasize that this boutique program is both professional and highly technical, which benefits tremendously from modern and current technology. Not only does this make the transition into workplaces smoother post-graduation, but it brings internships into alignment with training facilities and serves to attract the next cohort of students.	The PRT recommendation aligns with program recommendations 3.1 and 3.2 from the self-study. The program agrees with the assessment of the reviewers that there is a need to refurbish the physical space and technological infrastructure. Improving the lab and learning space will give a more professional appearance and will provide pedagogical benefits.	Specific improvements already initiated or planned include: Renovation of the MSA computer lab (JOR602) – to improve the quality of workstations (i.e., dual monitors/larger monitors) and create better working, meeting, and collaborative space. This would include the installation of new desks, meeting table, audio-visual equipment and conference equipment. Renovation of the MSA teaching lab (POD348). Switching to a server-based model, allowing students to access a 'virtual desktop' with adequate processing capabilities. Providing guidance to students – upon offer of admission – on hardware for personal computers to ensure that they have the capability to complete all GIS/spatial analysis locally.	**Timeline**: Fall 2025 to Fall 2027 **Responsibility for** **a) leading initiative:** Department Chair **b) approving recommendation, providing resources, and overall monitoring**: Department IT Committee; Dean of Arts	This will require significant investment, but it is both necessary and a priority. The Dean's Office will contribute financially to support the department, with the expectation that the department will also allocate resources toward the total cost.	YSGPS commends the program and the Dean of Arts' office for working collaboratively to ensure the program's technical infrastructure needs are properly resourced.
Summary Recommendations						
The acceptance letter to the students should clearly state	No specific rationale provided.	The program agrees with this admission recommendation as it aligns	Revise offer of admission letter template and content.	**Timeline**: Spring/Summer/Fall 2026	The Dean supports these proposed actions and agrees that revising the admission	YSGPS believes it is important to clearly communicate program streams and technical

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whether they are admitted to the MRP or Thesis program. ***Related program recommendations:*** *Revise program admission and streaming procedures*		with the self study. This will facilitate entry to the thesis stream earlier and provide clarity to all students on the expectations of the respective streams such as funding opportunities, completion timelines and requirements. However, some students will ultimately decide to transfer from the MRP to the thesis option or vice versa after matriculation, so we will additionally communicate this opportunity more effectively. More generally, the program has in recent years observed a change in academic preparedness as fewer incoming students have a background in spatial analysis and GIS. Simultaneously, industry and employer demand from graduates have evolved with new technologies, and research activities by Department faculty members have intensified and created more opportunities for graduate	Upon admission, provide guidance to students on recommended hardware for personal computers to ensure that they have the capability to complete necessary GIS spatial analysis computations. Add basic competency in GIS and statistics as admission requirement; alternatively require completion of Chang CE GIS course or 'GIS/statistics camp' ahead of Fall term.	**Responsibility for a) leading initiative:** Graduate Program Director **b) approving recommendation, providing resources, and overall monitoring**: MSA Executive Committee, Program Council	letter, providing clear hardware guidance, and setting baseline competencies in GIS and statistics will strengthen student preparation and success.	requirements to students. We encourage the program to work closely with their Admissions Officer to ensure proper communication to students at all stages of the recruitment and admissions process. As the program moves forward with changes to admissions requirements, they are encouraged to consult with YSGPS to ensure all changes are implemented in accordance with Policy 127. The program is also advised to be mindful of the timeline for any changes to admissions requirements, as these modifications must be approved in advance of the start of the admissions cycle.

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		students to complete thesis projects.				
The Thesis students should be the ones with a funding package.	No specific rationale provided.	We will explore the feasibility of providing greater funding for thesis stream students through entrance scholarships, research assistant and academic assistant positions. As such, the program also recognizes this PRT recommendation as an opportunity to stream students more effectively during the application and admission process.	Allocate guaranteed funding to Thesis stream students to increase thesis stream interest and add details on MRP versus Thesis stream program requirements and funding opportunities in the admission letter.	**Timeline**: Fall 2026 **Responsibility for a) leading initiative:** Graduate Program Director **b) approving recommendation, providing resources, and overall monitoring:** MSA Executive Committee, Program Council	The Dean supports these actions and notes that the additional program funding provided by the Dean's Office may be allocated at the department's discretion, including to support the Thesis stream, to best advance implementation.	YSGPS agrees that student funding should be distributed strategically, ensuring sufficient financial support for thesis students. The program may also consider how they might "guarantee" academic assistant work to thesis students, thus increasing the financial incentive to pursue this stream. Once these initiatives are established, the program is encouraged to work with the Admissions Officer to ensure this information is clearly communicated with students during the recruitment and admissions process.
Reducing the number of courses for Thesis students. ***Related program recommendations:*** *Improve Major Research Paper stream guidance, progression and supervision*	No specific rationale provided.	Although it was not specifically noted in the PRT report, the program identified and the PRT visit highlighted the need to define and differentiate expectations for Major Research Project reports and theses. This includes a review of the scope and process for MRP versus thesis completion (i.e., defense and course	Clarify differences in course requirements; potentially reduce the number of courses for Thesis students. Review/revise scope and process for MRP vs Thesis completion (i.e., defense requirements; general requirement). Add clarification on differences in MRP and	**Timeline**: Fall 2027 **Responsibility for a) leading initiative:** Graduate Program Director; MSA Executive Committee **b) approving recommendation, providing resources, and overall monitoring:** MSA Executive Committee; Program Council; Dean of Arts; YSGPS	The Dean supports these actions and agrees that clarifying the differences in course requirements, reviewing the scope and process for MRP versus Thesis completion, and updating program materials (website and D2L) will provide greater transparency and guidance for students.	YSGPS supports this recommendation. We encourage the program to consider the thesis expectations and requirements in the context of the overall program-level learning objectives. This work should be undertaken as part of the broader curricular review (Recommendations 1 and 2). As the program moves forward with changes to course

PRT Recommendations	PRT Rationale	Program Response	Proposed Program Action	Program Timeline and Responsibility/Lead	Faculty of Arts Dean Response	YSGPS Response
		requirements; program timelines) and developing guidelines that reflect this, along with evaluating and updating the curriculum structure for MRP and thesis streams. Thesis students are currently not required to complete the internship, but the process and guidelines for this determination needs review, along with potential differences in course requirements.	Thesis course requirements on program and Department websites, and D2L shared shell.	Council		requirements, they are encouraged to consult with YSGPS to ensure all changes are implemented in accordance with Policy 127.
Clarity on what the Poster Day is about ***Related program recommendations:*** *Improve Major Research Paper stream guidance, progression and supervision*	We see opportunities for improvements here, to run it as a poster hall at a conference with larger posters. Integrate the public, alumni, employers, and other faculty and students to liven the event while providing real-world experiences.	The program recognizes opportunities for improvement in communication, processes and milestones to ensure timely progress towards the completion of the MRP within the 12-month program.	Pilot a revised format of the 'Poster Day' to use presentations for proposal milestone in May, instead of using small-format posters, and replace MRP defence presentation with a poster format mini conference to present final results in late August or early September	The Dean supports piloting a revised format of 'Poster Day,' with proposal milestone presentations in May and a poster-style mini-conference in late summer for MRP final results. The Dean's Office will assist with communications and promotion through Faculty channels.	**Timeline**: Fall 2027 **Responsibility for** **a) leading initiative:** Graduate Program Director; MSA Executive Committee **b) approving recommendation, providing resources, and overall monitoring:** MSA Executive Committee; Program Council; Dean of Arts; YSGPS Council	YSGPS supports this recommendation, as it will provide a pathway towards the timely completion of program milestones.