

UTQAP Cyclical Review: Final Assessment Report and Implementation Plan

1 Review Summary

Program(s) Reviewed:	Master of Science in Sustainability Management
Unit Offering Program(s):	Institute for Management & Innovation (Program Only Review)
Commissioning Officer:	Vice-Principal Academic & Dean, University of Toronto Mississauga
Reviewers (Name, Affiliation):	<ul style="list-style-type: none">• Prof. Michelle Adams, Director, School for Resource and Environmental Studies, Dalhousie University• Prof. Steven Cohen, Senior Vice-Dean, School of Professional Studies, Columbia University• Prof. Niels Strange, Dept of Food and Resource Economics, University of Copenhagen
Date of Review Visit:	September 22 – 23, 2022
Review Report Received by VPAP:	February 9, 2023
Administrative Response(s) Received by VPAP:	March 11, 2024
Date Reported to AP&P:	April 10, 2024

Previous UTQAP Review: n/a

Current Review: Documentation and Consultation

Documentation Provided to Reviewers

Terms of reference; Self Study and Appendices; Previous Review Report and Administrative Responses; University of Toronto Graduate Degree Level Expectations (DLEs); UofT Facts & Figures, 2021; UTM Divisional Academic Plan, 2017; UTM Vision Statement, 2017; School of Graduate Studies Academic Calendar 2021-22 (Institute for Management and Innovation excerpt); School of Graduate Studies Admissions Guide, 2021-22; Tri-Campus Framework (Framework for a New Structure of Academic Administration for the Three Campuses); Access to all course descriptions; Access to the curricula vitae of faculty.

Consultation Process

As determined by the Commissioning Officer, the reviewers met with:

- The Interim Vice-Principal, Academic and Dean, Vice-Dean Teaching & Learning, and the Vice-Dean Graduate & Postdoctoral Affairs
- Associate Director, Institute for Management and Innovation
- Director, MScSM Program and MScSM Staff
- Current MScSM Students (Class 2023, 2024)
- MScSM Alumni
- MScSM Employers and Sustainability Professionals
- MScSM faculty members
- Department Chairs of cognate units at UTM (Department of Geography, Geomatics and Environment; Department of Management)

Current Review: Findings and Recommendations

1. Undergraduate Program(s) n/a

2. Graduate Program(s)

The reviewers observed the following **strengths**:

- Overall quality
 - ▶ “This is an excellent program, which is highly praised by students, faculty and the professional practitioners.”
 - ▶ Reviewers observed a very positive spirit and praised the uniqueness of the program

- Objectives
 - ▶ Consistent with the University’s mission and strongly aligned with the department’s objective to produce mission-focused leaders within the sustainability field
 - ▶ The MScSM is highlighted as “flagship education in the IMI Strategic Plan”
- Admissions requirements
 - ▶ Program has very well-developed admission plan with an established admissions criteria and process for selecting students
 - ▶ Has successfully expanded its number of applicants since 2014, and current class sizes suggest an increase in quality of students
- Curriculum and program delivery
 - ▶ Program management is excellent; responsive to requests for revising curriculum
 - ▶ Program and learning outcomes are appropriate and align with graduate degree level expectations
 - ▶ Curriculum reflects the current state of the sustainability science and management field
 - ▶ Strong delivery of curriculum with a well-developed program structure
 - ▶ Instructors use a diverse set of teaching methods such as in-person lectures, group projects and presentations, podcasts/interviews with subject experts
 - ▶ Program length is appropriate, as demonstrated by the impressive completion and employment rate of its graduates
 - ▶ The MScSM addresses all UN sustainability development goals (SDGS) and explicitly monitors which are addressed in each individual course
 - ▶ Reviewers complimented the program for its response to COVID 19 and its ability to adapt from in-person to online
- Innovation
 - ▶ Novel course delivery with boot camps, work-integrated learning opportunities, and a well-developed internship learning model
 - ▶ The structure of the program offers variation in learning methods and a strong link to the “world of work”
- Assessment of learning
 - ▶ Wide variety of assessment methods ranging from traditional assignments to more group-based
- Student engagement, experience and program support services
 - ▶ Strong supports from program staff, with students praising the help and support received during their studies
 - ▶ “The Capstone projects, the Internship, guest lectures from world of work, etc. connects this Program strongly to learning beyond the classroom”
- Quality indicators – graduate students
 - ▶ Students are “excellent and mission driven”
 - ▶ Impressive graduation results with hardly any drop-outs; almost all students enrolled graduate after two years
 - ▶ Diverse academic background of students makes the program stimulating

- Quality indicators – alumni
 - ▶ Reviewers remarked that there is a large need for graduates within this field, demonstrated by the impressive employability rates of recent graduates
- Quality indicators – faculty
 - ▶ “High faculty commitment to student mentoring”
 - ▶ Faculty are of high quality and research-oriented
 - ▶ Impressive student assessments of individual courses with almost all courses receiving an average score above 4 (1-5 scale)
- Student funding
 - ▶ Awards and institutional financial supports are available, and the majority of students find availability of student funding manageable

The reviewers identified the following **areas of concern**:

- Objectives
 - ▶ Program relies on collaboration and resources from other departments which poses a challenge to long-term sustainability. “This is currently causing teaching overload and apparent lack of commitment to the program on the part of some of the implicated Chairs.”
- Admissions requirements
 - ▶ Lack of adequate numerical preparation results in difficulties in some course modules
 - ▶ Resource limitations may restrict the program from expanding
- Curriculum and program delivery
 - ▶ Opportunities for research experience seems less developed. Reviewers saw no evidence of students participating in faculty or research institute led funded projects
 - ▶ “It is a concern if the current research training is sufficient to qualify the students for PhD studies”
 - ▶ Faculty supervising research papers noted a need for improved writing skills
- Assessment of learning
 - ▶ Some instructors expressed difficulty in assessing what students have actually learned
- Student engagement, experience and program support services
 - ▶ It is unclear how course evaluations are being utilized, how broadly they are shared, what the feedback process is in cases where something needs to be addressed or corrected
- Quality indicators – graduate students
 - ▶ Some internship hosts express a desire for improved writing skills and a higher level of self-confidence
- Student funding
 - ▶ Reviewers raised concerns that marginalised students may be challenged from lack of financial support. “The UTAPS (University of Toronto Advance Planning for Students) financial support is mentioned as being reduced after the decentralisation.”
 - ▶ 47% of students indicated the Provincial student loan is not enough to cover costs

The reviewers made the following **recommendations**:

- Admissions requirements
 - ▶ Consider scanning for numerical skills as part of the admissions process and expanding the existing math and statistics Boot Camp or insisting students undertake additional self-study in advance of arrival
- Curriculum and program delivery
 - ▶ Ensure consistent updates to course literature to reflect rapid movement in the field of sustainability
 - ▶ Minimize overlap between courses by having instructors present their curriculum and syllabus to each other at MScSM retreats or by establishing a program-level curriculum committee
 - ▶ Examine if the program has the flexibility to exempt students from content previously covered prior to entering the program, offering alternative learning in its place
 - ▶ Reviewers observe that the MScSM capstone, research paper, and studies abroad seem clustered timewise and recommend assessing if the structure should be revised to minimise time overlap
 - ▶ Consider if it would be beneficial to establish separate research-oriented and professional tracks in Year 2 of the program, and if the current role of professional practitioners should be expanded through course delivery
 - ▶ Contemplate adding a learning portfolio which students would complete along with their studies for self-reflections on learning processes and outcomes, including personal and professional development
 - ▶ External partners encourage instructing students on business writing rather than academic writing, as well as ensuring students learn key business skills such as ESG accounting, TCFD, cost-benefit analysis
 - ▶ Address need for improved writing skills by incorporating related training in the first year of the program
 - ▶ “Consider teaching students about the diversity of how sustainability is defined and practiced in different businesses, organizations and institutions.”
 - ▶ Assess if more supports could be allocated for TA training, particularly for courses using big data or mobility networks
 - ▶ Reviewers suggest separate evaluations of TA performance “to monitor quality of TAs”
- Innovation
 - ▶ Continue to encourage and develop students to be agents of change. “Change agents should have the understanding of the public-private nexus, and that change/transformation in the private sector will need change/transformation in the public sector.”
- Student engagement, experience and program support services
 - ▶ “Specific online modules, training, MOOCs, etc... could be recommended in advance of arrival rather than leaving the course or material selection to the students.”
 - ▶ Encourage students to make use of existing campus resources, such as the Robert Gillespie Academic Skills Centre, to improve writing skills

3. Faculty/Research

The reviewers observed the following **strengths**:

- Overall quality
 - ▶ Faculty in the program “are excellent and significant contributors within their respective research fields”
- Faculty
 - ▶ The program has developed a core group of faculty with excellent academic records. It is further supplemented by “excellent faculty from other universities and sustainability professionals/experts from other sectors (private and public).”

The reviewers identified the following **areas of concern**:

- Faculty
 - ▶ The MScSM draws on faculty without IMI appointment, or who have split appointments in other departments, increasing risk of teaching overload

The reviewers made the following **recommendations**:

- Research
 - ▶ “Sustainability research is inherently multi-disciplinary and the faculty do not appear to have a research unit to support interaction. One should be established.”
- Faculty
 - ▶ Consider requesting more core faculty to support the objectives of the MScSM without faculty overload. “Joint appointments are more unclear in terms of management of responsibility and coordination of other activities.”

4. Administration

Note: Issues that are addressed through specific University processes and therefore considered out of scope for UTQAP reviews (e.g., individual Human Resources issues, specific health and safety concerns) are routed to proper University offices to be addressed, and are therefore not included in the Review Summary component of the Final Assessment Report and Implementation Plan.

The reviewers observed the following **strengths**:

- Relationships
 - ▶ Reviewers observed morale amongst faculty, staff, and students as excellent and impressive.
 - ▶ Program staffing and supports are excellent. “The dedication of the staff is noteworthy.”
 - ▶ Collaborative working arrangements with other departments and centres
 - ▶ Relationships with European universities in Lund, Geneva, Utrecht and Copenhagen is a strength

- Organizational and financial structure
 - ▶ “Strong organization and financial structure”
- Long-range planning and overall assessment
 - ▶ Program is “well managed and well lead and includes a highly capable core faculty.”

The reviewers identified the following **areas of concern**:

- Relationships
 - ▶ Reviewers remarked that the program does not appear to conduct significant outreach or promotion. “We saw no evidence of the program sponsoring conferences or events on current events or academic research.”
- Organizational and financial structure
 - ▶ There is a need for more formal collaboration between departments
 - ▶ “The current financial model appears to be more relying on cost-based financing of educations and the significance of benefit sharing is less clear.”
 - ▶ The program lacks classroom space, which limits the possibility of expanding student numbers
- Long-range planning and overall assessment
 - ▶ There appears to be an absence of a long-term plan for staffing and resourcing/finances
 - ▶ The MScSM presents itself as a terminal degree. While IMI would like to establish a PhD program, it is not clear that the MScSM “intends to create research focused graduates that are prepared for the doctoral experience.”
- International comparators
 - ▶ “The program is more academic and less practice oriented than similar programs in the United States at the Bren School, UC Santa Barbara at Bard College, the New School, Harvard, American University and Columbia University.”

The reviewers made the following **recommendations**:

- Relationships
 - ▶ IMI should “ensure consultation with other institutions at UTM, which teach similar courses and educations to minimise the risk of conflicting interests”
 - ▶ Reviewers suggest increasing student space for the program to stimulate cohesion and an overall sense of identity
- Organizational and financial structure
 - ▶ IMI’s recent restructuring to an EDU:A should “strengthen its hand in negotiating co-appointments, but there should be a conscious decision to avoid basing specific courses and content on the input of specific individuals.”
 - ▶ The incentive structure for developing education should be aligned with the objective of increasing student enrolment
 - ▶ Reviewers encourage conducting a review of existing space allocations and introducing more flexibility and cycling of classrooms to ensure a fair distribution of space

- Long-range planning and overall assessment
 - ▶ If there is a desire to establish a PhD program in Sustainability Management, the existing program may need to address the trade-offs between the academic and professional tone of the Program
 - ▶ “There is a need for developing a business plan including the financing of PhD students. Moreover, a clear ‘pipeline’ from the MScSM to the PhD would need to be demonstrated”
 - ▶ Consider increasing financial incentives for benefit sharing from University to department level and between departments
 - ▶ Develop long-term agreements with co-appointing departments “to ensure faculty stability and quality”
 - ▶ Long-term agreements should also include increased financial resources and involvement to support program expansion. “The sense of co-ownership across departments and their faculty appears crucial to continue the positive spirit around the Program”
- International comparators
 - ▶ “The program needs to either have two tracks (academic and practitioner) – particularly in the second year, or be more definitive in what is it they are trying to accomplish – Preparing graduates for careers in this space or grooming sustainability scholars and researchers”



2 Administrative Response & Implementation Plan

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UNIVERSITY OF
TORONTO
MISSISSAUGA

Vice-Principal Academic and Dean

March 7, 2024

Professor Susan McCahan
Vice-Provost, Academic Programs
Office of the Vice-President and Provost
University of Toronto

Re: Request for Administrative Response – External Review of the Master of Science in Sustainability Management (MScSM), University of Toronto Mississauga

Dear Susan,

Thank you for your letter of November 22, 2023 to request the decanal administrative response to the review of the Master of Science in Sustainability Management (MScSM), which was held on September 22-23, 2023. I thank the review team (Professor Michelle Adams, Dalhousie University, Professor Steven Cohen, Columbia University, and Professor Niels Strange, University of Copenhagen, Denmark) for meeting with faculty, students and staff in the program, and for their thorough report.

Overall, the reviewers found the program to be of excellent quality and “highly praised by students, faculty and the professional practitioners”. I appreciate their assessment that the program has a “very positive” spirit, with collegial and knowledgeable faculty, that fosters lifelong relationships between students and graduates. In their recommendations for the program, the reviewers focus on potential future directions for the program and its curriculum, planning in collaboration with cognate units, numerical skills, supports for TA training, and classroom space.

In the enclosed table you will find a summary of responses to specific recommendations of the reviewers, which outlines the program and decanal responses as well as an implementation plan identifying specific actions and timelines. This response was developed in consultation with the Program Director and Director of the Institute for Management and Innovation (IMI), and in consultation with IMI faculty and staff during a Town Hall held on February 14, 2024. Progress checks and monitoring of the implementation plan will occur through the Director’s Annual Report to the Dean.

I note that the response to this review was considered alongside the response to the review of the Master of Management and Innovation (MMI), which was held in 2022. In discussions related to the reviews of both the MScSM and MMI, it became evident that future reviews of programs offered by IMI would benefit from reviewers understanding the context of the unit and all its programs, rather than assessing programs on an individual basis. We will plan to hold a review of IMI and its programs in Summer 2025, rather than review programs individually between 2024-2027 as previously scheduled. This will enable us to receive a fulsome set of recommendations about the direction of the unit and its programs.

The next external review of the MScSM will then take place in **Summer 2025**, alongside a review of the Institute for Management and Innovation and its programs. The timing of this review will serve as a progress check on the short-term recommendations stemming from the current review.

Sincerely,



Nicholas Rule
Vice-Principal, Academic & Dean

Encl: 2023-2024 UTQAP Review of the Master of Science in Sustainability Management, University of Toronto Mississauga - Review Recommendations (table)

CC: Shauna Brail, Director, Institute for Management and Innovation, University of Toronto Mississauga
Daniella Mallinick, Assistant Dean, University of Toronto Mississauga
Martha Harris, Manager, Academic Programs, Reviews & Quality Assurance, University of Toronto Mississauga

2022-23 DRAFT UTQAP Review of UTM Master of Science in Sustainability Management (MScSM) - Review Recommendations

Request Prompt <i>verbatim from the request</i>	Rec. #	Recommendations from Review Report <i>verbatim from the review report</i>	Program Response	Dean's Response	Implementation Plan
<p>The reviewers broadly observed a lack of clarity around the MScSM's identity and objectives. They strongly urged the program to set clear intentions regarding the vision and mission of the MScSM, and to "be more definitive in what is it they are trying to accomplish", before determining any future directions, for example the potential development of tracks within the MScSM, or the possible development of a doctoral program.</p>	1	<p>"The program needs to either have two tracks (academic and practitioner) – particularly in the second year, or be more definitive in what is it they are trying to accomplish – Preparing graduates for careers in this space, or grooming sustainability scholars and researchers" (p.19)</p>	<p>After reviewing this, the program finds the suggestion of two tracks is not practical and does not reflect the mission of the program which relies on research to prepare students to be professionals in the field of sustainability.</p> <p>As defined, MScSM is a course-based professional program in which students complete 18 half courses (13 required and 5 elective) over 20 months. All alumni are working professionally in various industries and sectors, except for a small number who have gone on to PhD studies (one of whom still works in industry). The required courses include a research paper course (1 FCE) which trains students in applied research skills and enables them to become subject matter experts in a sustainability topic, which employers appreciate and value in the hiring process. Therefore, the research paper is a core element of students' professional training. As well, creating an academic track may result in a longer program that would be in competition with the new Master of Environment and Sustainability at the School of Environment.</p>	<p>A full review of IMI and all its programs will take place in Summer 2025. OVPAD anticipates this review will provide guidance on the mandate of IMI as a unit and the vision and values of its programs, and that this will bring more clarity about the relationship and opportunities within the many Master's programs offered by IMI.</p> <p>If IMI chooses to pursue a professional doctoral program after consultations, this can be pursued through the annual decanal call for Expression of Interest (EOI) for new programs and major modifications.</p>	<p>Medium-term: The program will organize consultations with external stakeholders (surveys and one meeting) and hold a faculty retreat.</p> <p>Lead – Director, MScSM</p>
	2	<p>"If there is a wish to establish a PhD program on Sustainability Management, the current Program may need to address the trade-offs between the academic and professional tone of the Program." (p.3)</p>	<p>The program will consider this in consultation with internal and external stakeholders. We note that such a Ph.D. program, would be independent of the MScSM program with an independent recruitment process. The MScSM program remains committed as a professional program. However, graduates of the MScSM program are eligible to apply to any</p>		

	3	<p>“Faculty express a need for a PhD program which reflects the transdisciplinarity of sustainability studies... There is a need for developing a business plan including the financing of PhD students. Moreover, a clear “pipeline” from the MScSM to the PhD would need to be demonstrated. Currently it isn’t clear that the MScSM intends to create research focused graduates that are prepared for the doctoral experience. Rather [it] presents as a terminal degree that creates professionals. A clear intention needs to be established regarding what the MScSM intends to be.” (p.12)</p>	<p>Ph.D. program, as demonstrated by our alumni who have pursued this track after graduation.</p> <p>The program will work with IMI to determine whether to pursue Ph.D. program and engage in consultation with faculty and external stakeholders as a first step.</p>		
	4	<p>“Consider teaching students about the diversity of how sustainability is defined and practiced in different businesses, organisations and institutions.” (p.13)</p>	<p>The current curriculum and experiential learning in the program cover a wide range of perspectives of sustainability. This includes environmental, economic, social, aboriginal, cultural, scientific, and spiritual perspectives as well as perspectives of different types of organizations including corporations, governments, non-government organizations, academic institutions, social enterprises, and consultants. Diverse academic perspectives are provided by professors in different classes and throughout the curriculum while organizational perspectives are provided by guest speakers from external organizations and industry either embedded in courses or in professional development lectures. The success of this approach is demonstrated through the diverse range of industries, sectors and areas in which our alumni are successfully employed after graduation. This will continue to be assessed through faculty discussions.</p>	<p>The OVPAD supports the program’s understanding of their curriculum. The Programs and Curriculum Unit (PCU) is available to guide the program through curriculum changes in this area if needed.</p>	<p>Ongoing, through faculty discussions.</p>

	5	“We salute the strategic goal of expanding the program ...Further, we recommend to accompany the expansion with increased financial resources and involvement and long-term agreement with departments and faculty involved in the Program.” (p.4)	Expansion of the program is a possibility. However, it will require wider discussions with interested parties at many levels, including the program partners and alumni, related academic units at U of T, faculty members, campus leadership, and more. The program will engage in consultations as mentioned in points #1-3.	A range of external, institutional and Divisional factors constrain the possibility of program expansion. If conversations among interested parties indicate that program expansion would be academically advisable, then the OVPAD can work with Divisional and institutional offices to determine whether expansion is feasible.	
	6	“The incentive structure for developing education should be aligned with the ambition of increasing student numbers.” (p.11)	The program will continue to hold discussions about financial and other needs (faculty and staff members, and physical space etc.) with the OVPAD, after wider consultation.		
The reviewers observed that the program relies significantly on collaboration and resources from other units, raising concerns about its long-term sustainability. They highlighted the importance of establishing formal agreements with contributing units, in particular the UTM Department of Management. They also recommended that any future planning related to the MScSM should be done in consultation with cognate units, (especially the UTM Department of Management), to minimize the risk of overlap and/or competing interests.	7	“There is a need to establish more formal agreements between departments. It was discussed e.g., whether or not there is a formal agreement between IMI and Department of Management. Formal agreements should increase the possibilities for long-term stability with planning, development and implementation.” (p.14)	In June 2023, IMI has signed formal agreements for a term of 7 years with the Department of Management and the Department of Geography, Geomatics, and Environment (GGE).	The OVPAD is pleased that these agreements are in place and will continue to support the unit in its collaborations with other Departments at UTM.	Implemented in June 2023
	8	“The Institute for Management & Innovation’s (IMI) recent restructuring to an Extra-Departmental Unit, category A (EDU:A) should strengthen its hand in negotiating co-appointments, but there should be a conscious decision to avoid basing specific courses and content on the input of specific individuals.” (p.3)	We agree that the required courses in the program should not be designed based on the expertise of individuals. Courses were designed based on needs of the program prior to faculty hiring (either as regular faculty or sessional instructors). Similarly, elective courses offered by the MScSM program were designed by the program, rather than an individual. This will continue to be a priority in curriculum development going forward.	The OVPAD supports the program’s curriculum development process. The Programs and Curriculum Unit (PCU) is available to guide the program through curriculum changes in this area if needed.	Implemented ; the program will continue to assess this during faculty discussions.

	9	“One may consider in the long-term to increase financial incentives for benefit sharing from university level to department level and between departments.” (p.15)	This point is left for decanal consideration.	Discussed in point #5 and 6 above.	Long term: As discussed above, the OVPAD will work within existing arrangements and monitor possible opportunities for additional support to the program.
	10	“IMI should ensure consultation with other institutions at UTM, which teach similar courses and educations to minimise the risk of conflicting interests.” (p.15)	The consultations with other departments, including with the Department of Management, are built into the administration approval process of new courses, programs, certificates, streams, etc. The risk of overlap and/or competing interests is addressed in the approval process of new courses, programs etc. by the UTM Graduate Curriculum Committee and the UTM Academic Affairs Committee.	The OVPAD is aware of these potential issues and complementary interests for studies in different aspects of management. Recommendations on this will be sought in the upcoming review of IMI and its programs.	Medium-term: To be reviewed in 2025 External Review of IMI and its programs.
	11	“Overlap between courses should be minimised. This may practically be resolved at the MScSM retreats where teachers present their curriculum and syllabus to each other and coordinate between them. A program level curriculum committee exists in many course-based Master’s program; the MScSM could benefit.” (p.13)	The courses are discussed in MScSM Faculty meetings organized during Fall and Winter terms. The instructors of two science courses – Ecosystem Science and Environmental Science – and Science component of Boot Camp also discuss course contents among themselves. For the future, the matter will be discussed in the faculty retreat. If agreed, a curriculum committee will be formed.	The OVPAD supports the program’s curriculum development process. The Programs and Curriculum Unit (PCU) is available to guide the program through curriculum changes in this area if needed.	Short-term: MScSM Faculty Retreat as proposed in Item # 1.
	12	“consider asking for more core faculty which can dedicate their time to teaching without overload. Joint appointments are more unclear in terms of management responsibility and coordination of other activities.” (p.14)	We requested one faculty position in 2022-23 which was approved, and later cancelled. We will request again this year.	The unit may request new faculty positions that align with criteria set by the OVPAD complement planning advisory committee. The OVPAD will work with IMI as a whole to determine the longer-term complement plan for IMI and all its programs. The OVPAD will also seek guidance on this issue in	Short-term: The unit may request a faculty position through the complement planning process.

				the upcoming review of IMI and its programs.	
The reviewers recommended considering greater focus on applicant's numerical skills during the MScSM admissions process, to ensure appropriate competency levels. They observed that such competencies might further be supported by expanding the existing math and statistics "Boot Camp" offerings.	13	"To ensure sufficient numerical skills of all students such competences and skills may be further scanned for in the admission process. Could be supplemented by expanding the Boot Camp to include a brush up of math and statistics or insist that [they] should undertake directed self-study in advance of arrival" (p.15)	The program requires for admission, as a minimum, the completion of an undergraduate university credit course in statistics, calculus, or linear algebra. No exceptions are made for this requirement. While the Boot Camp period is prioritized to cover the basics of environmental science and principles of management, the program offers a number of related professional development workshops, such as two advanced Excel workshops. In addition, data analysis and data visualization lectures are organized in two Research Paper courses for all students, and respective research paper supervisors provide necessary data analysis support to the concerned students.	The OVPAD supports the program's curriculum development process. The Programs and Curriculum Unit (PCU) is available to guide the program through curriculum changes in this area if needed.	Annually, Ongoing through Data Analysis and Data Visualization Lectures will be included every year in the Research Paper courses.
	14	"Specific online modules, training, MOOCs, etc...could be recommended in advance of arrival rather than leaving the course or material selection to the students." (p.9)	We agree with this suggestion and will implement it in the current admission cycle.		Action: Make recommendations about relevant online modules to incoming students. Time frame: Ongoing Lead: Director, MScSM
Observing that "sustainability research is inherently multi-disciplinary", the reviewers noted concerns that contributing faculty do not appear to have mechanisms to support interaction. They recommended exploring potential approaches to encouraging and supporting interactions in the area of sustainability scholarship.	15	"Sustainability research is inherently multi-disciplinary and the faculty do not appear to have a research unit to support interaction. One should be established." (pp.17-18)	The program and IMI agree with the reviewers' observation. Growing and expanding research is one of the three current priorities for IMI, and Sustainability is one of the three proposed research hubs within IMI. The exploration of potential approaches to encourage and support interactions in the area of sustainability scholarship, including the provision of seed grants to support scholarship, will be an integral part of discussions and consultations within IMI, other departments and with the Dean.	The OVPAD supports creation of mechanisms for faculty who teach in these programs to have more interaction with research activities at UTM. We acknowledge this and will monitor opportunities for this with in ongoing discussions with the unit. IMI may also request funding from the OVPAD Priorities fund for research based initiatives in the MScSM and other programs, and	Medium term through discussions and consultations within IMI and with other departments and the Dean Time frame: Lead: Director, IMI

				work with the Office of the Vice-Principal, Research and Innovation for potential research funding.	
Observing that some MScSM courses require significant Teaching Assistant preparation, the reviewers recommended considering additional supports for TA training.	16	“Some courses require significant training of the TAs, e.g. courses using big data or mobility networks, and it is resource intensive and demanding for the course teacher/faculty. It should be considered if more support could be allocated for training TAs, e.g. by student mentors who have previously been TAs or taking the course OR in courses where TA training is particularly cumbersome, the inclusion of a permanent lab instructor may be something to consider.” (p.16)	As per the 2021-2023 Collective Agreement between CUPE 3902 Unit 1 and the University of Toronto, first-time Teaching Assistants shall receive 4 hours of paid job training. TAs can request additional training, up to 4 hours, for each subsequent appointment. As of September 1, 2014, all TAs who are asked to lead tutorials are required to receive training that focuses on a particular tutorial category. We are confident that TAs will have the necessary training time within their contracts and will ensure that this is allocated on an annual basis.	TA support is allocated through annual funding. CUPE training is supported in addition to annual TA funding. OVPAD staff are available to assist with this process.	Annually, ongoing: The program will ensure that every TA has received the required training.
The reviewers observed an apparent lack of classroom space, particularly if the MScSM intends to increase enrolments, and recommended conducting a review of existing space allocations.	17	“Current and future challenges in creating classroom space and space for stimulating MScSM identity need to be addressed. It may be considered to include more flexibility and cycling of classrooms.” (pp. 4-5)	IMI has already conducted a review and implemented a new classrooms allocation policy effective September 1, 2023. As per this policy, the classrooms are allocated according to the class size and teaching requirements of the course. IMI is working with Information and Instructional Technology Services as well as Facilities Management & Planning to further improve existing classroom spaces.	A new space allocation process is underway which will include faculty consultation. Facilities Management Planning and the Office of the Dean are working with IMI on this process.	Implemented as of September 1, 2023.
	18	“It may be considered if the classroom allocation could include more flexibility to achieve a better fit between class size and classroom space. The current fixed assignment of classes to a classroom may restrict such flexibility. In the long-term classroom allocation may be implemented at a larger			

		organisational scale to achieve scale efficiency.” (pp. 18-19)			
	19	“There is a need for introducing more MScSM student space to stimulate the social cohesiveness and feeling of identity.” (p.14)	A new room has been allocated and renovated for a Graduate Lounge for exclusive use of IMI students, including MScSM students. The graduate lounge is functional and being used by MScSM students on a regular basis.	A shared grad lounge is also available and recently renovated for all grad students.	Implemented
Other recommendations not prioritized in the Request for Administrative Response	20	“The Capstone, Research Paper, and studies abroad may seem clustered timewise and it needs to be assessed if the structure should be revised to minimise the time overlap.” (p.4)	The timing of these courses will be discussed in the proposed MScSM faculty retreat. The Research Paper and Capstone courses are required, with the Research Paper in the fall term of second year, and the Capstone in the winter term while studies abroad on exchange are optional. The exchange program is intended for those students who can manage the required workload during the fall term. Students also have a flexibility in taking number of elective courses during study abroad.	Initiatives that emerge from the retreat that will require priorities funding will help from OVPAD; we can help.	Medium-term: Discuss the matter in the MScSM faculty retreat proposed for Item # 1.
	21	“External partners express that it may be considered if students should focus on learning business writing rather than academic writing. Further ensure that students learn business skills such as ESG accounting, TCFD (Task Force on Climate-related Financial Disclosures), cost-benefit analysis and similar.” (p.16)	The Program has included professional communications training as part of the professional development series of workshops over the past five years, with a section on business writing. Further Business Writing Workshops will be added to the professional development series on an ongoing basis to further enhance this skill in the students. Business skills related to ESG accounting, ESG reporting, TCFD (Task Force on Climate related Financial Disclosures), TCND (Task Force on Nature related Financial Disclosures), the International Sustainability Standards Board (ISSB) Standards, cost-benefit analysis etc. are all essential parts of MScSM required and elective courses. In addition, these aspects are also covered by guest speakers invited to Professional Development series. No action is required.		Short-term, and ongoing, through expansion of Business Writing Workshops starting in the 2024-2025 session
	22	“It may be considered if students should develop a learning	We agree with this suggestion and it will be discussed in the MScSM faculty retreat proposed for Item # 1.		Medium-term: Both (22 and 23) will be discussed in

		portfolio which they complete along their studies.” (p.15)			the MScSM faculty retreat proposed for Item # 1.
	23	<p>“The external partners and professional world of work encourage the Program to continue developing the students and their understanding of the material to make a change in organisations and function as change agents in the transformation towards a better world. Students should have a mission and they should consciously address this by self-reflection and in discussions with instructors” (p.4)</p>	<p>The program puts a special emphasis on the transformation of students as a human being which requires developing an understanding of their role in the transformation towards a better world for everyone. Most students who come to this program have sustainability-focused value system and a mission to transform communities, organizations and ecosystems toward a more sustainable future. The program strengthens their value systems and missions, and teaches them not to trade-off their value system in the face of pushback and adversity.</p> <p>Further, the students have access to an IMI elective focused on change management and change leadership, which is a popular course, and concepts of organizational change are addressed in other core courses. Further exploration of ways to embed concepts of change will be considered, for instance the exploration of a change management bootcamp immediately after the internship placement, when students have seen first-hand how difficult it can be to implement values-driven sustainability initiatives and strategies in organizations, and are in a position to begin to learn from hands-on experience.</p> <p>The observation is valuable, and we will discuss this in the proposed MScSM faculty retreat.</p>		

3 Committee on Academic Policy & Programs (AP&P) Findings

The spokesperson for the reading group reported that the review summary accurately described the full review. The reading group reported that the suggestions made by external reviewers for greater clarity with respect to the program's objectives, particularly in distinguishing between preparing practitioners vs scholars and researchers, was not adequately addressed in the administrative response. The Reading Group noted that the reviewers expressed concerns about launching a PhD program without a corresponding research-based Master's program and felt this area of concern was also not sufficiently addressed in the administrative response. The group acknowledged that the Dean's response to the concern regarding the "lack of clarity around the MScSM's identity and objectives" entailed plans for a "full review of IMI in summer 2025" as well as "consultations with external stakeholders (surveys and one meeting) and a faculty retreat."

Nick Rule, Vice-Principal (Academic) & Dean, University of Toronto Mississauga clarified that the MScSM program was a professional program, and thus did not train researchers. He noted that there were no plans to train researchers or develop a PhD program.

No follow-up report was requested.

4 Institutional Executive Summary

The reviewers observed that the program is excellent, strongly aligned with the objectives of the Institute for Management & Innovation (IMI) and highlighted as a "flagship" program in the IMI Strategic Plan. Program requirements and learning outcomes are clear, appropriate and align with the graduate degree level expectations; and the curriculum reflects the current state of the discipline. Admissions requirements are well-developed, with a rising number of applications; graduation results are impressive, with high completion rates; and employment statistics are very strong, with 99% of alumni employed within six months after they graduate. Finally, the reviewers highlighted that morale within the program is very positive; faculty are collegial, very knowledgeable and have made significant contributions within their respective fields; and the dedication of program staff is noteworthy.

The reviewers recommended that the following issues be addressed: setting clear intentions regarding the vision and mission of the MScSM before determining future directions; establishing formal agreements with contributing units, particularly the UTM Department of Management; considering greater focus on applicant's numerical skills during the MScSM admissions process to ensure appropriate competency levels; exploring potential approaches to encouraging and supporting interactions in the area of sustainability scholarship; considering additional supports for TA training; conducting a review of existing space allocations.

The Dean's Administrative Response describes the Faculty and program's responses to the

reviewers' recommendations, including an implementation plan for any changes necessary as a result.

5 Monitoring and Date of Next Review

The response to this review was considered alongside the response to the Master of Management and Innovation (MMI), held in 2022. In discussions related to the reviews of both the MScSM and MMI, it became evident that future reviews of programs offered by IMI would benefit from reviewers understanding the context of the unit and all its programs, rather than assessing programs on an individual basis. The next external review of the MScSM will take place in Summer 2025, alongside a review of the Institute for Management and Innovation and its programs. The timing of this review will serve as an interim monitoring report for recommendations stemming from the present review.

6 Distribution

On June 30th 2024, the Final Assessment Report and Implementation Plan was posted to the Vice-Provost, Academic Programs website and the link provided by email to the Vice-Principal Academic and Dean of UTM, the Secretaries of AP&P, Academic Board and Governing Council, and the Ontario Universities Council on Quality Assurance. The Dean provided the link to unit/program leadership.