

Master of Science Information Systems Program Review Summary Report, February 2023

Programs Reviewed:

Master of Science:

- Information Systems specialization

Graduate Certificate:

- Data Analytics
- Information Security

External Review Team Appointed by the Provost & Vice President Academic:

- Dr. Rossitza Marinova, Professor, Mathematics and Computing Sciences, Concordia University of Edmonton
- Dr. Parimala Thulasiraman, Professor, Department of Computer Science, University of Manitoba
- Dr. Haibin Zhu, Professor and Coordinator of Computer Science, Nipissing University
- Dr. Bob Heller, Professor, Psychology, Centre for Social Sciences, Faculty of Humanities and Social Sciences (Internal Observer)

Key Milestones:

- Program Review Kick-off: September 24, 2021
- Self-Study Approval by Program Council: April 29, 2022
- Self-Study Approved by Faculty of Science and Technology Faculty Council: June 22, 2022
- Virtual Site Visit: August 25-26th, 2022
- Receipt of External Reviewer Report: September 20, 2022
- Program Response Report to Faculty of Science and Technology Faculty Council: February 2023
- Program Response Report to Academic Planning, Priorities and Standards Committee (APPSC) of General Faculties Council: March 27, 2023
- Public Posting of MSc IS Program Review Summary Report: following APPSC meeting
- Annual Program Update to APPSC: June 2024

Summary of Key Findings from the Self-study and External Reviewer Reports:

The external review team noted many strengths exhibited by the program, identifying improvements achieved following the previous program review in 2017. These improvements included the increase in the number of female students which currently stands at 19%, hiring of two new faculty, creating research clusters, addition of interdisciplinary focus areas to the

program, and hiring of a program officer to help with improving inclusiveness and recruiting more diverse students. The reviewers also highlighted areas related to uniqueness, quality, credibility and integrity of the program. This included the level of scholarly activity and research accomplished by both faculty and students, appropriateness of the program regulations and procedures, and pertinence of the MSc IS program expressed by the alumni in helping them to expand their learning as well as helping them to achieve their goals in their career.

The reviewers noted that to maintain these attributes, resources must be allocated to the FST and the School of Computing and Information Systems (SCIS) to continue to allow sustainability and growth of the program. In particular, the review team noted that the university could be more supportive to faculty who are engaged in intensive research programs and student supervision or are in their early research career. The reviewers commended the fact that MSc IS students have access to a wide range of funding, support systems, tools, resources, and communities provided by different departments of the university, in particular the Faculty of Graduate Studies, the Research Office, and the library. They also highlighted the benefit of having three routes (Thesis, Project, and Essay) in the program, as well as the flexibility offered to students in selecting their specialization.

The reviewers found clear evidence that the learning outcomes of the MSc IS program are well aligned with the regulatory and accreditation requirements and qualify the program to be well-established within the province, Canada, and internationally.

The reviewers listed some areas of concern related to the heavy workload for faculty, the need for IT support to computing course labs, the need for marketing support to the program, and concern raised by students about the use of the AU Landing platform in courses. While students and alumni commended the work their instructors do to help them learn, they asked for more engagement with their instructors through weekly online office hours or one-to-one meetings that could be used to discuss topics and concepts students may struggle to understand. The need for more interaction was highlighted by the reviewers. The review team also recommended that courses be updated regularly as some students and alumni reported issues such as broken links in courses.

Program Council Action Plan Including Dean's Response:

	Recommendations (in order of priority for the program)	Proposed Action(s)	Timeline (include specifics)	Individual(s) Responsible for Leading the Action(s) (by role)	Responsibility for Resourcing Action(s) (if applicable; by role)	Dean's Response
1	Recommendation 1: Active scholars and new faculty members receive additional support for research	<ul style="list-style-type: none"> - establish Associate Dean Research and Innovation - establish research clusters - address workload through analysis and resourcing 	2022 2022 2022-2025	Dean FST Associate Dean Research and Innovation Dean	Dean FST None Provost and Vice President Academic	Completed Three clusters in SCIS Dean on workload analysis committee at AU and Dean to submit requests for resourcing in 2024
2	Recommendation 2: More operable guidelines be established for admitting students to the MSc IS program to guarantee the success of students.	- increase directions and guidelines for admission	2023	Program Director MSc IS and Program Officer FST	None	
3	Recommendation 3: The MSc IS program should provide	- improve information to students on bridging courses	2023	MSc IS program council	None	

	required bridging courses in the acceptance letters.					
4	Recommendation 4: The program should offer more synchronous components in the asynchronous courses, including synchronous lectures and synchronous office hours.	- create synchronous courses	2022-2026	MSc IS program council, SCIS faculty	Current capacity and new faculty position	COMP 694 developed 2022
		- increase opportunities for engagement through seminars, workshops, and meetings	2022-2026	Associate Dean Student Experience, FST Program Officer, faculty	FST budget	Research clusters meet regularly. Ada Lovelace Day annually. MSc IS orientation annually.
		- create FST student communities through communication platforms	2023	Dean, Associate Dean, Student Experience, FST Program Officer	FST budget and University Relations support	Need support from UR and IT in communications to students.
5	Recommendation 5: There should be consistency amongst courses in: content presentation; timely updates; assessment; quality; increased interaction; Microsoft Teams usage; and group activities.	- ILE migration	2023	AU and FST	AU resource	Migration completed by April 2023.

6	<p>Recommendation 8: The program should explore and recommend new and time-relevant courses that populate new programming.</p>	<ul style="list-style-type: none"> - complete courses and open new focus areas in Bioinformatics and Environmental Data Analysis 	2023	MScIS program council, FST Program Officer, and Dean	Funding from GoA enrolment expansion grant	Courses to be completed June 2023. Governance to be completed June 2023.
7	<p>Recommendation 6: FST should continue the development of micro-credentials for students and provide laddering opportunities for students to the MSc IS program.</p>	<ul style="list-style-type: none"> - develop Artificial Intelligence Ethics micro-credential - open minor in AI+ML -finalize credential recognition for laddering - develop new micro-credentials and offerings 	2023-2027	SCIS faculty, Dean, PowerEd	<p>Funding from GoA skills for jobs grant</p> <p>None</p> <p>None</p> <p>Funding required from FST budget, AU IRP, or external funds</p>	<p>Completed 2022</p> <p>Open 2023</p> <p>Working with PowerEd and FST faculty</p>
8	<p>Recommendation 7: The program should continue to take advantage of the university-industry connections for</p>	<ul style="list-style-type: none"> - develop partnerships with industry - continue WIL opportunities 	2023-2027	Dean FST	<p>None</p> <p>FST budget</p>	<p>Riipen WIL established</p>

developing academic courses of interest to industry and, where applicable, assisted by industry, for the benefit of students and employers.					
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