

Master of Climate Risk Assessment and Opportunity
Final Assessment Report & Implementation Plan
April 202

	Faculty of Engineering	
Degrees Offered	MCR	
Date of Introduction	September 1, 2024	
Fields of Study	Climate Risk and Infrastructure Resiliency Business and Climate Impact Climate Risk and Financial Modelling Climate Change Governance	
External Reviewers	Dr. Daniel Scott, Management University of Waterloo	Dr. Mathieu Boudreault, Department of Mathematics, Université du Québec à Montréal
Internal Reviewer	Dr. Anabel Quan-Haase, Associate Dean Graduate and Postdoctoral Faculty of Information and Media Studies	Jennifer Guo, PhD Candidate Anatomy and Cell Biology
Date of Site Visit	March 8, 2024	
Date Review Report Received	March 20, 2024	
Date Program/Faculty Response Received	Program: April 16, 2024 Faculty: April 26, 2024	
Evaluation	To be determined by SUPR-G	
Approval Dates	SUPR-G: May 13, 2024 ACA: May 29, 2024 Senate: June 7, 2024	
Year of Next Review	2031-2032	
Progress Report	June 2027	

Executive Summary

The proposed professional Masters Program provides broad multidisciplinary

Canadian market research firm, conducted two surveys to gauge the need of the program from both the students' and employers' perspectives.

Subsequently, in May and June of 2023, the proposed Masters Program was discussed with the:

- Faculty Council of Engineering
- Social Science Graduate Council
- Social Science Chairs
- Relevant programs in the Faculty of Science
- Ivey School of Business, Curriculum and Program Review Committee

Following approval to proceed with an external review, a review committee was struck comprising two external reviewers, one internal reviewer and one student reviewer. Reviewers were provided with the program proposal brief in advance of the scheduled review and then met in-person over one day with the:

- Vice-Provost, The School of Graduate and Postdoctoral Studies
- Associate Vice-Provost, The School of Graduate and Postdoctoral Studies
- Associate Vice-Provost, Academic Planning, Policy & Faculty
- Director of Academic Quality and Enhancement
- Decanal Team (Deans from partnering Faculties)
- Associate Dean Engineering, Research & Graduate
- Climate Risk Program Director
- Program Committee
- Faculty members
- Associate Chief Librarian

Following the site visit, the external reviewers produced a comprehensive external reviewer report with recommendations which was sent to the academic unit and to the Dean of the Faculty of Engineering for review and response. These formative documents, including the new major proposal document, the external reviewer report, and the Program and Faculty responses, have formed the basis of this assessment report of the proposed Master of Climate Risk Assessment and Opportunity (MCR).

Summative Assessment – External Reviewers’ Report

External reviewers shared that “... we found the set of proposed courses very interesting and the applied focus on the types of problems and approaches specific to professions to be an excellent approach to upskilling mid-career as well as those continuing on from an undergraduate program.”

Strengths and/or Unique Aspects of the Program

- Flexibility of an asynchronous/synchronous fully online program will be attractive to mid-career professionals who are the key market segment this program is designed for.
- Applied focus of courses and the types of problems and approaches specific to professions.
- Development of online courses with CTL experts is noted and important for effective online delivery.
- Newly created courses could be offered to students in other existing programs.
- The program’s learning objectives, structure and admission requirements are well articulated and aligned with Western’s conventions.

Opportunities for Program Improvement Mentioned by Reviewers

- Inclusion of the term “Opportunity” in the program name may engender confusion. (Embedded in Recommendation #2)
- The requirements to take elective courses in Engineering or Science might be restricted for some Business / Social Science students (and vice-versa).
 - Course sequencing may need further consideration. This will have implications for enrolling in courses outside of a student’s specialization.
- Further reflection and consensus on the vision for the program is recommended – particularly on the focus and integration of climate change.
- Possible barriers to elective options for some students based on the level of numeracy and required bac<(r)7-(i)10(cent)10(Dea)2(w)6(6(ed)10(ge)JTJ 0 Tc 0 Tw (.)Tj 10

derived; 2) the p-(i)1vision of administrative support; 3) job prospects for graduates; 4) h[w Master’s Research P-(i)1jec(MRP) milestones will be graded and consistency will be achieved in terms of scope, student workload, level of supervision and grading criteria across the 4

Summary of the Reviewers' Recommendations and Program/Faculty Responses

The following are the reviewers' recommendations in the order listed by the external reviewers.

Reviewers' Recommendation	Program/Faculty Response
<p>Recommendation #1 Consider development of an MRP course to support instruction and supervision.</p>	<p>Program: As suggested, once the enrollment of the program reaches a significant level, e.g., five in each specialization, an MRP course will be created and an instructor will be hired as the coordinator for the MRP course. At low enrollment levels, the program director will act as the coordinator for the MRP milestone. The annual retreat will provide opportunities to discuss ideas for MRP. The revised brief will clarify the eligibility of each instructor for supervising MRP.</p> <p>Faculty: The program response is reasonable and a course instructor, or an interdisciplinary group of part-time instructors will be established between the involved faculties, once required by high enrollment.</p>
<p>Recommendation #2 Clarify and/or reconsider the name of the program</p>	<p>Program: The Program appreciates the reviewers' perspectives on the name of the program; however, declines to change the name of the program based on the following considerations:</p> <ol style="list-style-type: none"> 1. The word "opportunity" in the program name conveys explicitly a sense of optimism that solutions are possible to move toward carbon neutrality and business opportunities will arise from such solutions. 2. A Graduate Diploma (GDip) program with the same name is planned to be launched in September, 2024. Using the same name for this program and the GDip aids in maintaining a strong link and effective advertising of these two programs.

<p>Recommendation #4 Clarify how EDI-DIA will be incorporated in the program.</p>	<p>Program: The common course CLMTRISK 9001 has incorporated EDI components in the context of climate change and impact. Knowledge in EDI-DIA principles and experience in incorporating these principles in their teaching will be a key consideration in selecting the instructor for CLMTRISK 9001. The program committee will work with the Course instructor to incorporate decolonization, indigenizing and just transition aspects into the course. EDI-DIA will also be implemented in other aspects of the program, e.g. the program admission process will take due considerations of special circumstances associated with equity-deserving groups and Indigenous applicants.</p> <p>Faculty: The program's response to address this recommendation is adequate.</p>
<p>Recommendation #5 Consider incorporating interdisciplinary language into the program core course</p>	<p>Program: The different concepts of "risk" in different disciplines and how these concepts are related to the IPCC terms will be emphasized in the common course CLMTRISK 9001. Familiarization with the interdisciplinary language is a learning outcome of this course.</p> <p>Faculty: The program's response to address this recommendation is adequate.</p>

Implementation Plan

The Implementation Plan provides a summary of the recommendations that require action and/or follow-up. In each case, the Program Chair, and the Dean of the Faculty are responsible for enacting and monitoring the actions noted in Implementation Plan.

All recommendations presented by the external reviewers have been prioritized for implementation, with the exception of recommendation #2. A justification for not moving this recommendation forward has been provided in the recommendation summary table above.

Recommendation	Proposed Action and Follow-up	Responsibility	Timeline
<p>Recommendation #1 Consider development of an MRP course to support instruction and supervision.</p>	<ul style="list-style-type: none"> • Discuss and develop a plan of action for the management of the MRP at the upcoming annual retreat. • Monitor program enrollment, once enrollment exceeds about five students per specialization, create an MRP course and hire an instructor to coordinate; or, establish an interdisciplinary group of part-time instructors from the involved faculties. • Revise program proposal brief to clarify the eligibility of each instructor for supervising MRPs. 	Program Director	By Sept 2026
<p>Recommendation #3 Clarify that all aspects of the program will be asynchronous.</p>	<ul style="list-style-type: none"> • Clarify the synchronous/asynchronous aspects of the program in the program proposal brief, with particular consideration of aspirations to the recruitment of international students. • Schedule synchronous activities in accordance with time zone variation from Eastern to Western Canada. 	Program Director	By June 2024
<p>Recommendation #4 Clarify how EDI-DIA will be incorporated in the program.</p>	<ul style="list-style-type: none"> • Ensure that knowledge in EDI-DIA principles and experience in incorporating these principles in instruction will be a key consideration in selecting the instructor for CLMTRISK 9001. • The program committee will work with the CLMTRISK 9001 course instructor to ensure the incorporation of EDI, decolonization, and indigenization. • Integrate EDI-DIA considerations into the program admission process. Consider special circumstances associated with equity-deserving groups and Indigenous applicants. <ul style="list-style-type: none"> ○ Indicate what information will be used and how. 	Program Director	By May 2025

Recommendation #5

Consider incorporating interdisciplinary language into the program core course

- Emphasize the different concepts of “risk” in different disciplines and how these concepts are related to the IPCC terms in the common course CLMTRISK 9001.

Program
Director