

Final Assessment Report Environment, Resources, and Sustainability (BES, Minor) and Social Ecological Sustainability (MES, PhD) June 2023

Executive Summary

External reviewers found that the programs (BES, Minor, MES, PhD) delivered by the School of Environment, Resources, and Sustainability were in good standing.

"The School of Environment, Resources and Sustainability (SERS) contributes to leading-edge research and teaching, with a deep commitment to interdisciplinarity. These commitments extend to a transdisciplinary ethos that seeks to bring together multiple ways of knowing, community-engaged scholarship and a deep appreciation for complex problem solving within socio-ecological systems. SERS strengths include (1) many top-tier scholars with international reputations in their respective disciplines, (2) a renewed commitment to transdisciplinary teaching and research (as reflected in detailed program level learning outcomes), (3) the appointment of four new assistant professors from equity seeking groups, where three of these professors from a Cluster Hiring Initiative selected SERS as their academic home, and (4) passionate and well-trained undergraduate and graduate students who are encouraged and supported to pursue problem-based learning and career paths that help to resolve many of the most vexing societal challenges of our generation."

A total of 6 recommendations were provided by the reviewers, regarding undergraduate and graduate research methods, supporting course offerings for cohort-based MRPs, strengthening the undergraduate curriculum, communicating the strengths of an SERS degree, investments in academic community and culture, and funding for graduate students. In response, the program created a plan outlining the specific actions proposed to address each recommendation as well as a timeline for implementation. The next cyclical review for this program is scheduled for 2028-2029.

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Enrollment over the past three years

	BES	BES Co-op	Minor	MES	PhD
2022-2023(CURRENT YR)	77	249	20	33	41
2021-2022 (LAST YR)	93	271	24	37	49
2020-2021 (THREE YRS)	95	289	15	39	55

This data is based on Active Student Extracts in Quest on July 7, 2023.

Background

In accordance with the University of Waterloo's Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response of the programs (BES, Minor, MES, PhD) delivered by the School of Environment, Resources, and Sustainability. A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs on November 4, 2021. The self-study (Volume I) presented the program descriptions and learning outcomes, an analytical assessment of the programs, including the data collected from a student survey, along with the standard data package prepared by the Office of Institutional Analysis & Planning (IAP). The CVs for each faculty member with a key role in the delivery of the program(s) were included in Volume II of the self-study.

From Volume III, two arm's-length external reviewers were selected by the Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs: Dr. John Parkins, Professor of Resource Economics & Environmental Sociology, University of Alberta, and Dr. Robin Roth, Associate Professor; Associate Chair; Graduate Coordinator of Masters of Conservation Leadership, University of Guelph.

Reviewers appraised the self-study documentation and conducted a virtual site visit on September 26-30, 2022. An internal reviewer from the University of Waterloo, Dr. Daniel Henstra, Professor of Political Science, was selected to accompany the external reviewers. The visit included interviews with the Vice-President, Academic & Provost; Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs; Dean of the Faculty of Environment; Faculty Associate Dean of Graduate Studies; Director of the Department, Associate Director, Undergraduate, Associate Director, Graduate; as well as faculty members, staff and current undergraduate and graduate students. The Review Team also had an opportunity to meet with representatives from the library and Co-operative Education.

Following the site visit, the external reviewers submitted a report on their findings, with recommendations. Subsequently, the program responded to each recommendation and outlined a plan for implementation of the recommendations. Finally, the Dean responded to the external reviewers' recommendations, and endorsed the plans outlined by the program.

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This final assessment report is based on information extracted, in many cases verbatim, from the self-study, the external reviewers' report, the program response and the Dean's response.

Program Characteristics

Undergraduate

SERS offers two Honours programs leading to a Bachelor of Environmental Studies (BES) in Environment, Resources and Sustainability: Regular and Co-op. SERS also offers a Minor and participates in a variety of other minors and diplomas offered within the Faculty of Environment.

Graduate

At the graduate level, SERS offers two programs: A Master of Environmental Studies in Social and Ecological Sustainability (MES – Thesis and Major/Masters Research Paper streams) and a PhD program in Social and Ecological Sustainability. Both the MES and PhD programs can be combined with the Collaborative Water Program (https://uwaterloo.ca/collaborative-waterprogram/).

Summary of Strengths, Challenges and Weaknesses based on Self-Study

Strengths

Undergraduate

- a strong commitment to integrating social and natural science perspectives on environmental and sustainability challenges.
- good quality and highly motivated students whose personal interests and values align with the goals of the program.
- enthusiastic faculty members who teach courses that reflect their interests, and offer practical, relevant and current insights into environmental and sustainability challenges and opportunities.
- a mix of theory and application and freedom at the program level for students to build an undergraduate experience that strongly reflects their interests.
- Co-op is also a major strength of the SERS program that is highly appreciated by students, as reflected in the large proportion of students who pursue this option. At the same time, students who do not wish to pursue co-op learning, but who value the SERS curriculum, are grateful to have that option. The survey of current undergraduate students confirmed that most are satisfied with the mix of courses, minors and options.

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Graduate

- A successful and recognized graduate program that aims to integrate social and natural science perspectives (and humanities occasionally) on environmental and sustainability challenges.
- Highly engaged graduate students who choose SERS and the inter/transdisciplinary approach as it aligns with their research interests and values.
- Research intensive faculty members that provide good funding opportunities and excellent networks, and opportunities to engage in practical as well as theoretically unique projects.
- A flexible program with sufficient opportunities for MES and PhD students to undertake research that reflects their interests.
- Graduates finding relevant employment or continuing to further education.
- A sense of community that has been improved with the instigation of the SERS Salon, an informal bi-weekly gathering of faculty and predominately graduate students getting together during fall and winter terms in an informal manner to share ideas and to build connections (note: COVID seriously undermined this initiative, although online SERS Salons were started again. We are hoping in the Fall this will be possible again)

Challenges

Undergraduate

- Student mental health and wellness: The issue is not just that students are struggling to deal with learning during a pandemic, although that is itself a major concern. Rather, prior to the pandemic, some students were already expressing concerns that the subject matter of SERS the world's pressing environmental challenges and the way topics were being addressed had the unintentional effect of creating a growing sense of hopelessness. In recognition of this concern, SERS faculty have been attempting to introduce more examples of successes and positive developments, but discussions with students during this review process have highlighted the importance of a more proactive approach. Fundamentally, we need to support students better in developing essential skills, capacities and competencies for sustainability progress.
- Concerns students have raised relating to equity and diversity: It is a fact that SERS
 faculty are mostly male and mostly white. To their credit, students who have raised
 these concerns are not seeking simplistic solutions; rather, they are encouraging
 greater attention to equity, diversity and inclusiveness in hiring (a long-term goal)
 and in course curriculum (a much more tractable challenge). However, this pressure

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has raised a new challenge, which is that a small number of SERS faculty are deeply concerned that the ways in which equity, diversity and inclusiveness are being pursued at North American universities, including the University of Waterloo, will lead to reduced academic freedom to research and teach in highly sensitive areas. Most SERS faculty believe that increasing the diversity of perspectives will help to expand discussion, provide students with the broader range of experiences reflective of the world around us, and that it is possible to pursue both academic freedom and increased equity, diversity, and inclusiveness.

- Finding the right balance between qualitative and quantitative skills, and between social science and natural sciences perspectives on environment and sustainability challenges and opportunities: SERS attracts distinctly different kinds of students and faculty. Most students who come to SERS appreciate the balanced approach we take, but there are always some for whom there is "too much natural science", or not enough.
- Growing competition that exists, and the increasing difficulty of distinguishing SERS' programs from those offered by other institutions and even by other departments and schools at the University of Waterloo.

Graduate

- Maintaining desired recruitment and enrolment. We changed our name from the
 Department of Environment and Resource Studies to the School of Environment,
 Resources and Sustainability in 2016. There was some hope this might help
 differentiate the program from others within and outside the Faculty of Environment
 and support recruitment efforts. However, there remains a lack of clarity as to what
 differentiates our graduate programs from those in the School of Environment,
 Enterprise and Development (SEED, e.g., the Sustainability Management program) or
 Geography and Environmental Management (GEM), or others outside of the
 University.
- Finding and articulating a clear 'value proposition' or differentiator to reflect our graduate program seems difficult to us at times (see discussion in section 9.1.1 also for the UG program). However, while as noted above that some Faculty members from other units have said they are unable to articulate what SERS does, for other colleagues the SERS value proposition seems clear.
- Concerns relating to student mental health and wellbeing, discussed above in the
 context of undergraduate studies, are just as relevant at the graduate level, and need
 to be addressed specifically in our graduate teaching and supervision practices.

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Weaknesses

Undergraduate

- Need to change how we approach program-level curriculum development and delivery.
- A key persistent weakness that also is a strength is the open, flexible nature of the program, which students appreciate for allowing them to pursue their interests, also leaves many students adrift in the face of too much choice. Fixing this problem through a major commitment to developing more and more-detailed "guided pathway" resources (see Appendix G) is a SERS priority for 2021/22. Additionally, SERS launched a new student-led mentoring program in May, 2021

Graduate

- Most graduate recruitment (certainly for PhD and even at the MES level) is supervisor driven. For instance, recruitment can vary significantly depending on who decides to take on more students, what research funding faculty have to support students and/or changes in faculty complement.
- There is a desire for more 'professional skills' emphasis in the program. For MES students, feedback we receive points to a desire for more hands-on, practical training for employment. Inevitably there is a tension here between too much structure and too little. There are also a range of resources on campus (e.g., the Career Action Centre) that may already provide many skills students are seeking (i.e., marketing, networking, career training, project management), but students are not sufficiently aware of these opportunities. The proposed MRP+ program addresses some of these concerns. For PhD students, there is broad recognition that most won't go into academia, and so there is a need to develop professional skills and also translate how PhD training is relevant in other sectors.
- Research methods and skills are an area of repeated concern. At the moment there are no defined methods/research philosophy courses for doctoral students. MES students have a core methods course (ERS 669) which serves both those interested in more quantitative methods and those interested in more qualitative methods. At the faculty level there have been ongoing discussions for several years about faculty level methods courses to address the needs of all students and to reduce redundancy across programs. This issue has not been resolved yet.

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Summary of Key Findings from the External Reviewers

"In response to the self-study report and request for advice, we offer six recommendations within this report, three of which are highlighted here in order of priority. First, to support transdisciplinarity and enhanced skills development, we recommend more research methods training at the graduate and undergraduate level. Second, we recommend the development of a cohort-based graduate program (MES MRP) as a distinct alternative to the supervisor-driven thesis-based MES and PhD programs. Third, we recommend enhancements to undergraduate curriculum with a focus on several dimensions of Indigenous-settler relations and enhanced coverage of race, racism, and environmental justice."

Program Response to External Reviewers' Recommendations

1. Undergrad and graduate research methods. We spoke with faculty members, graduate students and undergraduate students about how to improve research methods training at the graduate and undergraduate level. Given the transdisciplinary nature of these programs, options are complicated, but there is near consensus that the status quo is suboptimal. We recommend a minimum of two required courses in research methods at the graduate level, and the addition of one required course at the undergraduate level (building on undergraduate statistics course requirements). Enhanced methods training will support thesis research and contribute to research knowledge and literacy for transdisciplinary collaboration.

Response

Program Response:

<u>GRAD</u>: We remain committed to developing a strategy to address this recommendation. We agree that expanded course offering(s) for methods/methodology are necessary, and with a reference to specific MES and PhD student needs. As part of this strategy we have an opportunity to further assess our capacity within SERS to deliver a wide range of methods training (particularly given the new faculty members that have joined SERS), and to determine what is offered in the core vs. non-core delivery. Ongoing negotiation with other faculty units is welcome, but will require support from the Dean's office and establishing and adhering to a decision timeline (e.g., 1 year) is necessary. If a faculty wide approach is not tenable, specific interventions should address SERS needs in the near term.

<u>UNDERGRAD</u>: We aim to explore two options to enhance our undergraduate research methods training. The first option is to develop a better understanding of what we are already doing currently in our courses. From this survey exercise, alongside faculty and student consultation, we will determine key research skills that can be prioritized within our classes. We can then focus on introducing some of these key research competencies as learning outcomes in some of our core upper year courses. The second approach would

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introduce a 3B course that would act as a preparation course for ERS 403 undergraduate thesis course (though knowing that not every student in this course would take ERS 403). This course would focus on introducing research methods and proposal development. This would prepare students for their fourth-year thesis projects and help them explore project ideas and whether a thesis is the right path for them. Both options will be explored moving forward.

Dean's Response:

<u>GRAD</u>: Graduate enrolment in each of the units is uneven and results in sub-optimal delivery of research methods courses within each unit. This issue raised by the reviewers is therefore recognized and will require a faculty-level solution. There is currently a longer-term vision being developed for ENV, which includes the potential establishment of a faculty-wide School of Graduate Studies. The anticipated time horizon for implementation of the vision is five years.

<u>UNDERGRAD</u>: The SERS response to the reviewers' comments is noted and supported.

2. Cohort-based MRP – supports course offerings. We recommend transitioning the MES MRP program from a supervisor-based model to a cohort-based model, where the MRP is completed within a single course with one instructor (from May to August). This change would allow students to complete the MRP program within a 12-month period. The cohort-based model will help to achieve several outcomes including: (1) growth in graduate student numbers without increasing demand on supervisors, (2) more sustainable graduate student course offerings with larger course enrollments, (3) alternative program delivery that could include virtual or hybrid course offerings.

Response

Program Response:

There is a general agreement that a cohort-based program should be explored, and augment or extend the existing efforts with the MRP+ program. There are however a number of assumptions with the recommendation that need to be further explored; for example, is a cohort-based program a response to an identifiable demand, or an effort to build something that we hope will attract new students. As well, there is a need to survey other successful cohort-based programs inside and outside the faculty to determine what may be appropriate for SERS, noting that the administrative burden of a cohort-based program will be significant. Finally, there is general consensus that a niche or 'value-added' program is necessary and there are a number of possible ideas in this regard (e.g., data science for sustainability; environmental assessment, etc.). However, any niche

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programs should align with the transdisciplinary aspirations of the MES and PhD programs.

Dean's Response:

The reviewers' recommendation is noted; however, I agree that there is due diligence required as outlined by the SERS response ahead of any program redesign that might occur.

3: Strengthen the undergraduate curriculum. Ensuring adequate coverage of Indigenous settler relations including (A) the legal, political, social and cultural dimensions of Indigenous leadership in sustainability and (B) ensuring adequate coverage of race, racism and justice. Both recommendations can be done through the explicit and required inclusion of these topics in core, required courses (through the revision of calendar descriptions) and/or the introduction of new ERS or, if there is interest, ENVS courses. Acting on this recommendation will strengthen the program's ability to deliver on LO3 and LO5.

Response

Program Response:

We agree that EDIJ themes can be more effectively integrated into our core and required courses. We believe that some of our EDIJ work was missed in the review of our courses. We would like to develop a better understanding of knowledge we want students to have and how we can integrate those ideas deeply within our courses – especially our core courses. We propose that ERS 100, our first-year core course, will further engage with Indigenous-settler relations and anti-racism content in ways consistent with Faculty and University of Waterloo's institutional practices (e.g., through Indigenous led guest lectures, Indigenous developed resources and working alongside the University of Waterloo Centre for Teaching Excellence Indigenous Knowledges Education Developers) as this is the first SERS course students take. That focus and those discussions, will then continue up through our upper year core and required courses. Determining what is currently being done and the gaps we have, will guide our focus on better incorporating EDIJ into our core and required courses.

Dean's Response:

I agree with the SERS response to the recommendations and support their evolving implementation strategy.

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4: Communicate the strengths of a SERS degree. We recommend working with the faculty and university marketing teams to better communicate the SERS value proposition. We consistently heard that the value of the education SERS is offering is that it builds core competencies that catalyze creative solutions to difficult problems. And while the word 'trans-disciplinary' does not likely have concrete meaning for prospective students, we recommend highlighting what the approach delivers for the aspiring environmental professional. Our impression from our visit is that SERS is oriented towards understanding complex environmental problems and, through collaboration, offering actionable solutions. In a world of deeply specialized experts, what SERS helps deliver are environmental professionals who are able to work collaboratively across disciplinary and professional silos, allowing problem and solutions formulation to draw from diverse sets of expertise and knowledge. Students graduating from SERS will be exposed to cutting edge research and a wide range of practitioner expertise delivering concrete skills in the ecological and social sciences to catalyze the action needed for a more sustainable and just future. We encourage SERS to better communicate the value of their transdisciplinary commitments.

Response

Program Response:

<u>GRAD</u>: We concur with the need to clarify the strengths of a SERS degree, noting that how that is communicated for MES and PhD students may be different. An annual survey of outgoing MES and PhD students (in house SERS survey) can help us with the language and fine-tuning of this message. Some core themes that seem to be applicable include the benefits of a systems perspective/thinking, an ability to engage with an applied sustainability problem, the capacity to link science and policy, and the focus on impact and advocacy. Further work on this issue is needed.

<u>UNDERGRAD</u>: There are two dimensions to this recommendation: what we tell the student and how we are perceived by others. The undergraduate focus is on the "what we tell the students" around the value of a SERS degree. This is demonstrated through our learning objectives from our courses and ultimately our program. A general review of our learning objectives and how well we are achieving them will help to solidify the value of a SERS degree. An example of where we are actively doing this is in ERS 100, a core course, where students are exposed to transdisciplinary perspectives in their first semester. This course has been structured around bringing in different SERS professors and graduate students, into the lectures, and having them discuss their unique backgrounds, research areas, and perspectives on environmental problems. Within this course, there was a SERS panel discussion in the final class, aimed at bringing together

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multiple perspectives to address the wicked environmental problem of biodiversity loss. This model will be used in future offerings with the potential to include more SERS professors and graduate students.

Dean's Response:

These recommendations relate to a larger, ongoing vision exercise underway in ENV. The discussion includes the establishment of a common entry first year for ENV and a common graduate school (as noted under 1. above). These are structural changes that will be linked to evolving branding, all of which will support increased clarity in 'what ENV does', including at the unit level.

5: Investments in academic community and culture. We recommend a series of actions to enhance the academic culture of the school. First, we recommend the development and management of a Graduate Student Handbook that is updated by SERS staff on an annual basis. Second, we recommend extending the Salon to a more formal SERS Seminar Series, with regular seminars from internal and external presenters (including community partners). These investments will enhance the transdisciplinary culture of the department. Third, to support this academic culture, renovations of the physical space are a key factor, whereby current facilities are less than adequate to support the Salon or expanded Seminar Series within the academic unit. Fourth, we encourage ongoing efforts to reduce teaching commitments from 4 courses per year to 3 courses per year.

Response

Program Response:

<u>GRAD</u>: Recommendations to invest in academic community and culture are fully supported. These investments can be achieved through regular and more casual interactions in a shared space, and through more formalized (i.e., in some cases required) events like seminar series that might be linked to curricula expectations or graduate milestones (e.g., designed into 680/81 and 701/02). Other initiatives to build community have been trialed (e.g., biking events, a SERS grad orientation walk, etc.) and will be encouraged.

With regard to the handbook, we are committed to curating and consolidating information to support graduate student experience. There are concerns about the idea of a single handbook however (e.g., regular maintenance challenges, etc.). There are ongoing faculty level efforts as well that need not be duplicated. Efforts in SERS instead can be placed on developing FAQs and curating access to relevant websites and information sources (e.g., GSPA, campus housing, health and wellbeing services, etc) by

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continuing to develop an online 'living document'. Some consideration of 'co-ownership' for the responsibility of building and maintaining information for graduate students is warranted.

The SERS salon continues to be a key community-centered event. Further discussions about its applicability for PhD seminar milestones and more regular speaker seminars (including some consideration of the timeslot) is warranted.

With regard to space, there are limits on our capacity to make changes, but there is an opportunity to assert the importance of the collective spaces we do have (e.g., the fishbowl) and consider how they can be used for combined social/academic activities as well.

<u>UNDERGRAD</u>: We support the idea of building a greater sense of community with our students. We have plans to continue the SERS Mentorship program. Further, we are working alongside the SERS Education Committee to hold a townhall forum in the winter term for students, SERS faculty and staff. The objective is to create a respectful, safe environment for discussions on how to better strengthen the SERS community and to enhance dialogue between students, staff, and faculty. There are opportunities that could be explored to allow for some better connections between our 403 undergraduate students and a potential new graduate seminar series. Other initiatives to connect with our undergraduate students and build community will be explored and prioritized. We will certainly discuss the reduction from 4 courses per year to 3 courses with the Dean but in the meantime, we are moving towards a 4/3 model (i.e., one course reduction every second year).

Dean's Response:

<u>GRAD</u>: I am in agreement with the approach outlined by SERS to help build community and provide updated information to students. Space at SERS is a limitation. In the post-pandemic environment, ENV is also placing an emphasis on building back community, which may have a positive influence on SERS.

<u>UNDERGRAD</u>: The Faculty is moving to a 4/3 teaching load, where feasible. A standardized 3/3 load is not supported by the Dean as resources are constrained.

6: Funding for graduate students Current funding for SERS graduate students is on the lower side of graduate funding at the University of Waterloo. To attract and retain top-quality candidates, we recommend the development of a funding mechanism at the

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School or Faculty level whereby supervisors can petition for matching funds to make competitive offers to top candidates. This fund may allow, for example, an offer of guaranteed funding from 1 year to 2 years. There are several models to sustain this fund, including growth in endowments, or a pool of funds whereby faculty members can draw from, but would also be required to payback funds in future years. This kind of fund will allow faculty to confidently recruit students for the full length of their program.

Response

Program Response:

We support the notion of improved graduate funding for SERS MES and PhD students and increases to minimum guaranteed funding commitments for all graduate students. However, we note that core funding for SERS students is determined by the Faculty (Associate Dean's office), not SERS, and is consistently applied across all academic units (GEM, SEED, etc.). Many faculty support graduate students with significant additional financial support (e.g., GRS and GRA funding), but these funding arrangements are tied to individual supervisors and projects.

Dean's Response:

I agree with the Program response – equity across the faculty is an active goal. Graduate funding levels are in part determined by the grants held by supervising faculty, which is where scope may exist to increase support on a case-by-case basis (as noted in the response).

Recommendations Not Selected for Implementation

There are no recommendations not selected for implementation; SERS intends to act on all recommendations.

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Implementation Plan

	Recommendations	Proposed Actions	Responsibility for Leading	Timeline for
			and Resourcing (if	addressing
			applicable) the Actions	Recommendations
1.	Undergrad and graduate research	Undergraduate: 1) Synthesize key research	Associate Director	2023
	methods	skills required, those already being taught in	Undergraduate with	
	- Minimum of 2 courses at	present courses, and opportunities to add	support of Director &	
	the grad level	missing key research competencies to core	Dean	
	- Addition of 1 required	upper year courses; 2) Consider introduction		
	course at the undergrad	of a 3B course research methods & proposal		
	level	development in support of ERS 403 Honours		
		Thesis Program.		
		Graduate: Continue to explore needs and		Early 2024
		capacity for expanded training in quantitative		
		and qualitative methods at the Faculty level. By	1	
		the end of 2023 make a decision on developing	, , ,	
		enhanced capacity at either the Faculty or	and the Dean	
	C. L L. LASS ASD	School level.	5	2022
2.	Cohort-based MES-MRP – transition	Explore the potential for developing &		2023
	report component to a single course	implementing the recommended model	' '	
_	with one instructor May - August	Augment or extend existing MRP+ program	Director and Dean	2024
3.	Strengthen the undergraduate	Consult UW CTE Indigenous Knowledges		2024
	curriculum with respect to legal,	Education Developers on content for ERS 100		
	political, social, cultural dimensions	on Indigenous-settler relations	support of Director &	
	of Indigenous leadership in	Review present curriculum for Equity,	Dean.	
	sustainability and	Diversity, Inclusion & Justice content and		
	adequate coverage of race,	ensure focus in all core & required courses		
	racism & justice			

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	Commenter that the standard for	Talkania diki Garan Ordina ki i f	Discours the second	2024
4.	Communicate the strengths of a	Indicate within Course Outlines which of our	Director with support	2024
	SERS degree - work with Faculty	new learning outcomes are being addressed	from Associate Director	
	and University marketing to better	and how.	Undergraduate and	
	communicate value proposition.	Conduct a review of how well we are	Associate Director	
		achieving our new learning outcomes.	Graduate	
		Consider implementing surveys of outgoing		
		students for how well learning outcomes were		
		achieved.		
		We have already begun consulting with our		
		Dean's office with regard to addressing		
		undergraduate recruitment for SERS and		
		associated marketing.		
5.	Investments in academic	Continue improvement of online access to	SERS Administrative	2024
	community and culture	information required by students including	Committee	
	 develop & maintain a Grad 	FAQs.		
	Student Handbook, updated	Consider role of Salon in PhD seminar		
	annually,	milestones & more regular speaker seminars		
	 extend Salon to a more 	Continue to make the Dean's office aware of		
	formal SERS Seminar Series	SERS' requirements for space, particularly in		
	& renovate physical space	light of new faculty.		
	for it,	Implement a 4/3 teaching schedule for all		
	 reduce teaching 	faculty teaching a full 4 course load and		
	commitment from 4 to 3	explore with Dean the potential for reduction		
	courses per year.	to 3 course load.		
		Maintain the SERS Mentorship Program		
		Work with ERSSA Undergraduate Education		
		Committee on regular Town Halls.		
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6.	Funding for graduate students –	Explore opportunities for SERS or ENV	Associate Director - 2023
	increase funding for top-quality	matching funds mechanisms with Associate	Graduate
	students	Dean – Grad.	

The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for the Implementation Plan.

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Date of next program review	2028-2029		
	Date		
Signatures of Approval			
Stanty	August 25, 2023		
Chair/Directo Shayluc	Date		
1_1-1	August 25, 2023		
Faculty Dean	Date		
John M. Caell	August 8, 2023		

Associate Vice-President, Graduate Studies and Postdoctoral Affairs (For graduate and augmented programs)

On behalf of the Associate Vice-President, Academic

Date