

# Final Assessment Report

## Knowledge Integration (BKI, Minor)

November 2024

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### Executive Summary

External reviewers found that the Knowledge Integration (BKI, Minor) programs delivered by the Department of Knowledge Integration were in good standing.

“The reviewers found the Knowledge Integration program at the University of Waterloo to be an effective and innovative program of study that is highly valued by its students for the individualized care and attention their studies receive from the program’s well-respected and dedicated faculty. The Knowledge Integration program, with interdisciplinarity defining the core of its identity and curricular focus, is an excellent example of the type of academic intersectionality that the university promotes in many of the themes throughout its strategic plan.”

A total of five recommendations were provided by the reviewers, regarding co-op, partnerships and internal marketing, the program’s narrative, broader connections with other interdisciplinary initiatives, and course selection support. 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 2029-2030.

### Enrollment over the past three years

|                        | <b>BKI</b> | <b>Minor</b> |
|------------------------|------------|--------------|
| 2024-2025 (CURRENT YR) | 60         | 1            |
| 2023-2024 (LAST YR)    | 79         | 1            |
| 2022-2023 (THREE YRS)  | 92         | 1            |

\*Based on Active Student extract from Quest on November 8, 2024

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### 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 Knowledge Integration (BKI, Minor) programs delivered by the Department of Knowledge Integration. A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic on January 20, 2023. 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: Professor David Gillette, English Department, California Polytechnic State University, and Professor Donald Bruce, School of Languages and Literatures, University of Guelph.

Reviewers appraised the self-study documentation and conducted a site visit to the University on September 25-29, 2023. An internal reviewer from the University of Waterloo, Professor Daniela O'Neill, Department of Psychology, was selected to accompany the external reviewers. The visit included interviews with the Associate Vice-President, Academic; Dean of the Faculty of Environment; Faculty Associate Dean of Undergraduate Studies; incoming and outgoing Chairs of the Department, as well as faculty members, staff and current undergraduate students. The Review Team also had an opportunity to meet with representatives from the library.

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.

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**

The Department of Knowledge Integration offers a direct entry, four-year honours undergraduate degree, the Bachelor of Knowledge Integration (BKI). As the program has become more well-known on campus, we have also had students choose to transfer to KI from other programs. In fact, over the review period we have registered negative net attrition.

In addition, there are several options for students registered in other programs to get varying degrees of the KI educational experience. Students' courses may be double-counted, up to the double-counting limits, towards both the home program and the KI programs listed below. KI does not impose a limit on the number of courses double-counted, though students' home programs may.

- Concurrent degrees: students must meet all the requirements of their home degree, as well as those of the BKI, and must take 20 courses over and above those required for their home degree. This results in awarding of both the home degree and the BKI.

- Joint honours with BKI: students must meet all the requirements of their home degree, and those of the BKI. This results in awarding the home degree “joint with KI” (e.g., BA in History joint with Knowledge Integration).
- Minor in Knowledge Integration: students must complete 8 courses: 5 specific core INTEG courses plus 3 other INTEG courses (1.5 units); these can be either the “museum sequence” INTEG230/320/321, or any other INTEG-labelled courses totaling 1.5 units.
- Option in Knowledge Integration (until 2019\*): students must complete 8 courses: 4 specific core INTEG courses plus 4 from a selection of courses from the INTEG core and breadth courses.

*\* NOTE: the KI Option was removed from the calendar in the 2019-20 academic year during a campus-wide option/minor reconciliation exercise, and as a result of low uptake. At the same time, the minor was redefined to be 8 courses instead of the 10 it had been prior to 2019, in order to make it more consistent with other Waterloo minors.*

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

Information from our surveys of alumni, current students, and employers suggests that the program is well designed and is serving students well. We have students out in the work force in a wide array of fields, and our graduates have been admitted to both disciplinary and interdisciplinary graduate programs. This is validation that the workforce, academia, and our graduates all value this innovative approach to education that is the BKI. Still, we recognize that we have challenges and areas for improvement, explored below.

#### Strengths

- **Our Students and Alumni:** One of the strengths of the KI program is evident from the many positive comments we hear from employers, supervisors, and other faculty across campus. It is a common and validating occurrence for the Chair of KI to be meeting with other Chairs and faculty from across campus, and to hear spontaneous comments about how engaged and reflective and knowledgeable KI students are. Our alumni are amazing ambassadors, promoting the program among friends and family but also professionally. Fully 95% of our alumni say they would recommend KI to suitable high school grads, and 92% said they would pick KI if they were starting again.
- **Flexibility:** The BKI is flexible by design, which allows students to pursue their individual academic interests and gives them an opportunity to put together a program of study that might not otherwise be available (e.g., a focus on collaborative design), should they be interested in doing so. This flexibility, as well as the learning activities in the core courses, also trains them to think broadly across disciplines, while still acquiring depth through their area of concentration.
- **A Proven Interdisciplinary Education Model:** KI’s focus on flexibility and interdisciplinary education is very well-aligned with Waterloo’s current strategic plan, which commits to increasing interdisciplinary collaboration in teaching and providing students with “flexible learning pathways.” Specific objectives speak of “flexible

- curricula that simulate reflective, deep learning and develop competencies to address global challenges and opportunities,” and of removing “barriers to collaboration, interdisciplinarity and the integration of knowledge.” Notably, KI faculty have been invited to give keynote talks at international conferences and other venues to share KI’s unique model of interdisciplinary education.
- **Learning Community:** Our learning community is cited by faculty, staff, and students and their parents as a significant strength. The small size of the cohorts and intentional opportunities for cross-cohort interaction (e.g., INTEG 10) have helped to build a tight community. The museum field trip to Europe at the end of the 2<sup>nd</sup> year builds a particularly strong cohort bond. In our survey of current students, 73% (n=33) indicated they felt a Strong or Very Strong sense of community in KI. Removing students who started during the pandemic in Fall 2020, that percentage goes up to 83%.
  - **Faculty and Staff:** KI is fortunate to have incredibly dedicated faculty and staff who care a lot about the students and making the program successful. Our faculty members have high-quality, funded research programs which provide opportunities for innovative teaching coupled with pedagogical research, and research assistantships for KI students. On the teaching side, our faculty members receive strong teaching evaluation scores and have a disproportionate number of high-level teaching awards given our small size. Regarding our faculty and staff, current students overwhelmingly indicated that they felt Well Supported or Very Well Supported by faculty (100%, n=33) and staff (89%, n=33).
  - **Experiential Education and Professionalism:** The KI core courses, individually and in sequence, intentionally balance theory and practice: Leonardo da Vinci’s infamous “knowing and doing.” Students combine strong theoretical frameworks with experiential learning, problem solving, and “maker” skills, to prepare them to be knowledgeable and flexible in their professional lives. In addition, we emphasize skills articulation through course assignments, individual reflection, and INTEG 10 seminars devoted to professional development and skills literacy. Outside the classroom, some students have opportunities to take on paid teaching assistantships or research assistantships with KI or non-KI faculty.
  - **Applicant Management:** Paradoxically, while recruitment itself remains our most significant challenge, our recruitment practices are seen as a model for others to emulate, particularly when it comes to interaction with applicants to the program. Every applicant receives a hand-written note from KI, thanking them for applying, offering to answer any questions they have, and inviting them to visit the campus to attend a class or sit in on INTEG10 (such as our annual KI Alumni Panel). Applicants are also emailed monthly about KI events and news. When an applicant is admitted, an individual email is sent by the Chair, often personalized if the student has submitted their AIF, to congratulate them and again invite them to visit or ask questions. Admitted students are also sent a letter from a current KI student

welcoming them to the program. Admitted students also receive a postcard written by a KI student while they're on the museum field trip in Europe. When a student confirms their registration, they are sent a personalized email from the Chair thanking them for choosing KI. We know from the students' responses to these emails, and from conversations with students (both those who come and those who choose not to), that they really appreciate the attention during the recruitment process. In addition to these emails and individual invitations, applicants and admitted students are invited to campus for formal recruitment events at three times during the recruitment process: in November, March, and May.

### Challenges

- **Brand Recognition and Recruitment:** The most significant challenge facing KI continues to be recruitment. Despite years of investment in several strategies outlined in the self-study, application numbers remain relatively steady but lower than we would like. We are keen to apply our limited resources in more effective ways, but it is unclear what those might be. The very nature of the KI, valuing diversity in all its forms and seeking heterogeneity, makes it difficult to identify a particular constituency of students for whom we might design our marketing. The International Baccalaureate community is perhaps the most identifiable, and 15% to 20% of our applicants are from IB schools. We are confident that as we continue to graduate successful Knowledge Integrators and they spread out in the world, we will see increasing recognition and demand for the program, but for now this remains a significant challenge.
- **External Dependencies:** As an interdisciplinary program, KI is housed within the Faculty of Environment but embedded throughout the university. Our faculty are cross-appointed to several other units, often outside of Environment, and each has an outside unit on which we rely for assessment of their research. Guest lecturers and senior research project advisors come from all across campus, as do non-KI students registered in our courses. Our own students spread out across campus for the bulk of their courses, and many rely on non-KI faculty for senior research project supervision. At the present time, this remains a significant strength, and the connectivity that results from those experiences is part of KI's contribution to the campus, in exchange for the campus' contribution to KI. It is a symbiotic relationship that grows opportunity and engagement for everyone, and under the current strategic plan and president, seems like a model to emulate. While at the present time this remains a significant strength, we are mindful, however, of the extent of these connections and the dependency of our current model on the willing engagement of the broader campus community.
- **Managing Growth:** KI's strategic plan sets a steady-state target of 35-40 students in each year of the KI major and an additional 10 students doing the minor, which implies a doubling from the current cohort size. Students, staff, and faculty all value the small

size and sense of community in the program. In our survey, managing growth while maintaining the critical sense of community was the challenge most often articulated by current KI students, along with reputation and recruitment.

- **Budgetary Concerns:** Early in this review cycle, Waterloo implemented an activity-based budget model that sets a “service course fee” for students taking courses outside their home Faculty. For a program like Knowledge Integration, which by design has students take up to 70% of their courses outside the Environment Faculty, this is problematic. With roughly 100 KI students on campus in a given term, each taking 5 courses, we need to be teaching 350 students each term from other faculties if we are to redress this imbalance strictly through service teaching. To date, the Dean, the other unit heads in Environment, and senior University administration have all spoken very positively about KI and are strongly supportive, but it does leave us vulnerable. With a new President in 2021, a new Dean in Environment in 2022, and increasing budgetary pressure from provincial cutbacks, there is a strong sense of uncertainty among KI faculty and staff, and urgency to increase service teaching and find other ways to balance the budget.
- **Staffing:** As a result of the budget situation, the lack of program growth, and the termination of the Waterloo Unlimited program in 2017, we have gone from having 4 full-time staff to two part-time staff totaling 1.4 FTEs. In particular, the academic advisor is only 60%, and we are losing the Senior Design Instructor role when Paul McKone retires in 2022. The Faculty has been supportive in navigating these changes, with formal reallocation of some of Paul’s KI staff duties to other Environment Faculty staff. However, the loss of Design teaching capacity has already impacted the program in that we’ve needed to cancel the upper-year Real World Problem-Solving course for lack of resources.

### Weaknesses

- **Department Size:** With a small faculty cohort we do not have the resiliency, or the budgetary autonomy, of a larger department. This impacts faculty and staff and means we are always trying to do “more with less.” Specifically in terms of impact on faculty, it has the following consequences:
  - Sabbatical timing: We need to make use of sessionals to fill in when faculty are on sabbatical, yet finding good sessionals for our core courses isn’t always easy.
  - Resiliency in teaching: Currently, most of our core courses have been taught by the same instructor during the entire review period and would be challenging for another KI faculty member to teach.
  - Service loads: As a small department it has been difficult to find time amid the base level of required administrative service to tackle any significant strategic projects (e.g., the creation of a co-op stream, or a revision of our marketing and recruitment materials). Service task distribution was discussed in depth at



a faculty retreat in April 2022 and two roles were created to formally lead KI Messaging and Future Ready planning.

- **Lack of Familiarity with KI Among Those Outside the Program:** One of the biggest challenges cited by current students in our survey results is others' lack of understanding about what KI is, and what kind of employment its graduates can expect to enter into. Yet 80% of alumni surveyed (n=65) said that KI's relevance to career opportunities was either Strong or Very Strong, and 92% rating the degree design and structure as Strong or Very Strong. Anecdotally, it is broadly true that employers, professors, parents and students who have interacted with KI or its students in any meaningful way, pretty much always "get it." It is also broadly true that many who have not had this interaction don't understand the program design, or what its graduates would do. This despite having public evidence that graduates successfully enter a broad range of careers and post-graduate study; it's the "broad range" that seems problematic, because unlike some degrees there isn't a specific job waiting for the graduates. We hope that the recent creation of Messaging Lead and Future Ready Lead service roles within the department will help catalyze and provide focus for strategic thinking and action to start to address this weakness.
- **Lack of Co-op:** While reaction of current students and alumni is mixed about whether KI should be co-op, with many worried that a traditional co-op model would negatively impact the community feel, there is definitely a sense that not having a co-op program is hindering recruitment. Related to the weakness above, students who participated in KI Works mention how the experience and the reflections helped them better understand the skills they were learning; introducing a more formal co-op would also help in this regard. While we believe that having the option of co-op would be good for recruitment and benefit some students, we have heard from students a split on whether co-op would have been an attractor or they might have gone elsewhere. We also have concerns about both resources and community were we to try to provide both a co-op and non-co-op stream. At the same time, increasing work-integrated learning (WIL) opportunities is a central part of Waterloo's strategic plan, and the institution is creating more flexible pathways for WIL.

### Summary of Key Findings from the External Reviewers

"The program has reached a point in its academic development, and with how it is resourced from the university, where a decision must be made about how to change and adapt to shifting economic conditions on campus. Change is necessary for the program to be sustainable for the benefit of its faculty, staff, students, and the preservation of its academic mission... Looking outward, with more engagement and collaboration with other like-minded faculties and students, could quickly increase the program's visibility; extend the interests and ideals of its faculty into a larger cohort of thinkers and educators on campus; connect the program to more established and reliable administrative and financial support units at the university; and could help the program chart a leadership future for itself that is less insular and more engaged with

other interdisciplinary initiatives at the institution, in harmony (and learning from) more sustainably supported interdisciplinary projects at other universities in Canada and abroad.”

### **Program Response to External Reviewers’ Recommendations**

#### **1. Co-op: Introduce a co-op component in the program.**

##### **Program Response**

Both reviewers emphasized the importance of introducing co-op during the site visit. During our discussions, they agreed that we ought to maintain a regular stream for students who choose not to do co-op, and that we should keep the student cohorts together through their third year (i.e., through the entire Museum Course sequence). As the reviewers note, instituting a co-op stream would bring KI in line with the Waterloo’s focus on work-integrated learning and may even provide KI with more visibility. While we currently offer an informal coop-like program called KI Works and promote the EDGE certificate, neither are a perfect substitute for co-op. The reviewers also suggest that the addition of a co-op stream will make KI more attractive to prospective students. We agree with this assessment, as many prospective students – and their parents – inquire about co-op during recruitment events. In fact, surveys of admitted students (non-confirm surveys) show that the lack of a co-op stream is often cited as one of the main reasons for not choosing KI. Thus, we believe that adding co-op has the potential to boost our admission numbers, even in the short term.

As noted in our Two-year Progress Report (June 2018), we were previously unable to add a co-op option since the available sequences would not allow us to offer both co-op and regular streams while keeping our cohorts together. Given the integral role community plays in our program – indeed, it is a feature of KI that we know attracts a significant number of students to KI – we felt it was crucial to avoid the separation of cohorts. (We also did not have the resources to mount our core courses more than once per year, which would have been required for those models.)

While we have since identified a new co-op sequence that would allow us to offer both co-op and regular streams with the teaching resources we have, the Dean has asked us to put the co-op implementation plan on hold while we evaluate the program’s structure and administrative home, especially in light of Environment 2035. We are hopeful that we will be able to resume implementation in the future, should we have the resources to do so.

##### **Dean’s Response**

I agree with pausing the implementation of a co-op stream for KI at this time. Since the timing of this review, numbers in KI have decreased even further. Only 11 first-year students matriculated into the plan in Fall 2024. With low enrollment numbers coupled with upcoming faculty departures, we need to rethink the role of KI, with an immediate first step of revising



faculty administrative structures to gain some efficiencies and exploring how the KI plan can more closely align with and contribute to faculty-level programming under Environment 2035. Now is not the time to launch a new stream; however, there are a number of Environment co-op programs with sufficient flexibility to add KI as a joint major.

2. **Partnerships/Internal Marketing:** Actively build program links to the Faculty of Environment and other disciplinary areas. This requires close collaboration with other programs/entities. [e.g. Future Cities, STEAM, Leadership, Social Justice, Science Communication, Entrepreneurship, Cultural Industries, etc.]

### **Program Response**

We appreciate this suggestion, as we believe KI is well-positioned to contribute to programs and initiatives in Environment – and across campus – that are interdisciplinary, address complex problems, and/or require students to work in teams. We have begun to build links with several initiatives.

For instance, KI has been offering INTEG 210: Making Collaboration Work since 2018. This course teaches students collaborative theories and practices that enable them to cultivate high-performing teams and become collaborative leaders. It also gives students the opportunity to work in highly interdisciplinary teams (with peers from multiple faculties) to address a real-world design challenge. INTEG 210 is open to all students at Waterloo, with the idea that it brings key aspects of KI to the rest of campus. (One of our faculty members recently published a paper in the Canadian Journal for the Scholarship of Teaching and Learning demonstrating the effectiveness of INTEG 210 in helping students appreciate diverse perspectives, cultivate teams that are safe for risk-taking, and recognize the value of teamwork.) Our hope in creating INTEG 210 was that it would grow into a large service course that would bring in students from all faculties. While we have been attracting a diverse range of students, we would benefit from links with other educational initiatives at Waterloo (as recommended by the external reviewers) to increase the visibility of the course. To this end, we are working with colleagues in Environment to make INTEG 210 a co-requisite for the ENV interdisciplinary capstone course. While INTEG 210 isn't co-taught with other ENV faculty, it is being organized in parallel with the interdisciplinary capstone course, thus allowing us to collaborate more directly with our colleagues in ENV. Our next step is to connect this course to the other interdisciplinary capstone courses being developed at Waterloo.

Second, KI has been contributing to the Future Cities program in ENV. One KI faculty member, for instance, has been teaching the Future Cities undergraduate capstone course while another has been asked to develop a research methods course for the Master of Future Cities (MFC). Unfortunately, the former faculty member's contract is set to expire in June 2025, which means that KI will drop down to four full-time faculty, bringing us to the lowest number

of available teaching tasks since our inception. Given the current economic climate, and the deficits that UW is facing, it is hard to know if we will be able to return to our full complement of teaching tasks, but doing so would certainly give us more capacity to continue building curricular links and offering more service courses for the Faculty of Environment.

The third way we have been building more program links to Environment is to examine our program requirements to see where we might be able to incorporate additional ENV courses. This exercise is being undertaken in parallel with Environment 2035, which seeks to identify a common set of courses for all undergraduate students in Environment. Three courses were identified during the first phase of this process, and we are discussing how we might accommodate these courses in our curriculum. KI is also contributing to this faculty-wide initiative by teaching one of the common courses in the upcoming academic year and has offered to regularly cover one of these courses going forward. We hope that during the second phase of the common first-year initiative, one or more KI courses will be considered. For example, some faculty members in other ENV units have suggested that INTEG 120 (The Art and Science of Learning) would be beneficial for incoming students, especially given the additional challenges students have been experiencing in the transition to university since the start of the pandemic. Additional relevant courses are INTEG 121 (Collaboration, Design Thinking, and Problem-Solving) and INTEG 210 (Making Collaboration Work) given that these courses teach students how to work effectively in teams – a skill in high demand by employers but which tends not to be explicitly taught.

We are also looking to create more opportunities for non-KI students to take KI courses, e.g., to learn more about multi-, inter-, and trans disciplinaryity and to hone their collaborative skills. On the undergraduate side, we are developing a Diploma that we believe will be attractive to a wide range of students. Many students outside KI take one or two KI courses and have remarked that while they would like to take more courses, they do not have the elective space for a full Minor. A Diploma will address this issue as it involves fewer courses than a Minor and is thus easier to add to existing degrees without increasing the time to graduation. Importantly, given that our courses attract students from non-ENV faculties (e.g., Engineering), this will be a great opportunity to bring more non-ENV students into ENV courses.

At the graduate level, we are seeking opportunities to connect with more graduate students across Environment through relevant and unique course offerings. For example, in the latest offering of INTEG 410 (Interdisciplinary Collaboration), we held the course with ERS 674 and BIO 680 and focused on the topic of ‘the science of team science’. We believe it would be beneficial to have other graduate students in ENV take this course; such students would benefit even further if we could open it to non-ENV grad students, giving them a chance to work in interdisciplinary teams with other students across campus.

Outside of building links through courses, we have also been partnering with colleagues in ENV through a new educational initiative, WiSER@Waterloo. WiSER stands for Wellbeing in Student Education and Research and is the brainchild of Carrie Mitchell, Associate Director for the School of Planning. One of the KI faculty has been working with Dr. Mitchell to develop concrete ways to increase wellbeing among undergraduate students in ENV. The first of these leverages KI's strengths in building community among students and between students, staff, and faculty, to determine how we might scale up community-building for a larger program. The second, funded by a UW LITE Grant, consists of a pilot program to train KI and Planning faculty how to increase student wellbeing, belonging, and equity in the classroom (two additional KI faculty are participating in the pilot). Our plan is to scale this up Faculty- and then University-wide. We believe this will better enable KI to "develop a more visible identity on campus as a source of curricular invention and creative academic problem-solving", as the external reviewers noted.

#### **Dean's Response**

I am supportive of KI building programs links where they are both welcomed by other programs and feasible from the perspective of delivering the KI curriculum within existing teaching capacity. I welcome KI's contribution to faculty wide (ENVS) teaching.

- 3. The Knowledge Integration Narrative:** Craft a narrative which recognizes its uniqueness but also its integration into the University of Waterloo Brand. Where does the degree lead for employment or for further, more advanced academic study and achievement? Provide concrete examples of past student outcomes.

#### **Program Response**

This recommendation is well aligned with steps that we have been taking for several months to craft a narrative around KI that better conveys its integration with the University of Waterloo brand. In 2023, we undertook a marketing study, involving interviews with KI students, alumni, and some of their parents, as well as doing a deeper dive into comparable programs across Ontario (e.g., McMaster and Guelph's Arts & Science programs). This work generated a detailed implementation plan which we have shared with the Marketing and Undergraduate Recruitment (MUR) team. Thus far, we made changes to the KI narrative within our website, marketing materials, social media, and recruitment talking points. Given the reviewers' emphasis on the need to highlight where the degree leads in terms of further employment, we are also working with employers to include testimonials on our website and with our alumni to capture overviews of their career pathways. Reviewers also suggested creating summaries of alumni employed in various industries to help demonstrate the

importance and immediate applicability of the program. This is a terrific suggestion, and one that we will prioritize.

Another recommendation was to engage in other multi-year collaborative community-based projects. As it happens, two KI faculty members are involved in a SSHRC Partnership Grant project that was awarded \$2.5 million in 2024. The project will provide foundational skills training for graduate students across Canada in the humanities and social sciences. It draws on work that KI has already been doing to teach students skills such as collaboration, communication, and intercultural awareness. This project allows us to engage with others on a national level and gives us access to educational resources that can help us advance additional objectives.

Finally, as part of our work on improving the narrative around KI, we have been discussing the possibility of a change to our program name. While we are sensitive to the fact that those involved with KI strongly identify with the name, we believe that the broader lack of awareness about our program at least in part stems from the unique name. As we have noted elsewhere, KI goes beyond a traditional Arts & Science degree, which one of the reviewers (who designed one of Ontario's Arts & Science programs) agreed with. However, 'Arts & Science' has much more name recognition in Ontario, and Canada more broadly. In fact, Arts & Science programs at Guelph and McMaster attract significantly more students than does KI despite their similarities. We believe the difference in numbers is largely due to name recognition (and related issues, like search engine optimization). Thus, we are investigating the possibility of a name change, but ideally one that emphasizes our commitment to integrating what students learn from disparate disciplines.

#### **Dean's Response**

I am supportive of KI coming up with a clear narrative, and recognize the challenges associated with this within the Waterloo and Environment brands. I am particularly supportive of KI evolving to become an Arts and Science program in not only content but name.

- 4. Look Outwards:** Actively build links to other interdisciplinary programs within the University of Waterloo (e.g. GBDA at the Stratford Campus) and with other universities, in Canada, the US, and abroad.

#### **Program Response**

This is a terrific recommendation. While we have been building links with other interdisciplinary programs outside UW, we will follow the suggestion to connect with other programs at Waterloo, as well as the programs in the U.S. as suggested by the reviewers.

Thus far, we have connected with Duke's Bass Connections and Ohio State University's Wicked Science program. KI students and alumni have been invited multiple times to serve on an expert panel for OSU's graduate course on Interdisciplinary Team Science; this invitation arose due to external recognition of KI students' significant experience working in interdisciplinary teams. We realize that we have not captured this ongoing partnership on our website or social media, so we will also work to raise the visibility of these opportunities for KI students and alumni (as well as the external recognition of their expertise).

Within Ontario, KI students have developed connections with students in other Arts & Science programs through the Combining Two Cultures (C2C) conference, which is organized for and by undergraduate students in Arts & Science programs. (KI students hosted C2C in 2024.) The Chair of KI has also connected with the Directors of Guelph's and McMaster's Arts & Science programs to develop a closer working relationship. We expect this relationship to be especially fruitful given the geographical proximity of these programs and the fact that they attract large numbers of students (which, we speculated above, may be due to having a more recognizable program name). KI's role in the SSHRC Partnership Grant mentioned above is also generating opportunities to connect with other programs across Canada. This project focuses on teaching foundational skills to graduate students, drawing on many of the skills taught in KI.

Following the reviewers' recommendations, we will connect with programs at Waterloo including GBDA and the Conrad School of Entrepreneurship and Business. Like KI, both emphasize design, collaboration, and leadership, and thus may present opportunities for fruitful partnerships. We appreciate the reviewers recommending programs to connect with in the U.S. as well, including Cal Poly, and we plan to follow up on those recommendations.

### **Dean's Response**

I support this recommendation and look forward to seeing how building links will result in tangible benefits for KI.

- 5. Course Selection Support:** Seek to establish 'space' in other programs for Knowledge Integration students to facilitate their admission for courses with prerequisites.

### **Program Response**

We are glad that the reviewers raised this as it has recently become a salient issue for our students. In the past, UW courses had fewer constraints on reserves, and when such constraints existed, the Associate Chair of KI was typically able to arrange informal agreements to secure space for our students. However, KI students have been reporting more difficulties with this. It is especially challenging for our students when other programs reserve spaces for majors but not for minors given the high percentage of KI students who pursue

minors (and the university calendar system doesn't allow us to see how those reserves are coded). To address this, the Associate Chair and UG Advisor are connecting with various programs on campus to ask if they can reserve spaces for KI students. Since our students are interested in a wide variety of courses, we don't expect to need more than two or three spaces per course, which we are hopeful we will be able to secure.

**Dean's Response**

I support addressing this recommendation via associate chair / UG advisor work, but recognize that, given the sheer number of possible courses coupled with low student numbers, formal course reserves may not be feasible. Solving this challenge may well result in a case-by-case solution.

**Recommendations Not Selected for Implementation**

**Recommendation #1:** While we agree with the reviewers that this is a good idea in general and have taken steps to determine what such a stream would look like for KI, we are putting our implementation plan on hold until we can determine whether we have the resources to mount a co-op stream in the future.



## Implementation Plan

|    | Recommendations  | Proposed Actions  | Responsibility for Leading and Resourcing (if applicable) the Actions     | Timeline for addressing Recommendations   |
|----|--|---|---|---|
| 1. | <b>Co-op:</b> Introduce a co-op component in the program.  | <i>The Dean and Associate Dean, Undergrad, have since asked us to postpone the addition of a co-op stream at this time. The Chair of KI will revisit this decision with the Dean and AD in early 2025 to see if we have support to resume our implementation, with the aim of having a co-op stream effective by Fall 2027.</i>                     | <b>Rob Gorbet</b> , in consultation with the Chair and Associate Chair    | The implementation plan has been put on hold.   |
| 2. | <b>Partnerships/Internal Marketing:</b> Actively build program links to the Faculty of Environment and other disciplinary areas. This requires close collaboration with other programs/entities.   | <ul style="list-style-type: none"> <li>Connect with interdisciplinary capstone coordinators to explore INTEG 210 as co-req (IN PROGRESS)</li> <li>Accommodate ENV common first-year courses (IN PROGRESS)</li> </ul> Pilot WiSER program in the Faculty of Environment (IN PROGRESS)  | <b>Chair</b> , with assistance from other KI faculty                      | We will offer spaces in INTEG 210 to ID Capstone students starting in <b>Fall 2024</b> .<br><br>ENV common courses will be added to KI program in <b>2025</b> . WiSER is being piloted in <b>2024-25</b> , and then scaled up the following year. |
| 3. | <b>The Knowledge Integration Narrative:</b> Craft a narrative which recognizes its uniqueness but also its integration into the University of Waterloo Brand. Where does the degree lead for employment or for further, more advanced academic study and | <ul style="list-style-type: none"> <li>Conduct a robust marketing study (DONE)</li> <li>Create a short-, medium-, and long-term implementation plan, with input from all KI faculty (DONE)</li> <li>Revise MUR materials (DONE)</li> <li>Share key talking points for recruitment events (DONE)</li> <li>Update KI website (IN PROGRESS)</li> </ul> | <b>Chair</b> , with assistance from the Outreach & Administrative Manager | Several of the proposed actions have already been completed.<br><br>We are aiming to complete the remaining actions (e.g., updating the KI website, soliciting employer testimonials) by <b>2026</b> .  |

|    |   |  |   |   |
|----|---|--|---|---|
|    | achievement? Provide concrete examples of past student outcomes.  | <ul style="list-style-type: none"> <li>Solicit employer testimonials (IN PROGRESS)</li> </ul> Create summaries of KI alumni employment experiences (IN PROGRESS)   |   |   |
| 4. | <b>Look outwards:</b> Actively build links to other interdisciplinary programs within the University of Waterloo (eg. GBDA at the Stratford Campus) and with other universities, in Canada, the US, and abroad. | <ul style="list-style-type: none"> <li>Connect with Directors of Ontario Arts-Sci programs (IN PROGRESS)</li> <li>Connect with other ID programs at UW (IN PROGRESS)</li> </ul> Connect with other ID programs in the U.S. and abroad (IN PROGRESS)  | <b>Chair</b>  | The Chair will begin making connections in 2024, with the aim of connecting with all relevant programs by <b>2026</b> (ideally in time for the 2-year progress report). |
| 5. | <b>Course Selection support:</b> Seek to establish 'space' in other programs for Knowledge Integration students to facilitate their admission for courses with prerequisites.                                   | <ul style="list-style-type: none"> <li>Chair to meet with current and previous UG Advisor to better understand the nature of the problem (DONE)</li> </ul> Associate Chair to work with UG Advisor to determine which programs we need to connect with to secure reserve spaces for KI students. | <b>Associate Chair,</b><br>with assistance from the Undergraduate Advisor | The ACUG will work with the UG Advisor on this during the 2024-25 academic year, with the aim of having identified key courses by <b>2025</b> .                         |

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

Date of next program review \_\_\_\_\_ 2029-2030  
Date

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**Signatures of Approval**



\_\_\_\_\_ 8-April-2025  
Chair/Director Date

\_\_\_\_\_ Date  
AFIW Administrative Dean/Head (*For AFIW programs only*)



\_\_\_\_\_ May 07, 2025  
Faculty Dean Date

**Note:** AFIW programs fall under the Faculty of ARTS; however, the Dean does not have fiscal control nor authority over staffing and administration of the program.



\_\_\_\_\_ Jan. 15, 2025  
Associate Vice-President, Academic Date  
(For undergraduate and augmented programs)