Senate Graduate and Research Council

October 21, 2024

10:30 a.m. - 12:00 p.m.

Needles Hall

NH 3318 / Virtual Option

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2024 10 21 Senate Graduate and Research Council Meeting Book

AGENDA

OPEN SESSION

Governance Resources

Link to Governance Resources

1. Conflict of Interest

1.1 Conflict of Interest	Declaration	3

Consent Agenda
To approve or receive for information the items on the consent agenda, listed as items 2-4 below.

10:35 a.m.	2. Minutes of September 16, 2024 Meeting	Decision (SGRC)	
	2.1 2024-09-16 SGRC Minutes		4
	3. Research Ethics		
	3.1 Waterloo Clinical Research Ethics Board (CREB) [Terms of Reference Update]	Decision (SGRC)	6
	4. Graduate Awards		
	4.1 Buitrago Opportunity Graduate Scholarship in Engineering [trust]	Information	7

Regular Agenda

	5. Business Arising from the Minutes	Oral/Input	
10:40 a.m.	6. Co-Chair Remarks	Information	
10:55 a.m.	7. Credentials Framework Report (David DeVidi & Cathy Newell Kelly)		
	7.1 Overview of Credentials Framework	Discussion	8
	7.2 Credentials Framework Report	Discussion	10
11:15 a.m.	8. Freedom of Expression and Inclusive Engagement Taskforce Report (Christine McWebb)	Information	
11:35 a.m.	9. New CREATE Grant Proposal/Procedures (Bernard Duncker)	Information	
	10. Other Business	Oral/Input	
	11. Adjournment	Oral/Input	

Next Meeting: November 18th, 2024 10:30 a.m. - 12:00 p.m.

Excerpt from Senate Bylaw 1

8. Declarations of conflict of interest

8.01	At the beginning of each meeting of Senate or any of Senate's committees or councils, the chair will call for members to declare any conflicts of interest with regard to any agenda item. For agenda items to be discussed in closed session, the chair will call for declarations of conflict of interest at the beginning of the closed portion of the meeting. Members may nonetheless declare conflicts at any time during a meeting.
8.02	A member shall be considered to have an actual, perceived or potential conflict of interest, when the opportunity exists for the member to use confidential information gained as a member of Senate, or any of Senate's committees or councils, for the personal profit or advantage of any person, or use the authority, knowledge or influence of the Senate, or a committee or council thereof, to further her/his personal, familial or corporate interests or the interests of an employee of the university with whom the member has a marital, familial or sexual relationship.
8.03	Members who declare conflicts of interest shall not enter into debate nor vote upon the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).
8.04	Where Senate or a committee or council of Senate is of the opinion that a conflict of interest exists that has not been declared, the body may declare by a resolution carried by two-thirds of its members present at the meeting that a conflict of interest exists and a member thus found to be in conflict shall not enter into debate on the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Minutes of the September 16, 2024 Meeting

Present: Steven Bednarski, Phil Bigelow, Sue Ann Campbell, David Clausi, Nancy Collins, Ashley Day (secretary), Robert de Loe, Peter Deadman, Charmaine Dean (co-chair), Bernard Duncker, Anna Esselment, Ana Ferrer, Mike Grivicic (secretary), Abhishesh Homagain, Brian Ingalls, Julie Joza, Joseph Meleshko, Ian Milligan, Carlee Ann Montgomery, Marina Mourtzakis, Nicholas Pellegrino, Martin Ross, Marianne Simm, Siva Sivoththaman, Mike Szarka, Clarence Woudsma (co-chair)

Resources/Guests: Catherine Burns, Carrie MacKinnon Molson, Will Percival, Melanie Will, Susan Willsie

Absent: Neela Hassan, Shirley Tang, Mrittika Dreesha

Organization of Meeting: Clarence Woudsma took the chair, and Ashley Day acted as secretary. The secretary advised that a quorum was present. The agenda was approved without formal motion.

1. **CONFLICT OF INTEREST**
   No conflicts of interest were declared.

CONSENT AGENDA
Council heard a motion to approve or receive for information the items of the consent agenda. Bigelow and Ferrer. Carried.

2. **MINUTES OF THE JUNE 16, 2024 MEETING**
   Council approved the minutes of the meeting as distributed.

3. **RESEARCH ETHICS**
   Council approved the membership update for the Clinical Research Ethics Board (CREB) & Human Research Ethics Board (HREB), as distributed.

4. **GRADUATE AWARDS'**
   Council approved item (a)-(d) and received items (e)-(g) for information.

5. **CURRICULAR SUBMISSIONS**
   Council approved item (a) on behalf of Senate.

6. **RCR Integrity Administrative Guidelines**
   Council received item (a) for information.

REGULAR AGENDA

7. **BUSINESS ARISING FROM THE MINUTES**
   Council received the results of the June 25-28, 2024 E-Vote for information.

8. **CO-CHAIR'S REMARKS**
   Dean spoke to the following: the committee structure review of SGRC is ongoing; the goal is to have a recommendation to Senate Executive Committee by the end of the year. Next steps are that Duncker will meet with the ADRs outside of SGRC, and in parallel the Secretariat team will be conducting further research on comparator institutions.

   A task force has been developed to review institutional partnerships and how the University conducts work in this space. The taskforce will be led by Christiane Lemieux and Ian Milligan and the first meeting will take place on October 1st.
   Woudsma spoke to the following: ongoing work around Graduate WIL space; applied research for Graduate WIL will tie in with work underway with D. DeVidi and the recently presented "Alternative Credentials Framework report (to Senate earlier this year); co-op fees approval will be moving forward to the Board.

   Woudsma invited Mike Grivicic to speak to the implementation of the Board Effect Portal, and he observed that implementation will include a "shadow period" where SharePoint and Board Effect will run simultaneously, where eventually BoardEffect will be the main portal for information and documentation related to all governance work. If members have any questions, please reach out to the Secretariat.

Mike Grivicic introduced Ashley Day, a new member of the Secretariat team who will be supporting this council and other governance bodies within the Senate Portfolio.

9. **New Program: MASc and PhD in Biomedical Engineering**
    Siva Sivoththaman presented on behalf of SYDE, ECE and MME who are seeking to establish a Doctor of Philosophy (PhD) and research-based Master of Applied Science (MASc) degrees in Biomedical Engineering (BME). He noted: the proposal is a natural evolution of the undergraduate BME which launched 10 years ago; a number of faculty have been hired in this area to support the undergraduate program and will now support graduate research through these new programs; expected admission of 100 students for first cohort; feedback in the approval process to date have been very supportive, including the full support of the Dean.

    A motion was heard to recommend the proposal to Senate as part of the regular agenda, as presented. Sivoththaman and Ross. Carried.

10. **Research Centres and Institutes: Waterloo Centre for Astrophysics (WCA) Renewal**
    Will Percival presented in support of the renewal of the WCA and spoke to the following: the research centre has doubled its publication rate since 2018; increased uptake in courses in the same period; WCA currently has 16 postdoctoral students and carries a stature where WCA is competing with Harvard and the Hubble Fellows program; there has been an increased effort for outreach via Outreach Coordinator Roan Haggar; including Ontario Postsecondary Access and Inclusion Program, events at the Kitchener Public Library; future directions for the WCA are to continue to do world class astronomy research, expand outreach and to secure funding to maintain the momentum that the WCA has gained. A motion was heard to approve report on behalf of Senate, as presented. Ferrer and Sivoththaman. Carried.

11. **2025 THE Digital Health Summit**
    Catherine Burns provided a presentation on the upcoming Times Higher Education Digital Health Summit which will take place April 11 & 12, 2025. She highlighted the opportunity for Waterloo to promote the institution's thought leadership, demonstrate our impact on our community, set the stage for collaboration and showcase a wide range of topics including Health Policy, Health Technologies, Interventions, Data and public health. There is a planning team in place if members want to be engaged or have questions (Co-Chairs: Kelly McManus and Michael Dorr). Members discussed: how to create awareness in the Faculties; how to participate and to promote engagement of students; please share any recommendations for speakers to either Burns or McManus.

12. **Waterloo Values**
    Melanie Will and Susan Willsie presented an update on the Institutional Values project: values project speaks to UW culture, values and actions, and why they are important; what do we value and how does it shape our culture; aim of the project is for the message go wider, to provide common language, and to connect with the campus community about the work. Next steps include a taskforce being established, values champions being identified, integration into onboarding and performance development, behaviour statements are in progress. Members discussed how changes to existing processes would be made through the taskforce; ensuring people are empowered to make change and the importance of having the right decision makers in the room; using the values as guidelines to daily work and decision making.

    As an additional resource, Imperial College offers case studies on their website that offers context as a follow-up to the conversation: https://www.imperial.ac.uk/about/values/embedding-the-values/casestudies/ The Waterloo Values can be found on the Values webpage: https://uwaterloo.ca/values/

13. **OTHER BUSINESS**
    With no further business in the open session, Council moved into confidential session.

14. **ADJOURNMENT**
    With no further business, the meeting adjourned. The next meeting will be held on Monday, October 21, 2024, 10:30 a.m. to noon in NH 3318.

September 24, 2024   Ashley Day
                                                                   Governance Officer

Memorandum

To: **Members, Senate Graduate and Research Council (SGRC)**

From: **Julie Joza, Director, Research Ethics**

Date: **September 30, 2024**

Subject: **Terms of Reference Update for a Waterloo Research Ethics Board**

This memo outlines a Terms of Reference update to be implemented for Waterloo's Clinical Research Ethics Board (CREB). This update is for consideration and approval by the Senate Graduate and Research Council.

The Clinical Research Ethics Board (CREB) is looking to add an additional member to the board. The addition is to go from one student or post-doctoral fellow to two. Expanding the number will help ensure the student perspective is well represented, which is particularly important as students and post-doctoral fellows are often carrying out, as well as participating in research studies. This change will result in CREB having the same number of student and post-doctoral members as both the Human Research Ethics Board and the Animal Care Committee.

The change to the terms of reference is limited to the section shown below:

The CREB shall consist of a minimum of 1~~1~~2 voting members:

- three faculty members including
    - one faculty member with expertise in vision science from Optometry
    - one faculty member with expertise in Pharmacology or Immunology/Toxicology from Pharmacy
    - one faculty member with expertise in the science of human movement from Kinesiology
- two clinical physicians knowledgeable about clinical trials research
- one lawyer preferably knowledgeable about clinical trials research and privacy
- one member knowledgeable in ethics/bioethics
- two community members who have no affiliation with the institution
- two ~~one~~ member~~s~~ that are ~~is a~~ student~~s~~ or post-doctoral fellow~~s~~ preferably with experience in the conduct of research with humans
- one member with expertise in statistical methodologies

Reminder: SGRC members who wish to learn more about the REBs are encouraged to contact Julie Joza, Director, Research Ethics at jajoza@uwaterloo.ca. Julie will be pleased to discuss with SGRC members in advance of the meeting the information they may need to help support their decision.

September 30, 2024

TO: Tim Weber-Kraljevski, Governance Officer

FROM: Heidi Mussar, Associate Director, Graduate Financial Aid & Awards

RE: Agenda items for Senate Graduate & Research Council – October 2024

Items for Information

a) **Buitrago Opportunity Graduate Scholarship in Engineering – trust**
    This scholarship was originally created in 2020 with several amendments. The scholarship is being renewed with a gift of $50,000 and some additional amendments to clarify the payout of the scholarship. The clarity is as follows:

    -   The scholarship value is "up to" $50,000, with payments made over the standard academic length for the student's respective master's program in Engineering at Waterloo.
    -   Future instalments of the award are contingent upon maintaining good academic standing (as defined by the recipient's academic program) and full-time enrolment in a master's program in the Faculty of Engineering.
    -   In the event that a recipient fails to meet the renewal criteria or completes their degree early, residual funds may be used to offer additional entrance scholarships based on the award criteria.

    The updated award description is as follows:

    One scholarship, valued at up to $50,000, will be provided to graduate students who will be registered full time in a course-based or research-based master's program in the Faculty of Engineering. The award will be paid in equal installments over the standard program length for their respective master's degree as long as they remain registered full time. Selection will be based on academic excellence (minimum cumulative average of 75% or equivalent in their current or most recently completed program). Preference will be given to a student who received a degree in Mechanical Engineering from the Industrial University of Santander, Colombia then to a student who received any degree in Engineering from the Industrial University of Santander, Colombia, then to a student who received any degree in Engineering from any university in Colombia. A recipient will be selected in the Winter term based on the student's application for admission to the program. This fund is made possible by a donation from Jorge Buitrago, a proud alum, (MASc'82 Mechanical Engineering) who wants fellow students to experience graduate studies in Waterloo.

Credentials Framework: Overview

The following is a brief summary of the work and recommendations stemming from the Credentials Framework project, which was carried out in 2022-2023. Additional details can be found in the attached Credentials Framework Report and will be elaborated on at our meeting. Questions are welcome.

The University of Waterloo's current framework for academic credentials was designed in an earlier era. Many external developments suggest the need for its reconsideration, including shifting priorities in the business world and at other universities, including a growing focus on (i) credentials that indicate the acquisition of desirable skills sought by employers, and (ii) learners who are different from traditional students (e.g., at different stages in their lives and careers).

A project team was tasked with rethinking Waterloo's credentials framework with this context in mind as one of a series of initiatives that will help prepare the governance, administrative, and procedural ground for us to innovate, experiment, and evolve in the fields of teaching and learning—particularly related to interdisciplinarity and student flexibility and choice, a signature commitment in Waterloo's 2020-25 strategic plan.

The resulting recommendations are either program-related (flexible pathways that increase student agency over their education and creating new pathways into a Waterloo education) or pertain to governance/oversight (focused on the conditions required to facilitate the development of those pathways). The following is a summary of the project team's recommendations:

1. Establish clear criteria for use of the terms, "course" and "course equivalent" for all for-credit credentials.
2. Establish standard criteria for existing credentials, as a means of facilitating recommendation 3 and more.
3. Prepare the University for increased flexibility and student agency.
4. (a) Establish classifications for microcredentials that satisfy Ministry requirements and categorize credentials in ways that facilitate decision-making, e.g., it may make sense to classify all assessed microcredentials in terms of Level (general interest vs. graduate); Intensity (number of hours of effort); in addition to (iii) distinguishing between practical and theoretical content. (b) Ensure that microcredentials have clearly articulated learning outcomes that align with and justify these classifications.
5. Support "lifelong learning" by investigating mechanisms to create opportunities for learners to achieve "for-credit" credentials even if they are not actively pursuing a degree. Doing so will set a foundation for ideas like open enrolment and making it possible for mid-career professionals to enrol in graduate certificate programs without setting out to pursue a degree, etc.

6. Investigate and experiment with approaches that can help attract students from groups traditionally underrepresented at Waterloo.
7. Implement mechanisms for approval to stack non-credit credentials into for-credit credentials, ensuring academic credibility in ways that are efficient and appropriate to the size of the credential.
8. Update the University's formal approval mechanism by creating a Senate Alternative Credentials Committee (SACC) to handle alternative (non-credit) credentials.
9. SACC should be nimble while providing appropriate academic oversight: smaller than SUC/ SGRC; online and asynchronous work; voting members include a rep from each Faculty, AVPA, AVPGSPA; include "resource" members from relevant ASUs that can inform decision-making.
10. Form a new Senate Committee to oversee academic quality assurance processes at the graduate, undergraduate and non-credit levels.
11. Lead a consultative process to design QA processes for alternative credentials.

1   Contents

Credentials Framework

Executive Summary

The University of Waterloo's current framework for academic credentials was designed in an earlier era. Many external developments suggest the need for its reconsideration, including shifting priorities in the business world and at other universities, including a growing focus on (i) credentials that indicate the acquisition of desirable skills (i.e., those sought by employers) and (ii) learners who are different from typical/traditional university students (e.g., at different stages in their lives and careers).

Internally, the need for a review of our credentials framework is recognized by the University's senior academic leadership as one of a series of initiatives that will help prepare the governance, administrative and procedural ground for us to innovate, experiment, and evolve in the fields of teaching and learning—particularly as these relate to interdisciplinarity and student flexibility and choice.

The focus of this report is on *credentials*—i.e., a means of certifying that a person has achieved a high degree of knowledge (both conceptual understanding and practical ability) in some area, issued by an institution widely recognized and trusted as competent to attest to a learner's achievement. It is an unfortunate but common practice to conflate credentials with the mechanisms used to communicate that a learner has achieved a credential (i.e., a degree vs. a piece of parchment, or a microcredential vs. a badge that can be shared via social media). While it is hard to avoid this confusion—and the question of what credentials should be on offer is obviously related to questions about how to display credentials—the focus of this report is not the "methods of transport" for demonstrating credentials, but on what achievement those methods denote.

Recommendations

We list the report's recommendations here for convenience. Rationales are detailed in the body of this report. It is worth emphasizing that some of the recommendations are readily implementable and can be acted on quickly (e.g., recommendations 8, 10, and 11) while others will take much more work (e.g., recommendations 1 and 2, which have wide institutional implications and are associated with a higher complexity of detail which has not been (and would not appropriately be) worked out by the authors of this report.

The recommendations fall into two broad categories—program-related and governance/oversight-related:

- Program-related recommendations focus on meeting one of the signature commitments in Waterloo's 2020-2025 strategic plan: "empower[ing] students to leverage diverse learning experiences by creating more flexible pathways." We distinguish two senses in which the term 'flexible pathways' is used: (a) increasing student agency over their own education by, for instance, offering a wider range of possible programs or pathways ("flexible learning pathways"), and (b) the creation of new pathways into a Waterloo education, offering different kinds of programming and reducing barriers to programs ("audience-broadening"). These program-related recommendations also involve conditions that would

support both flexible learning pathways and audience-broadening: facilitating "stacking" of credentials where appropriate; facilitating the adoption of new kinds of credentials; and positioning the University to meet various sorts of requirements that are consequences of offering new sorts of credentials.

- Recommendations related to governance/oversight focus on the conditions required to facilitate programming-related recommendations.

Abbreviated list of recommendations:

1. Establish clear criteria for use of the terms, "course" and "course equivalent" for all for-credit credentials.
2. Establish standard criteria for existing credentials: Honours Bachelor's degree, Honours Bachelor's degree (co-op), Four-year general Bachelor's degree, Three-year Bachelor's degree, Honours Specialization, Specialization, Major, Minor.
3. Prepare the University for increased flexibility and student agency.
4. (a) Establish classifications for Waterloo's microcredentials that (i) satisfy Ministry requirements for preferred status (referred to as Ontario Microcredentials status at the time of writing of this report), and (ii) categorize these credentials in ways that facilitate subsequent decision-making within the University. This classification should apply to microcredentials aimed both at external audiences and degree-seeking students.
   (b) Ensure that all microcredentials have clearly articulated learning outcomes that align with and justify these classifications.
5. As part of the lifelong learning portfolio of the University, the University should actively investigate mechanisms that will create opportunities for learners not actively pursuing a degree to achieve credentials involving for-credit courses.
6. The University should actively investigate and experiment with approaches that can help attract students from groups traditionally underrepresented at Waterloo.
7. Implement mechanisms for approval to stack non-credit credentials into credit credentials at both the undergraduate and graduate levels. While it is important to ensure academic credibility via these approval processes, they should be efficient and appropriate to the size of the credential.
8. Update the University's formal approval mechanisms by creating a new Senate committee to handle alternative credentials (aimed at "external" audiences). We propose that it be called the Senate Alternative Credentials Committee (SACC).
9. The new SACC needs to maintain the nimbleness for which ACAC has been praised while providing an appropriate the degree of academic oversight for the sorts of credentials on offer.
   - SACC should be much smaller than either SUC or SGRC (as ACAC is currently).
   - SACC should continue to work primarily online and asynchronously.
   - SACC's voting membership should include a representative from each Faculty in addition to the AVPA and AVP GSPA.
   - SACC's membership should include "resource" members from relevant ASUs who can inform decision-making in a timely and effective manner.
10. Form a new Senate Committee to oversee academic quality assurance processes at all of the graduate, undergraduate and non-credit levels.

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11. Task the AVPA, the AVP GSPA, and Academic Quality Assurance and Continuous Improvement Office with leading a consultative process in designing appropriate quality assurance processes for alternative credentials.

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1   Introduction

The University of Waterloo's current framework for academic credentials was designed in an earlier era. Many external developments suggest the need for its reconsideration. To name a few: the ballyhooed move of many high-profile employers—especially large high-tech firms such as IBM and Google—to remove the requirement for traditional credentials such as Bachelor's degrees for many jobs; the related focus at some universities to focus on other ways of certifying learning achievement by students, particularly that are more explicit in their focus on specific skills; a growing need for reskilling and educational renewal for mid-career professionals and other sorts of lifelong learning; and a recognition of the need to open up university education to groups who historically have had less opportunity to avail themselves of it.

Internally, the need for a review of our credentials framework is recognized by the senior academic leadership of the University as one of a series of initiatives that will help prepare the governance, administrative and procedural ground for us to innovate, experiment, and evolve in the fields of teaching and learning in our pursuit of the aspirational goals developed through broad consultation with the University community and articulated in the current Strategic Plans and the Waterloo at 100 document. To note just a couple of examples:

- The 2020-25 strategic plan *Connecting Imagination with Impact* includes a "signature commitment" to "empower students to leverage diverse learning experiences by creating more flexible learning pathways." This commitment is worded to suggest that these learning opportunities and flexible pathways are part of the traditional core activities of the University, namely education for degree-seeking students but, especially in light of the plan's objective to "Establish a lifelong learning centre that will enable and encourage our alumni and other professionals to reskill in a society that increasingly requires continuous learning," also suggests a need for flexibility for non-traditional learners.
- Both the strategic plan and Waterloo @100 state a commitment to interdisciplinary academic programming to address the complex problems of our complex world. It is a worthwhile question to ask whether changes or additions to our existing credentials framework can facilitate achieving this goal.

1.1   Focus of this report

Precise definitions of any term are rarely possible for any interesting notions, and those used in this report are no different. Nevertheless, it will serve us well to try to be as clear as we can.

Clarification: Separating credentials from their "method of transport"

A *credential,* for the purposes of this report, is usefully characterized by the following points[1]:

- A means of certifying that a person has achieved a high degree of knowledge in an area
- "Knowledge" in this claim needs to be interpreted broadly as including an appropriate mix of conceptual understanding and practical ability
- It is issued by an institution (e.g., a university) widely recognized and trusted as competent to attest to a learner's achievement in this way

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[1] Adapted from *Credential Confusion: A call for uniformity in practice and terminology*, Mike Simmons et al., AARCO report, p.6

We use the vague term "a means" here deliberately. Especially when it comes to some newer forms of credential, a common source of confusion is conflating (i) **the credential itself** with what one report helpfully refers to as (ii) **the "method of transport" for the credential**. In other words, is a "badge" the institution's attestation that a learner *learned something*, or is it a notation that the student posts on a social media platform? The distinction is easier to see in more traditional credentials: a degree is a credential granted by a university and we easily distinguish it from the parchment handed out at a convocation ceremony or a transcript listing the courses completed and grades achieved by the learner along the way.

The focus of this report is *credentials*, and not the question of "methods of transport" for credentials. While it is not always possible to keep these distinctions from bleeding into one another, the committee's view is that questions about credentials themselves need to be answered, at least in a preliminary way, before sensible decisions can be made about appropriate "methods of transport" for those credentials.

1.2   The purpose of establishing a new credentials framework at Waterloo

A new credentials framework should aim to satisfy a range of goals:

- It should facilitate answers to questions like:
    - What credentials should Waterloo be in the business of offering now?
    - Can we set up structures that will open up options for offering additional sorts of credentials in the future so the University can be nimbler in its adaptation to changing conditions?
- It should help establish and maintain consistent use of terminology in a field where such consistency is woefully lacking, and so help communicate the value of Waterloo credentials to external and internal audiences.
- It should answer crucial *governance* questions, so that internal stakeholders (e.g., Senate) and external audiences can be confident that the University can play the role of "institution widely recognized and trusted as competent" to attest to learning as the credentials signify.
- It should clarify the relationship between different sorts of credentials, for instance whether and under what conditions credentials developed with a mid-career learner in mind should be "stackable" into a credit that counts towards something like a traditional degree.

The committee that produced this report was not starting from zero with respect to these goals. In the mid-to-late 2010s, the Undergraduate and Graduate Operations Committees worked to standardize terminology relating to the most familiar sorts of credentials at Waterloo. More recently, an Alternative Credentials working group has worked towards standardizing descriptions of credentials and programming aimed at lifelong learners. The Alternative Credentials Approval Committee was set up in 2021 to support the launch of WatSPEED as a mechanism for governance and academic approvals and has implemented this standardized language.

As outlined in Appendix B, the committee behind this report consulted widely and did considerable research about the types of credentials offered by comparable universities, including (among many others):

- Two-year Associate Degrees
- MPhil (or similar) for people who complete all PhD requirements except the dissertation (or who fail dissertation exam)
- Competency-based certificates that fall outside traditional curricula
- Acknowledgement of student activities outside curricula (e.g., recognition of involvement in student leadership of community-based service)
- Credentials aimed at University staff (and others): leadership, enrolment management, supporting equity, etc.

Discussion of these topics is very difficult without spilling over into related topics like the financial implications of particular avenues, the complications of integrating "open enrolment" students into courses also offered to degree-seeking students, and so on. Full discussion of these related topics would make this report unwieldy, so we will not address any of them in detail. Nevertheless, where there are clear relationships to such matters, we will mention them.

2 Context

As noted, it is difficult to provide informative, accurate and non-circular definitions of some key terms that we will use repeatedly in this document. The following sections outline the types of credentials offered at Waterloo, their approval pathways, and the Institutional Quality Assurance process. See Table 1 for an overview of this information.

2.1 "Degree"

A crucial notion for us is the idea of a degree. Waterloo's Institutional Quality Assurance Process document refers to the Quality Council's definition, which is as follows:

> An academic credential awarded on successful completion of a prescribed set and sequence of requirements at a specified standard of performance consistent with the OCAV's Degree Level Expectations and the university's own expression of those Expectations (see Appendix 2) and achievement of the degree's associated learning outcomes.

Both the Council's and the University's degree level expectations make liberal use of vague terminology such as "general knowledge of … a discipline" for a bachelor's degree and "systematic understanding … at, or informed by, the forefront of their academic discipline" for a Master's degree. It is clear that there is a substantial reliance of long-established practices and standards to enable a community of scholars to judge whether particular "sequences of requirements at a specified standard of performance" are worthy of a degree credential for various levels of degree. For present purposes we can do no better than to adopt this as our working definition of "degree," and to take this as a basic conceptual building block in what follows.

2.2 "For credit" vs. "alternative" credentials

Next it will be useful to distinguish "for credit" and "alternative" credentials. Generally, at Waterloo the prescribed requirements for a degree include specified courses and milestones (e.g., at the graduate level milestones might include comprehensive exams, major research projects, or theses). We shall refer to such courses and milestones which *can* count towards a Waterloo

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degree as "for credit." We shall also refer to other sorts of credentials for which the requirements are "for credit" (e.g., specializations, minors, graduate certificates) as "for credit." With this understanding, Waterloo currently offers a variety of "for-credit" academic credentials including undergraduate, professional, and graduate programming.

Waterloo also offers credentials that do not count as "for credit" in this sense. These include:

- WatSPEED courses, including some courses formerly offered by the Centre for Extended Learning's former professional development unit. Some WatSPEED certificates involve completion of a series of related courses.
- "Certificate" offerings delivered by academic support units like the Centre for Teaching Excellence and Cooperative and Experiential Education, most aimed at degree-seeking students, others at staff or other non-degree-seeking learners.
- Professional and personal development opportunities for learners internal to Waterloo through Organizational and Human Development.

Waterloo is by no means alone in offering non-credit credentials. Terminology in this general area is used very inconsistently between institutions. For instance, sometimes a *microcredential* is taken to refer to a single course, normally of less than 12 weeks duration (in Ontario, this is required to be eligible for OSAP funding); others will refer to a sequence of related courses as culminating in a microcredential. The terminology for the category is also not consistent. The previously cited AACRAO report recommends the name "innovative credential," preferring it to the more common "alternative credential" on the grounds that once alternative credentials become established, they will no longer be "alternative." Granting this point, it seems like they will similarly no longer count as "innovative" at that same point. Since the name "alternative credential" has been in use at Waterloo, that is how we will continue to refer to them in this report.[2]

2.3   Approval pathways

Ensuring and attesting to the academic value of all credentials with the University of Waterloo name attached to them is ultimately the business of the University's Senate. There are three bodies which either recommend approval of credentials to Senate or to which Senate has delegated the task of approving credentials:

- **Senate Undergraduate Council (SUC)** is responsible for approving or recommending three-year General degrees and four-year Honours degrees, including Co-op and Regular programs, and approval of the requirements (e.g. courses) required to complete them. It also approves related credentials such as minors and specializations.
- **Senate Graduate and Research Council (SGRC)** is responsible for approving or recommending (both research and course-based/professional) Master's degrees and PhDs, as well as Type 1, 2, and 3 graduate Certificates. It also approves the requirements (e.g. graduate courses) for these degrees.
- **The Alternative Credentials Approval Committee (ACAC)**, established in 2021, is responsible for approving assessed and participation-based alternative (non-credit)

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[2] The AACRAO report notes that the category is also sometimes referred to as "digital credentials," which is problematic since not all such credentials are offered online.

certificates (predominantly including WatSPEED credentials, but also credentials offered through Cooperative and Experiential Education and the Centre for Teaching Excellence, and potentially by others in the future).

Waterloo also has several alternative (non-credit) professional development credentials that were approved by a predecessor of ACAC and that are marketed for learners external to Waterloo. Many of these courses are marketed as "microcredentials." Waterloo is one of the most active universities in the Ontario government's microcredentials database, i.e., the University offers many microcredentials that satisfy the Ministry's criteria for eligibility for OSAP funding.

Credentials for learners internal to the University, including workshops focused on regulatory requirements (e.g., safety training for lab personal) or personal growth (courses offered through Organizational and Human Development or the Office of Equity, Diversity, Inclusion, and Anti-Racism) do not have a formal Senate-related approval pathway.

3   Institutional quality assurance

Waterloo's "for-credit" offerings are, directly or indirectly, subject to the University's Institutional Quality Assurance Process (IQAP). Degree programs are subject to a cyclical review, one component of which is assessment of the appropriateness of program requirements. Currently none of our alternative credentials are subject to IQAP processes, though ACAC asks that all proposals for assessed credentials come with a plan to assess quality over time, the first of which were received and accepted by ACAC in 2023.

Table 1: Credentials offered by Waterloo and their approval pathway

Type of credential	Credentials offered	Approval/recommendation responsibility	Examples
Undergraduate	Bachelor's degrees (e.g., 3-year General; 4-year Honours) Minors Specializations Options	Faculty Council(s) → Senate Undergraduate Council → Senate	Honours BA in English Minor in Urban Studies Engineering specialization in Heat and Mass Transfer Bioinformatics option
Graduate	Master's PhD Type 1,2,3 Graduate Diplomas (GDips)	Faculty Council(s) → Senate Graduate and Research Council → Senate	MSc in Biology PhD in Kinesiology GDip in Computer Networking and Security
Non-credit/ alternative microcredentials	Non-credit certificates (either assessment or participation-based)	Alternative Credentials Approval Committee (ACAC)	WatSPEED, CEE, CTE courses
Professional development "microcredentials" *(external)*	Offered by WatSPEED, inherited from CEL's former PD unit	Professional Development Advisory Committee (Predecessor of ACAC)	Courses designed for career development (manufacturing, health care, Executive, leadership, etc.)

Professional development *(internal)*	Offered by OHD, IST, EDI-R, safety office, etc.	n/a	Lab safety Personal growth

4 Recommendations

The Committee offers recommendations in two broad categories: program-related and governance/oversight-related.

4.1 Programming

The recommendations in this section focused on meeting one of the signature commitments in Waterloo's 2020—2025 strategic plan: "empower[ing] students to leverage diverse learning experiences by creating more flexible learning pathways." This report differentiates between two distinct categories of "flexible learning pathways":

a. Increasing student agency over their own education by, for instance, offering a wider range of possible programs of study or pathways through particular programs of study. **In this report, we continue to refer to this as "flexible learning pathways."**

b. The creation of new pathways into a Waterloo education—reaching new student audiences by developing different sorts of programming (e.g., WatSPEED programs aimed at mid-career professionals), reducing barriers to programs (e.g., alternative admission processes or open enrolment), and so on. **In this report, we refer to these strategies as "audience broadening."**

In addition to facilitating the development of flexible pathways and audience broadening, the recommendations in this section facilitate the development of the following *conditions* that support these goals:

- Facilitating "stacking" where appropriate, between distinct categories of credentials. The most frequent discussions of "stacking" involve allowing mid-career learners to pursue non-credit credentials which, taken together, can lead to a more traditional for-credit credential, like a degree. As we mention below, though, the idea of stacking non-credit credentials as a possibility for degree seeking students was raised several times during our consultations.
- Facilitating the adoption of new kinds of credentials[3] in ways that:
  - allow clear articulation of their purpose, and
  - distinguishes them from existing credentials.
- Positioning the University to meet the anticipated requirements to
  - qualify for government funding for microcredential offerings, and
  - brand Waterloo credentials as Ontario Microcredentials.

During its consultations, the committee also heard many suggestions of ideas for alternative credentials (i.e., not-for-credit recognition for things such as involvement in student leadership or in helping the University reach its accessibility goals) aimed at students enrolled in a degree program at Waterloo.

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[3] Note: Should the University opt to do so.

The following programming-related recommendations fall into three distinguishable but sometimes overlapping sub-categories: (1) those related to for credit offerings; (2) those related to alternative/non-credit credentials; and (3) those having to do with the relationship between first two sub-categories.

4.1.1 Better use of existing credit credentials

> **Recommendation 1:**
>
> **Establish clear criteria for use of the terms, "course" and "course equivalent" for all for-credit credentials.**
>
> **Responsibility: Undergraduate Operations, Graduate Operations**

Rationale and Implementation notes: The 0.5 credit "half-course" serves as a basic building block at Waterloo in almost all programs. (This probably derives from the outsized influence of Co-op at Waterloo, which makes the eight-month "full credit" courses familiar at many schools impractical for many Waterloo programs). For present purposes we will follow Waterloo standard practice and use "course" to generally refer to a 0.5-credit course.

- Might there be a benefit to introducing a smaller unit of credit? During consultations, the committee heard expressions of frustration about "the tyranny of the 0.5 credit course," and a desire to allow smaller achievements to stack into a 0.5 credit. For example, multiple stakeholders, suggested that a variety of small modules related to equity and diversity could be bundled in a way that builds a "diversity" requirement for an undergraduate degree.
- Unfortunately, here is no general understanding of the criteria associated with the general understanding of what ought to be expected in terms of student achievement, effort, class time, or anything else to count as such a "half-credit" course. A satisfactory set of criteria should include answers to such questions and some general conditions about coherence of learning outcomes (to enable judgements about when to approve, for instance, the bunding of modules into credits).

Thinking through the "value" of credits and credentials in this way will facilitate much of the work described in the other recommendations in this section.

> **Recommendation 2:**
>
> **Establish standard criteria for[4] credentials: Honours Bachelor's degree, Honours Bachelor's degree (co-op), Four-year general Bachelor's degree, Three-year Bachelor's degree, Honours Specialization, Specialization, Major, Minor**

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[4] The committee wants to be explicit about why this recommendation is directed only at the undergraduate level. In our consultations, and in particular in consultations with the AVPA GSPA, it was suggested that there was no need for an analogue of Recommendation 2 at the graduate level (because existing mechanisms that facilitate the sort of flexible pathways Recommendation 2 advances already exist at the graduate level

These criteria should include:
- A specific number of credits/credit equivalents required by each credential type;
- For undergraduate degrees, criteria such as completion of an appropriate UCR course and "breadth requirements"
- A requirement for coherence of overall learning outcomes for each credential type.

For degree programs, these outcomes should be organized around something deserving of the name of an academic discipline to satisfy the Undergraduate Degree Level expectations (UDLEs), including depth of knowledge in "a discipline."

Minors and other lesser credentials might be organized around more specialized topics.

Rationale and implementation notes: This recommendation is designed to facilitate flexibility in combining elements from programs in different areas to allow students to tailor their academic careers at Waterloo to their interests and the passions that brought them to Waterloo in the first place. This is a mechanism to facilitate "flexible pathways" capitalizing on the types of credentials already frequently found at Waterloo, though their criteria are often unclear or inconsistent between Faculties. Using the same structure for minors in different Faculties, for example, would remove an impediment that currently sometimes stands in the way of allowing students to combine a degree in one area with a minor in a very different field (i.e., the minor they want requires too many courses to fit within their honours program).

Implementing Recommendation 2 will not be without its challenges. Currently there are inconsistencies in the use of the above terms both between and within Faculties. These inconsistencies are sometimes artifacts of the somewhat complicated historical evolution of programs within different parts of the University, but sometimes the differences are important to those involved in "outlier" programs because they are perceived as facilitators of worthwhile goals ("It is what gets our students into top graduate programs!"). Agreeing on who should have to change and how will be a complicated business. The

Consider a student who comes to Waterloo with an interest in the impact of climate change on social determinants of health. Waterloo does not have a program in this specialized, but potentially interesting and important, area of study. If a student enrols in the Faculty of Environment, the common definitions of these key credentials could facilitate a bespoke program without having to add it to the list of Senate approved programs. If an honours degree required completion of 40 "course equivalents," and the student's honours major required 20 courses in a climate change program, a minor in a relevant Health field covering social determinants might require 12 courses, and the student would have eight remaining courses in which to achieve their UCR credit and their breadth requirements. "Policing" appropriate combinations would not require much additional academic advising, and the pressure to create additional degree programs tailored to specific combinations of interests would be reduced.

efforts made by the Undergraduate Operations Committee and Senate Undergraduate Council to reach the current incomplete level of consistency took years. On the other hand, the committee is of the view that a serious commitment to flexible pathways makes this task worth the effort.
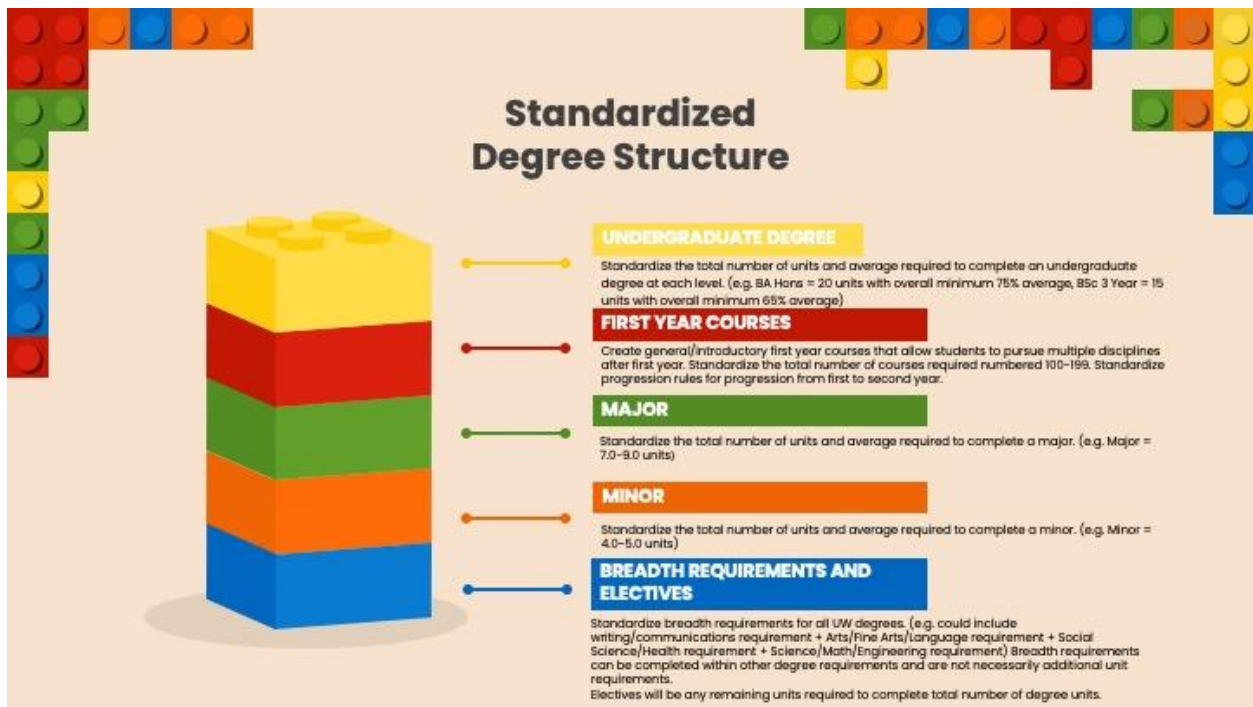
The benefits of working with the concept of "building blocks"

Standard definitions of these terms will facilitate use of a "Building Blocks Model." Figure 1 presents what we have in mind, *using fictional scenarios.* (There is no current standard number

of courses involved in a major across the University, for instance). Recommendation 2 involves standardizing the current set of building blocks used in undergraduate programming at Waterloo to facilitate combining these credentials in coherent ways. (It is always possible to add additional building blocks into the mix, such as "focused majors" that require more than the standard number of courses in a discipline, perhaps.)

The underlying idea is that a set of building blocks of unpredictably varying sizes obviously limits the number of structures that can be built from the blocks. While it is a further decision to say which blocks may be appropriately combined with other blocks, we believe that the Building Blocks Model is probably the most useful single avenue for opening up the possibilities for more flexible pathways for students than any action we might take given the current context in which the University operates.

Moreover, implementing this recommendation, together with a recognition of the values motivating it, will also create momentum in support of other concerns, like the common complaint that inflexibility of programs make it very difficult for students to pursue interests outside required courses, and a consequent request in some parts of the University that programs undergo a "curriculum diet," reducing the number of *required* elements to enable students to take more elective courses.

Standardized Degree Structure

UNDERGRADUATE DEGREE
Standardize the total number of units and average required to complete an undergraduate degree at each level. (e.g. BA Hons = 20 units with overall minimum 75% average, BSc 3 Year = 15 units with overall minimum 65% average)

FIRST YEAR COURSES
Create general/introductory first year courses that allow students to pursue multiple disciplines after first year. Standardize the total number of courses required numbered 100-199. Standardize progression rules for progression from first to second year.

MAJOR
Standardize the total number of units and average required to complete a major. (e.g. Major = 7.0-9.0 units)

MINOR
Standardize the total number of units and average required to complete a minor. (e.g. Minor = 4.0-5.0 units)

BREADTH REQUIREMENTS AND ELECTIVES
Standardize breadth requirements for all UW degrees. (e.g. could include writing/communications requirement + Arts/Fine Arts/Language requirement + Social Science/Health requirement + Science/Math/Engineering requirement) Breadth requirements can be completed within other degree requirements and are not necessarily additional unit requirements.
Electives will be any remaining units required to complete total number of degree units.

EXAMPLE
Bachelor of Public Health, Honours
Major in Public Health + Major in Climate and Environmental Change
20.0 total units, overall average of 70%

First year courses

5.0 units numbered 100-199:
Introductory Health (minimum grade of 60%)
Introductory Geography (minimum grade of 60%)
Introductory Biology (minimum grade of 60%)
2.0 additional units numbered 100-199

Major in Public Health

7.0 units numbered 200 or above
Minimum major average of 60%

Major in Climate and Environmental Change

7.0 units numbered 200 or above
Minimum major average of 60%

Breadth Requirements and Electives

Breadth depends on what has not been completed within other requirements.

1.0 elective unit

Preparing for newer things

The challenges of implementing Recommendation 2 are significant but are at least internal to the University. While the "Building Blocks model," if achieved, will be a substantial contribution to creating flexible pathways for learners at Waterloo, during the Waterloo @100 consultations and the consultations for this report there were frequent suggestions that the future of university education will involve programming that is *more of a departure from traditional degrees, minors, and the like.* The value, both to students and to society, of higher education that allows students to tailor programs to their individual interests and passions in ways that do not correspond to disciplinary distinctions that have over time become reflected in credentials (majors, minors, options, and the like) that have resulted in academic plans being approved by Senate or its designates. (The suggestions we heard included ideas like "a degree based on a problem, not on a discipline," or versions of a "choose your own adventure" degree).

Consultations with relevant experts on campus (e.g., in Institutional Analysis and Planning and the Quality Assurance Office) made clear that at present such programming would probably face very substantial hurdles that are a product of current rules for seeking Ministry approval, the way that Ministry funding is calculated, and from the Quality Council which must approve all new programs. For instance, current Ministry rules dictate that undergraduate degree programs must have a defined major subject. While subjects such as "Liberal Studies" or "Knowledge Integration" allow substantial flexibility, they are still far from "design your own degree." Moreover, each student currently brings a particular grant weighting depending on the major in which they are registered. Since it is not clear what box 'design your own degree' would fit into, it would probably be regarded as a square peg by Ministry decision makers. Finally, recent questions by GSPA to the Quality Council about their willingness to consider programs described with a lot of subject-matter flexibility did not receive a warm reception.

Nevertheless, the Working Group recommends that the University be prepared so that it *could* choose to implement programming that is flexible in new ways — for instance, programs organized around *problems* or *intractable issues* or, as is contemplated in Waterloo@100, around "futures"; or, indeed, programming involving as much student agency as versions of "design your own degree." Should these contextual factors change in the future, which may happen in response to pressure from students for more say in shaping their education or the need for Ontario to keep up with international trends in education that are attractive to international students and employers, the University should be ready. We should take steps now to ensure that we do not find ourselves in a position where our internal rules prevent us from moving forward efficiently when the opportunity arises.

Note: The recommendations in this section are directed only at the undergraduate level. In consultations with GSPA, it was determined that similar work is not required at the graduate level given the flexibility already provided by various sorts of Graduate Diplomas.

Recommendation 3:

Prepare the University for increased flexibility and student agency.

Rationale and implementation notes: The following are some steps that should be part of this preparation:

i. Review the UDLEs and GDLEs to ensure that they accurately reflect what the University wants Waterloo degrees to signal about the skills and knowledge our graduates possess.

- Stakeholder suggestions included updating the "diversity" UDLE so that it includes not only knowledge that the world *is* diverse but also supports capacity to live effectively in a diverse society based on principles of tolerance, understanding of the history of Indigenous peoples in Canada, and an ability to reason about sustainability in relation to decisions relevant to fields of study.

- At the same time, the University should establish criteria for their interpretation of key terms in the UDLEs (e.g., the word "discipline" could apply not only to established, Senate-endorsed academic programs covering a recognized discipline, but also to any topic with an appropriate degree of intellectual coherence).

ii. Investigate existing and potential mechanisms for the governance of interdisciplinary programs (in particular, for those that cross Faculty boundaries), revise policies and practices so that promising new mechanisms are allowed by the University's internal rules and prepare documents that make clear the pros and cons of each, so they are available and useful to those advancing new program ideas.

- Currently some interdisciplinary programs are, nominally, "housed" in the Provost's Office, though in practice they are overseen by the Deans of the Faculties directly involved. Others are housed in one Faculty and collaboration is ensured by agreements of varying degrees of formality. None are housed in, for instance Centres and Institutes, which are administrative creatures whose ostensible goal is interdisciplinary cooperation. The latter fact is due to existing Senate by-laws about what constitutes an academic "unit" and which state that academic programs are to be housed in units, and that Centres and Institutes (unlike Faculties and departments) are not intended as "permanent" administrative structures. An investigation of the various models currently in use and some other possibilities (for instance, devising ways to house programming in the nodes in the "Futures Framework Network" under discussion in the wake of the Waterloo@100 report) is overdue. Such a project would be timely because the statement of pros and cons can benefit from the current discussions about integrated resource planning.

- Prepare criteria for establishing time-limited academic programming. A long-standing challenge for universities is that it is much easier to establish programs than it is to shut them down. This is a significant impediment to establishing relevant and timely programs. It is, as noted, also a reason that time-limited administrative structures such as Centres and Institutes do not house academic programs at Waterloo. Programs designed with a "sunset" date allow for nimbleness, re-deployment of resources (including faculty teaching and supervisory capacity). They are a natural complement to ideas heard during the consultations leading up to Waterloo@100—to bring together groups of faculty, staff, and students to pursue problem/theme-based projects at the intersection of the "futures," as that vision only makes sense if these groups are understood to be ad hoc and temporary.

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These ideas would be a natural project to assign to the Teaching Innovation Incubator. The Incubator can bring together a team and facilitate a project that could bring forward suitable recommendations on these related topics.

4.2   Audience broadening: Options for lifelong and non-traditional learners

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Recommendation 4:

(a) **Establish classifications for Waterloo's microcredentials that (i) satisfy Ministry requirements for preferred status (referred to as Ontario Microcredentials status at the time of writing of this report), and (ii) categorize these credentials in ways that facilitate subsequent decision making within the University. This classification should apply to microcredentials aimed both at external audiences and those aimed at degree-seeking students.**

(b) **Ensure that all microcredentials have clearly articulated learning outcomes that align with and justify these classifications.**

Rationale and implementation notes: Such classification will have benefits both for recruiting students for these credentials and for improving efficiency and academic decision-making within the University (see recommendations 6 and 7 below). While the details of the required classification are not yet finalized, the Ministry's rationale for requiring some classification for the preferred status is sound. It will help (a) students understand what they are signing up for when they intend to take a course, (b) employers understand what a given microcredential certifies; and (c) will facilitate sound decisions about "stacking" of credentials. Clearly articulated learning outcomes will similarly be useful for all three of these constituencies.

A real-world example of what this might look like: It would be useful to classify all *assessed* microcredentials along each of these dimensions:

- **Level:** General interest; Undergraduate, no prerequisites; Undergraduate, with prerequisites; Graduate, general; Graduate, specialized.
- **Intensity:** Number of hours of effort for a typical student to complete satisfactorily.
- Distinguish between *practical* and *theoretical* content
  - Practical skills are often especially sought after in employment focused microcredentials; e.g., a health professional may need skills in "safe patient transfer"; on the other hand, when stacking into university credits, theoretical understanding of content with a degree of abstraction that allows skills to be readily employed in different domains may be expected.

The distinction between general and specialized content in "levels" dimension is important. For instance, graduate professional-level education is delivered at a level of sophistication appropriate to students who already have a degree, it may nevertheless be somewhat elementary for someone with an honours degree in the particular subject. Using a "for credit" example, some of the courses taught in the Master's of Public Service program cover issues essential for any public servant to understand and are taught at a level appropriate to someone with a previous Bachelor's degree; but these courses are fairly elementary to those whose Bachelor's degree happens to be in Political Science. This distinction is obviously important to so learners considering taking a course can assess whether they are prepared to succeed, but it is also important for decisions about "stacking" of credentials — see below.

> **Recommendation 5:**
>
> **As part of the lifelong learning portfolio of the University, the University should actively investigate mechanisms that will create opportunities for learners not actively pursuing a degree to achieve credentials involving for-credit courses.**

Rationale and implementation notes: Offering for-credit courses to learners not actively seeking a degree would make enable the University to expand its student base. The University currently already has specializations that are only available to learners registered as students (i.e., pursuing a degree, post degree, etc.), but that could be a suitable stand-alone credential likely to be of interest to many who are not currently interested in pursuing a degree. It also regularly offers courses, including many online, where the typical number of registered students is below the stated enrolment capacity of the course. The committee heard enthusiastic support for the idea of "bundling" for-credit courses as independent credentials during consultations, and this recommendation echoes an idea described in the Digital Learning Strategy report. Other Universities have had success with "open enrolment," and Waterloo is already working on a project investigating the steps required to have similar offerings at Waterloo.

Sorting through the mechanisms of other ways of offering such credentials might be an appropriate project for development in the Teaching Innovation Incubator.

> **Recommendation 6:**
>
> **The University should actively investigate and experiment with approaches that can help attract students from groups traditionally underrepresented at Waterloo.**

Rationale and implementation notes: A similar recommendation was made by the President's Anti-Racism Taskforce, particularly with respect to transitional programming for racialized learners, particularly those who are Black or Indigenous. Some early experiments aimed at developing such a program for Black learners are underway, led by EDI-R in consultation with the Registrar's Office. There is potential for such programs to also support other traditionally underrepresented learners, like those with disabilities, as part of the University's commitment to accessible education. The idea of "prior learning assessment" as a way to attract students has long been discussed at Waterloo but has not yet been pursued.

One of the reasons for establishing a Teaching Incubator is to serve as a mechanism for experimenting with and sorting out the details of such complex but potentially valuable initiatives.

4.3   Relationships between credentials

> **Recommendation 7:**
>
> **Implement mechanisms for approval to stack non-credit credentials into credit credentials at both the undergraduate and graduate levels. While it is important to ensure academic credibility via these approval processes, they should be efficient and appropriate to the size of the credential.**

Rationale and implementation notes: With respect to microcredentials developed for and aimed at those who are not currently Waterloo students, there are ongoing suggestions that the Ministry will restrict OSAP funding for microcredentials (and perhaps the use of the term "microcredential" itself) to programming that (at least potentially) is stackable into more traditional credit credentials. It is also likely that many offerings the University might have for mid-career professionals will be more attractive if they have the prospect of leading to a more traditional credential.

This recommendation is therefore one that the University must follow through on if it is serious about lifelong learning. As noted above, it was also frequently suggested in consultations that it would be a productive step towards flexible pathways for degree-seeking students if various alternative credentials aimed at them can be bundled together and count as equivalent to a credit course.

A mechanism for "stacking"

The details of this mechanism would need discussion, buy-in, and eventual approval by governance bodies, but the Committee suggests that a process along the following lines would be effective.

The "stacking" decision need not be complicated when the non-credit credentials are being deemed equivalent to (a portion of) a credit credential already approved by Senate or a Senate Committee. Approval of the equivalency of non-credit credentials can rest at the department level, and merely be reported to the Faculty and recorded centrally. It is already a routine matter for Associate Chairs to make "course equivalency" decisions when students transfer from other universities and decisions need to be made about which program requirements they can be deemed to have already completed. The stacking decision is fundamentally of the same kind. Since the equivalency decision does not require further involvement of any Senate committee, we judge the same to be true for this sort of stacking decision. For practical reasons (e.g., the ability of WatSPEED to accurately describe which of its credentials stack into which credit courses) these decisions should be centrally documented and remain in place until explicitly changed (e.g., because of a change in the course or in one of the microcredentials involved), to maintain consistency despite changes in departmental leadership.

The "mechanisms" for stacking could be as follows:
- Approval of non-credit credentials aimed at external audiences remains with ACAC (or its successor: see below).
- Approval of non-credit credentials aimed at current students requires approval from SUC or SGRC, but such approvals should be more efficient and "lighter weight" than, for instance, approval of credit courses:
    - A decision that a selection of non-credit credentials should count as equivalent to an existing (i.e., SUC or SGRC approved) credit course could be *made by program leadership (as 'course equivalents' are currently for transfer credits)*, approved pro forma by the Dean or their delegate, and reported annually to SUC/SGRC.

- A decision to count a collection of non-credit credentials as equivalent to an existing (sub-degree) credit credential (e.g., and option of specialization) should require approval by SUC/SGRC on behalf of Senate and reported to Senate.

Guiding criteria for when stacking is appropriate should be developed and endorsed by relevant Senate bodies. For instance, at the graduate level, a credit credential attests to a level of theoretical sophistication that might not be provided by microcredentials that are especially focused on development of practical skills. Criteria that involve comparison of the learning expectations of the various credentials involved to ensure that the expectations of the credit credential are met are therefore appropriate. The classification scheme for Waterloo's microcredentials (see Recommendation 5) will facilitate application of these criteria.

Note: Before leaving this section, we want to remark on a topic raised a few times during our consultations. As noted, there are a range of "credentials" offered on campus that are not approved by any Senate body. These include internally focused training offered by various units (OHD, EDI-R, CTE), often aimed at employees but also sometimes at students. It was noted that (a) Waterloo employees often take courses at other Universities because the credential the other institution offers is *perceived to be useful for career advancement*. The content on offer is sometimes similar-in-kind to some of our internally focused professional development and in other cases the content overlaps areas of internal expertise, but at the other school the training comes with some form of recognition (e.g., a badge or certificate or even a course credit). It is plausible to think that by not having the right "method of transport" for this training we are losing an opportunity to train our own people and also are passing up an opportunity to market our training to employees from other schools. This would qualify as "expanding our audience," but these non-Senate credentials do not seem to the Committee to obviously fall within our remit. On the other hand, we do note that the existence of ACAC does provide a mechanism for creating and approval of credentials based on this training that would allow the sort of marketing envisioned in appropriate cases.

4.4 Processes and governance

The discussion above makes clear that the lines between undergraduate, graduate, and alternative credentials are increasingly blurry as new sorts of credentials, both those aimed at current students and those aimed at new audiences, emerge. This might seem to militate against having different Senate committees to handle each of these categories, but the approval needs of each of the categories are sufficiently distinct that the Committee is confident in making the recommendations in this section.

> **Recommendation 8:**
>
> **Update the University's formal approval mechanisms by creating a new Senate committee to handle alternative credentials (aimed at "external" audiences). We propose that it be called the Senate Alternative Credentials Committee.**

Rationale and implementation notes: Since 2021, non-credit credentials have received formal academic approval via the Alternative Credentials Approval Committee (ACAC). The primary impetus for the design and implementation of ACAC was the University's move to be a bigger

player in offering educational opportunities for mid-career professionals, a move most emphatically signalled by the creation of WatSPEED.

Unlike the Senate Undergraduate Council and Senate Graduate and Research Council, ACAC's remit is not specified in a Senate by-law. Instead, it works with a remit developed to be consistent with Senate motions made more than two decades ago to cover "continuing education" programming, then primarily offered by (what is now) the Centre for Extended Learning. The decision to devise something different from the approval mechanisms used for continuing education was driven by the need for:

- an approval mechanism that would be recognized as ensuring the academic credibility of the new sorts of credentials WatSPEED wanted to offer.
- the approvals to be nimbler and more efficient that those that applied to traditional, for-credit credentials (so, as WatSPEED might say, it can 'move at the speed of business').
- recognition that not all non-credit credentials will be WatSPEED-developed credentials. Other ASUs, for instance, may lead the development of credentials intended for registered students and external audiences.

At the same time, it was essential that ACAC processes be consistent with and licensed by Senate motions, as the University of Waterloo Act makes clear that approval and oversight of all academic programming credentialed by the University of Waterloo must ultimately derive from Senate decisions.

The need to move beyond ACAC and the motivation for establishing it as a formal Senate committee is that ACAC's current remit (based on outdated Senate motions) restricts the sorts of offerings that can be approved in ways that will eventually hinder the growth of WatSPEED and other units interested in developing alternative credentials aimed at external audiences. (E.g., "Stackable" credentials seem to be ruled out because the existing Senate motions draw a red line between "extended education" and credit offerings; there are limitations on the length of a course that can be approved by a committee like ACAC that are likely to be problematically restrictive to units like WatSPEED—essentially, the existing Senate motion says "it can't look too much like a standard 12-week credit course.") Making ACAC a Senate committee by approving terms of reference in the Senate by-laws that generally parallel the terms of reference for SUC and SGRC will allow this committee suitable latitude to adapt as the needs of learners and the University evolve over time without need to repeatedly return to Senate for minor revisions to the committee's mandate.

> **Recommendation 9:**
>
> **The new SACC needs to maintain the nimbleness for which ACAC has been praised while providing an appropriate the degree of academic oversight for the sorts of credentials on offer. That is, a credential certifying participation in a workshop of mastery of a particular practical skill does not require the level of detailed scrutiny required for a new degree program.) We therefore recommend that:**
>
>   **i. SACC should be much smaller than either SUC or SGRC (as ACAC is currently)**
>   **ii. SACC continue to work primarily online and asynchronously**
>   **iii. SACC's voting membership should include a representative from each Faculty in addition to the AVPA and AVP GSPA**

> **SACC's membership should include "resource" members from relevant ASUs who can inform decision-making in a timely and effective manner.**

Rationale and implementation notes: When a small working group was tasked with replacing the previous Professional Development Committee with what became ACAC, it quickly became clear to them that two considerations needed to be balanced. The University community wanted assurance that our offerings would have academic credibility and that the reputation of the University was safeguarded. But to be a viable player in this market, WatSPEED needs to be able to "move at the speed of business," so the approval pathway needs to be much more efficient than the pathways for credit offerings. The ACAC process has generally been regarded, by those aware of it, as doing a good job of satisfying both those needs. The asynchronous nature of most deliberations has meant that approvals generally are completed within a week of a proposal coming forward.

Once SACC replaces ACAC and so becomes an official Senate committee, it will be subject to Bylaw 1, and so will be required to satisfy Bylaw 1's requirements about agendas, quorum, holding open meetings, and so on. During the consultations with the Secretariat about governance-related consequences of draft recommendations for this report, we received some assurances that Bylaw 1's requirements and ACAC's mode of operation can be reconciled.

> **Recommendation 10:**
>
> **Form a new Senate Committee to oversee academic quality assurance processes at all of the graduate, undergraduate and non-credit levels**.

Rationale and implementation notes: When Recommendation 9 is implemented, there will be three different Senate committees approving credentials: SUC, SGRC, and SACC. Quality Assurance and Continuous Improvement is an important part of preserving the credibility and value of all University of Waterloo credentials. For SUC and SGRC approved/recommended credentials formal quality assurance is an externally imposed requirement. For many SACC credentials, this is likely soon to be true as well. A single, special purpose Senate Committee devoted to the academic quality assurance and continuous improvement processes promises efficiency to those who must shepherd programs through QA processes and effectiveness for the processes themselves, compared to, for instance, each of SUC, SGRC and SACC overseeing their own processes.

A similar recommendation has been made to the Senate Executive Committee by the Senate Undergraduate Council, largely because Waterloo's current practices involve both SUC and SGRC in the IQAP process (as approvers of Final Assessment Reports and mid-cycle progress updates) resulting in long delays in getting approvals completed, involves many members of those large committees in processes where their expertise is not really required, and often does not result in meaningful feedback to programs. This recommendation went to Senate in May 2024 (item 11) and was approved. We have left the recommendation in this report because it was an important one to the Working Group.

Further support for this suggestion comes from the fact that it is increasingly clear that the Ministry of Colleges and Universities and the Quality Council are both moving decisively in the

direction of expecting non-credit credentials to be subject to appropriate academic quality assurance processes and be included in the IQAP (even if via quite different processes than the cyclical reviews used to assure quality of traditional credit programs). Especially as phenomena like stacking of credentials make the boundaries between types of credentials more porous, a single committee to oversee academic quality of all Waterloo offerings promises efficiencies and adaptability to new sorts of offerings over time.

> **Recommendation 11:**
>
> **Task the AVPA, the AVP GSPA, and Academic Quality Assurance and Continuous Improvement Office with leading a consultative process in designing appropriate quality assurance processes for alternative credentials.**

Rationale: There are both internal and external reasons for this recommendation. Externally, as just noted, there are signals that, for instance, eligibility of students taking microcredentials for government financial support will depend on QA processes for those credentials being part of the university's IQAP, and the designation Ontario Microcredential, which the University may seek for its WatSPEED offerings, will depend on appropriate QA processes being in place. Internally, our academic community expects every Waterloo credential to signal an appropriate level of academic quality; QA processes where the effort and rigor involved matches the significance of the credential are a way to assure the community that this remains true in the alternative credential space.

Appendix A: Glossary of Terms – current and proposed definitions

The following table lists some definitions/characterizations of important terminology used in discussions of credentials at Waterloo. As the University pursues some recommendations (e.g., Recommendation 1 about establishing clear criteria for what counts as a course or course-equivalent) the definitions in this table will need to be modified or expanded (e.g., if "discipline" receives a suitably broadened definition in accordance with Recommendation 3). The proposed definitions listed in this table are offered as a step towards increasing consistency and clarity in the use of this terminology in the meanwhile.

Term	Current UW definition	Proposed definition
Credential	Undergraduate Studies Academic Calendar - An earned degree, major, specialization, minor, option, diploma, or certificate appearing on a student's transcript.	A means of certifying that a person has achieved a high degree of knowledge in some area, where this knowledge includes an appropriate mix of conceptual understanding and practical ability. It is issued by an institution (e.g., a university) widely recognized and trusted as competent to attest to a learner's achievement in this way.
For-credit vs. alternative (credentials, courses, etc.)	N/A	Degrees are for-credit credentials. Courses and milestones which *can* count towards a Waterloo degree are also described as "for-credit." Other sorts of credentials for which the requirements are "for-credit" (e.g., minors, specializations, graduate certificates) are "for credit." For credit credentials are approved or recommended to Senate by SUC or SGRC. Alternative credentials are those which are not for credit in this sense. University of Waterloo alternative credentials are approved by SACC.
Degree-level expectations	CTE - Degree-level expectations (primarily outlined by OCAV) represent a set of minimum requirements all students must attain to earn the relevant degree. All undergraduate programs in Ontario must meet the requirements outlined in the university undergraduate degree-level expectations (UDLEs). UDLEs: Depth and breadth of knowledge; Knowledge of methodologies; Application of knowledge; Communication skills; Awareness of limits of knowledge; Autonomy and professional capacity. GDLEs: Depth and breadth of knowledge; research and scholarship; level of application of knowledge; professional	The minimum requirements to earn a degree. In Ontario, all university degrees must meet a set of expectations primarily determined by the Ontario Council of Associate Vice-Presidents (OCAV), but each university is free to implement additional expectations. Ontario undergraduate degree-level expectations (UDLEs): depth and breadth of knowledge; knowledge of methodologies; application of knowledge; communication skills; awareness of limits of knowledge; autonomy and professional capacity. Additional UDLEs specific to UW: experiential learning; diversity. Ontario graduate degree-level expectations (GDLE): depth and breadth of knowledge; research and scholarship; level of

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	capacity/autonomy; level of communication skills; awareness of limits of knowledge.	application of knowledge; professional capacity/autonomy; level of communication skills; awareness of limits of knowledge
Academic Program	Undergraduate studies academic cal - A defined set of requirements (honours or general, regular or co-operative) common to a particular degree. Future Students - An undergraduate program is what you complete to earn your degree. A program will have a certain number of required courses you need to take along with electives that you choose. Graduate studies academic cal - A set of courses, a number of which may be mandatory and of a specialized nature, leading toward a particular degree.	A defined set of requirements for the awarding of a particular degree. The requirements, taken together, ensure an appropriate level of mastery in a specified, coherent area of knowledge and ensure that a student has an opportunity to satisfy the relevant degree level expectations and to achieve the program's learning outcomes.
Academic Plan	Graduate Academic Plan: A defined set of requirements for the awarding of a particular credential.	A defined set of requirements for the awarding of a particular credential that ensure a learner has acquired the level and type of knowledge the credential indicates they have.
Course	Undergraduate calendar - A unit of study relating to a specific academic discipline and identified by a course subject code and number. Graduate studies calendar - A unit of study relating to a specific academic discipline and identified by a course name/number.	An approved collection of activities that provide learners with the opportunity to acquire an identified body of theoretical or practical knowledge and to satisfy specified learning outcomes. For-credit courses are approved either by SUC or SGRC and have a specified unit weight. They generally are identified by a subject code and number, often but not necessarily identified with an academic discipline. The term "course" is also used for non-credit courses. Such courses are approved by the SACC.
Unit Weight	Undergraduate studies academic cal - The credit value associated with a course. Unit weights are used in the calculation of averages for academic standing. Most courses have unit weights of 0.5 and are of one-term duration. Some courses have other weights such as 0.25, 1.0, and 2.0. Registrar's Office - The credit value associated with a course. Unit weights are used in the calculation of averages for academic standing. Unit weights vary from 0 to 3.0 and most courses have unit weights of 0.5. Graduate studies academic cal - The credit value associated with a course.	A numerical value assigned to courses or milestones that form (or might form) requirements of a for credit credentials. Unit weights are used in the calculation of averages for academic standing. They are sometimes also referred to as "credit values." The most common unit weight is 0.5, which is the most common weight for courses of one term duration.

Elective	Undergraduate calendar - A course not specifically required for a degree or academic plan but counting towards it, to be chosen freely by the student either from within a specified group of courses or more broadly from courses offered anywhere across the University of Waterloo.	A course not specifically required for a degree or academic plan but counting towards it, to be chosen freely by the student either from within a specified group of courses or more broadly from courses offered anywhere across the University of Waterloo.
Milestone	Quest glossary Milestones are non-course degree requirements (e.g., thesis, comprehensives, master's research paper) that a student must complete toward degree progress in order to graduate	A non-course requirement for the completion of a credential (especially a degree). Examples include theses, comprehensive exams, major research projects, community service learning requirements, and workplace placements.
Undergraduate degree	Undergraduate Studies Academic Calendar - A qualification awarded to a student by the post-secondary educational institution. Types of undergraduate degrees: Bachelor's/ Baccalaureate, Professional Doctoral.	An academic credential awarded on successful completion of a prescribed set and sequence of requirements at a specified standard of performance consistent with the Ontario Council of Academic Vice-President's Degree Level Expectations (DLEs) and the University's own expression of those expectations, with any University-specific DLEs and achievement of the degree's associated learning outcomes. Undergraduate and graduate degrees are distinguished by having different DLEs, and by the fact that graduate degrees are normally pursued by learners who have an undergraduate degree credential (or an equivalent).
Major	Undergraduate Studies Academic Calendar - An academic plan that is the primary area of study in a student's baccalaureate degree. Future Students - A major is the subject that's the main focus of your university degree. Most of the courses you'll take will be in your major. The terms major and program are often used interchangeably. You might choose your major when you apply to university or after first year depending on the program.	A specified, coherent area of knowledge that is the primary area of study in an Undergraduate Academic Program that culminates in a Bachelor's/baccalaureate degree. Degrees with a particular Major can often be earned at different levels of achievement, e.g., Honours or General degrees. The terms "major" and "program" are sometimes used interchangeably. When doing so, "major" is standing being used elliptically to refer to the academic program that specifies the requirements for a degree with the major in question.
Minor	Undergraduate Studies Academic Calendar and "Undergraduate Academic Programming: Definitions and Guidelines" doc - An academic plan that is a secondary area of study and that provides breadth to a student's baccalaureate degree. Minors	An academic credential that attests to a substantial level and mix of theoretical and practical knowledge in a coherent and specified area of study. It is generally a secondary area of study in a student's bachelor/baccalaureate degree, and so will

	offered by faculties are normally available to all students. • No requirements • Range of courses: 8-10 courses (normally 4.0 – 5.0 units) • Has a distinct average requirement Future Students - In many programs, you can include a minor (usually 8-10 courses in a specific subject) as part of the 40 or so courses for your degree. This allows you to study a second area of interest.	generally involve learners accomplishing some but not all of the undergraduate degree level expectations in the specified area of study. The term "minor" is also used to refer to an academic plan specifying the requirements to achieve the credential. These requirements are designed to ensure that learners acquire and demonstrate the relevant level of knowledge by the time they complete the plan.
Undergraduate diploma	Undergraduate Studies Academic Calendar A defined set of academic courses that allows a student to acquire skills or knowledge in a specific area.	An academic credential that attests to a significant level and mix of theoretical and practical knowledge in a coherent and specified area of study. A diploma generally indicates a lesser degree of knowledge than a minor, but one still worthy of explicit acknowledgement. Diplomas are generally available to students in all Faculties. The term "undergraduate diploma" is sometimes also used to refer to an academic plan specifying the requirements to achieve the credential. The requirements are designed to ensure that learners acquire and demonstrate the relevant level of knowledge by the time they complete the plan.
Option	Undergraduate Studies Academic Calendar and **"Undergraduate Academic Programming: Definitions and Guidelines"** doc - An academic plan that provides depth to a student's baccalaureate degree and typically requires fewer courses than a minor. Options are only available to students within their home faculty. • No requirements • Range of courses: 6-8 courses (normally 3.0 – 4.0 units) Has a distinct average requirement	An academic credential that attests to a significant level and mix of theoretical and practical knowledge in a coherent and specified area of study. An option generally indicates a lesser degree of knowledge than a minor, but one still worthy of explicit acknowledgement. Options are generally available to students in all Faculties. The term "option" is sometimes also used to refer to an academic plan specifying the requirements to achieve the credential. The requirements are designed to ensure that learners acquire and demonstrate the relevant level of knowledge by the time they complete the plan.
Specialization	Undergraduate Studies Academic Calendar and **"Undergraduate Academic Programming: Definitions and Guidelines"** doc - An academic plan that offers an area of concentration and provides depth to a student's primary area of study. Specializations are only available to students within their primary area of study.	A credential that attests to a student's having concentrated and deep knowledge in a particular area within their primary area of study (i.e., their major). As such, the credential is generally only available to students within their primary area of study. "Specialization" is also used as a term to refer to the academic plan that specifies the requirements for the credential.

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	No requirements	
	• Range of courses not definable	
	May have distinct average requirement	
Undergraduate certificate	Undergraduate Studies Academic Calendar and **"Undergraduate Academic Programming: Definitions and Guidelines"** doc - A defined set of requirements (which may include any combination of non-academic experiential components and academic courses), that allows a student to acquire skills or experience in a specific area. • Should include an experiential component and the option of one or more academic courses • Range of courses: 3 courses (normally 1.5 units) or less May have a distinct average requirement	A credential attesting that a learner has achieved a significant level of skill paired with some relevant theoretical knowledge in a particular area. The skill is at least in part acquired through experiential learning acquired. The term "undergraduate certificate" is also sometimes used to refer to an academic plan that results in achieving the credential. Such plans generally include three or fewer courses and require some experiential learning component, and sometimes require a distinct average requirement in the courses.
Graduate degree	Future Students - Allows you to pursue further specialized studies after completing your undergraduate degree. There are two levels: Master's degree (which often takes one to two years to complete) and Doctor of Philosophy (usually take four years to complete, also known as a PhD or doctoral program). You normally need to complete a Master's before applying to a PhD program. Types of graduate degrees: Master's/ Magisteriate, Doctoral	An academic credential awarded on successful completion of a prescribed set and sequence of requirements at a specified standard of performance consistent with the OCAV's Graduate Degree Level Expectations (GDLEs) and the University's own expression of those Expectations, with any University-specific DLEs, and achievement of the degree's associated learning outcomes. Undergraduate and Graduate Degrees are distinguished by having different DLEs, and by the fact that graduate degrees are normally pursued by learners who have an undergraduate degree credential (or an equivalent).
Graduate diploma (GDip)	Secretariat - A Graduate Diploma is awarded by the University upon completion of an approved Graduate Diploma program with a minimum of four graduate-level courses. For direct entry Graduate Diploma programs, the minimum admission requirements are the same as for a master's program, a four-year honours bachelor's degree or equivalent, with an overall 75% average in the last two years. A regular graduate studies application for admission is required. A Graduate Diploma program may be proposed by one or more departments/schools for a collaborative or interdisciplinary type diploma program	A credential that attests to a high level and a specified mix of theoretical and practical knowledge generally commensurate with graduate degree level expectations. Graduate Diplomas are assigned *types* following guidance from the Ontario Quality Council. At the University of Waterloo, Graduate Diplomas take the following forms: A **Type 1 Graduate Diploma (GDip1)** may be awarded when a candidate admitted to a course-based Master's program leaves the program after completing a specified portion of the degree requirements, normally half the course requirements, where the option has been specified through the program's approval process.

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	which is offered in conjunction with a master's or doctoral program. Entry is approved by the Graduate Officer or Director of the Graduate Diploma program and the student's home department/ school Graduate Officer and Faculty Associate Dean. All Graduate Diploma programs require department/school, Faculty, SGRC and Senate approval, followed by review and approval from the Ontario Council on Graduate Studies (OCGS). A Graduate Diploma program and qualification is recorded on the official student academic record and conferred at convocation. Includes Type 1, Type 2, Type 3, or Type 4 diplomas	Students receiving a Type 1 GDip can return to complete the full degree, whereupon the GDip1 is rescinded. A **Type 2 Graduate Diploma (GDip2)** is intended to demonstrate mastery of a topic area that is complementary to, but not embedded within, a graduate student's primary area of study. As such, the type 2 graduate diploma is pursued concurrent with the student's primary Master's or PhD program. Completion of a GDip2 generally requires completion of additional requirements beyond a Graduate program's normal requirements. A **Type 3 Graduate Diploma (GDip3)** is earned when a student completes a direct entry, stand-alone program with an articulated set of learning outcomes achieved through a minimum of four 0.5 credit graduate-level courses.
Graduate Certificate	Secretariat - A Graduate Certificate of Participation or Completion is prepared and awarded by the department/faculty to acknowledge participation or completion of one or more courses, seminars or workshops. Awarding of a Graduate Certificate of Participation or Completion is not recorded on the official university record and academic transcript. Proposals for Graduate Certificates of Participation/Completion require department and faculty approval and are normally completed in conjunction with a master's or doctoral program, or non-degree graduate enrolment. All certificates of Participation/Completion approved by a department/school and Faculty must be reported to SGRC for information.	A credential awarded by a department or faculty indicating familiarity with a degree knowledge of or familiarity with an identifiable subject matter at the graduate level. A departmental/faculty graduate certificate indicates completion of one or more credit courses, workshops, or other milestones. A departmental graduate certificate of participation indicates attendance at one or more courses or workshops. The method of transport for such credentials shall not use suggest that it is a University of Waterloo credential nor bear the University of Waterloo coat of arms or any other University of Waterloo branding. Such credentials approved by a department or faculty must be reported to SGRC for information.
Microcredential/ microcertificate	Waterloo Alternative Credential Framework - Credential recognizing assessed achievement in a competency or its underlying knowledge areas, skills, or abilities. • Length of program variable; typically short time to completion • Issued by department/Faculty/ASU Variable format; upon approval, issuing bodies may request digital certification through Digitary	A credential recognizing a learner's achieving possession of a specified level of practical and theoretical knowledge. Often this knowledge is practical, and assessment involved demonstration of skills and abilities. While the time and effort involved in completion of a microcredential is variable, they are generally completable more quickly than a 0.5 unit for-credit course. University of Waterloo for credit microcredentials are possible. These are approved by SUC or SGRC and can be

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		assigned a unit weighting or serve as degree milestones. Non-credit University of Waterloo microcredentials are approved by SACC. These normally are expected to satisfy the conditions required to be Ontario Microcredentials.
Professional Development Certificate **Executive Education Certificate**	[Waterloo Alternative Credential Framework](#) - Credential representing non-credit course of study; could be issued upon combination of learning experiences including courses, microcredentials, participation and attendance activities. • Length of program variable; Typically longer than microcredential or microcertificate • Issued by department/Faculty/ASU sponsoring the learning opportunity • Variable format; upon approval, issuing bodies may request digital certification through Digitary	A credential attesting to completion of an academic plan comprising specified non-credit learning experiences, completion of which demonstrates a degree of mastery of an identifiable body of practical and theoretical knowledge that has the potential to be of professional value to a learner. University of Waterloo Professional Development/Executive Education Certificates are approved by SACC. The distinction between the two types of certificate is based on the intended student audience.
Badge	[Waterloo Alternative Credential Framework](#) - Recognition of participation/ completion/ achievement in a workshop, non-credit course, event, committee, etc. • Length of program variable • Issued by department/Faculty/ASU sponsoring the learning opportunity • Variable format	A mode of delivery for a non-credit credential, generally making available to the learner and those with whom the badge is shared an articulation of the learning outcomes attested to by the credential, and often the activities involved in assessing the learner's knowledge.
Record of participation or completion	Waterloo Alternative Credential Framework - Recognition of participation/ completion/ achievement in a workshop, non-credit course, event, committee, etc. • Length of program variable • Issued by department/Faculty/ASU sponsoring the learning opportunity • Variable format	A mode of delivery for a non-credit credential that does not involve assessment of a learner's knowledge.

Appendix B: The Credentials Framework Working Group

Co-leads:

- David DeVidi, Associate Vice President, Academic
- Cathy Newell Kelly, Registrar

Additional team members:

- Jennifer Coghlin, Registrar's Office
- Anne Fannon, Work-Learn Institute
- Leanne Ferries, Associate Dean UG, Faculty of Health
- April Philpotts, WatSPEED
- Siva Sivoththaman, Associate Dean, Grad, Faculty of Engineering
- Tim Weber-Kraljevski, Secretariat
- Jeff Casello, Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Project support staff:

- Harley Kaufmann-Sacrey, Research and Communications Coordinator, AVPA Office
- Carrie MacKinnon, Institutional Analysis and Planning
- Alisa Sivak, Communications Associate, AVPA Office

Appendix C: Processes and Sources of Information

This report is the product of extensive consultations and research conducted by members of the Credentials Framework Working Group over a period of nine months, including the following:

Environmental scan

The working group conducted an environmental scan that included (i) a compilation of credentials and pathways offered at other U15 institutions, and (ii) government standards, COU reports, and updates.

Stakeholder consultations

Members of the working group worked in pairs, including one faculty member and one representative from an academic support unit, to lead consultations with stakeholders.

Consultations with students and academic support units

Consultations were held with undergraduate and graduate students, and the following academic support units:

- Organizational and Human Development
- Quality Assurance and Continuous Improvement
- Information Systems and Technology
- Library
- Centre for Teaching Excellence
- Student Success Office
- Centre for Extended Learning
- WatSPEED
- Writing and Communication Centre
- W Store
- Campus Wellness
- AccessAbility Services
- Centre for Experiential Education
- Centre for Work-Integrated Learning
- Strategic Initiatives and Integrated Planning
- Office of Academic Integrity

These support units are all involved with credentials in one way or another, either as a unit that assigns credentials for completed training, as units that serve students who would benefit from a credentials overhaul, or as units tasked with governance and administration matters relevant to the approval and operation of academic programming.

Faculty consultations

Once the first round of consultations was complete, the working group met with Faculty leadership. Rather than holding a very large number of meetings that individual faculty members could attend, Chairs and Directors were asked in advance of these leadership meetings to consult with their department/school members about a list of questions and bring suggestions and feedback to the leadership meeting.

Associate Deans from the Faculties were also consulted in discussions at Undergraduate Operations Committee and Graduate Operations Committee. *Expert Consultations*

After these consultations, multiple drafts of recommendations were produced and discussed at meetings of the Committee.

The committee consulted with constituencies likely to have particular expertise relevant to the recommendations for their feedback. These groups were selected because they were judged to be best placed to spot unintended consequences of the recommendations. These consultations included:

1. GSPA and QACI
2. IAP and the Assoc Provost for Integrated Planning and Budgeting
3. The Secretariat

After another round of revision in light of the expert advice, the Committee provided a final round of feedback.