

## UCalgary Micro-credential Taxonomy

In 2024, the University of Calgary added micro-credentials to its *Non-Credit, Professional and Continuing Education Credentials Framework*. To facilitate the development and operationalization of Micro-credentials at the university, the Micro-credentials Learning Working Group (*the Working Group*), in consultation with Dr. Christine Martineau (Educational Developer – Indigenous Ways of Knowing) developed the Micro-credential Taxonomy (*the Taxonomy*).

The Working Group conducted a scan of micro-credential and badge offerings and frameworks from post-secondary institutions across Canada and the United States to identify structures and best practices. This scan built on previous work undertaken by UCalgary colleagues that informed the criteria for Micro-credentials in the university's *Non-credit, Professional and Continuing Education Credentials Framework*.

The Taxonomy incorporates a holistic and inclusive approach to learning, with the intention for all faculties and units across campus to see their micro-credential and digital badge offerings reflected in it. The Working Group also prioritized one of the key values of ii' taa'poh'to'p, the university's Indigenous strategy, which is to acknowledge parallel pathways.

Beginning with a circular model (Figure 1) that is built out into a descriptive framework (Table 1), the Taxonomy draws on key concepts and scholarship including Bloom's Taxonomy (Bloom, 1956; Krathwohl, 2022) and LaFever's (2016) work connecting Bloom's Taxonomy to Indigenous ways of knowing.

LaFever (2016) emphasizes the importance of honouring, relating, interconnecting, empowering and self-actualizing as we conceptualize learning progression. The stages of learning draw upon LaFever's (2016) framework for learning outcomes which further support Indigenous ways of knowing in postsecondary education. The Micro-credential Taxonomy visualizes (see Figure 1) and describes (see Table 1) stages of learning that are categorized as: setting out (attendance and engagement); journey beginnings (foundational knowledge); walking together (applying and analyzing through shared experience); deepening understanding (gaining deeper insights); and knowledge sharing (contributing back to the community). These stages are non-hierarchical, recognizing that learning is often a non-linear and reciprocal process that repeats itself as learners undertake new and different learning journeys.

It is important to note that the setting out (attendance and engagement) category of learning is not assessed and therefore does not meet the UCalgary criteria for micro-credentials. However, its representation in the taxonomy is valuable to acknowledge a type of learning that regularly takes place on our campus, one which faculties and units may wish to recognize with a digital badge.

Although intended to provide a framework for micro-credentials at UCalgary, this framework could apply to other learning contexts, including academic program, course, lesson and assessment design.

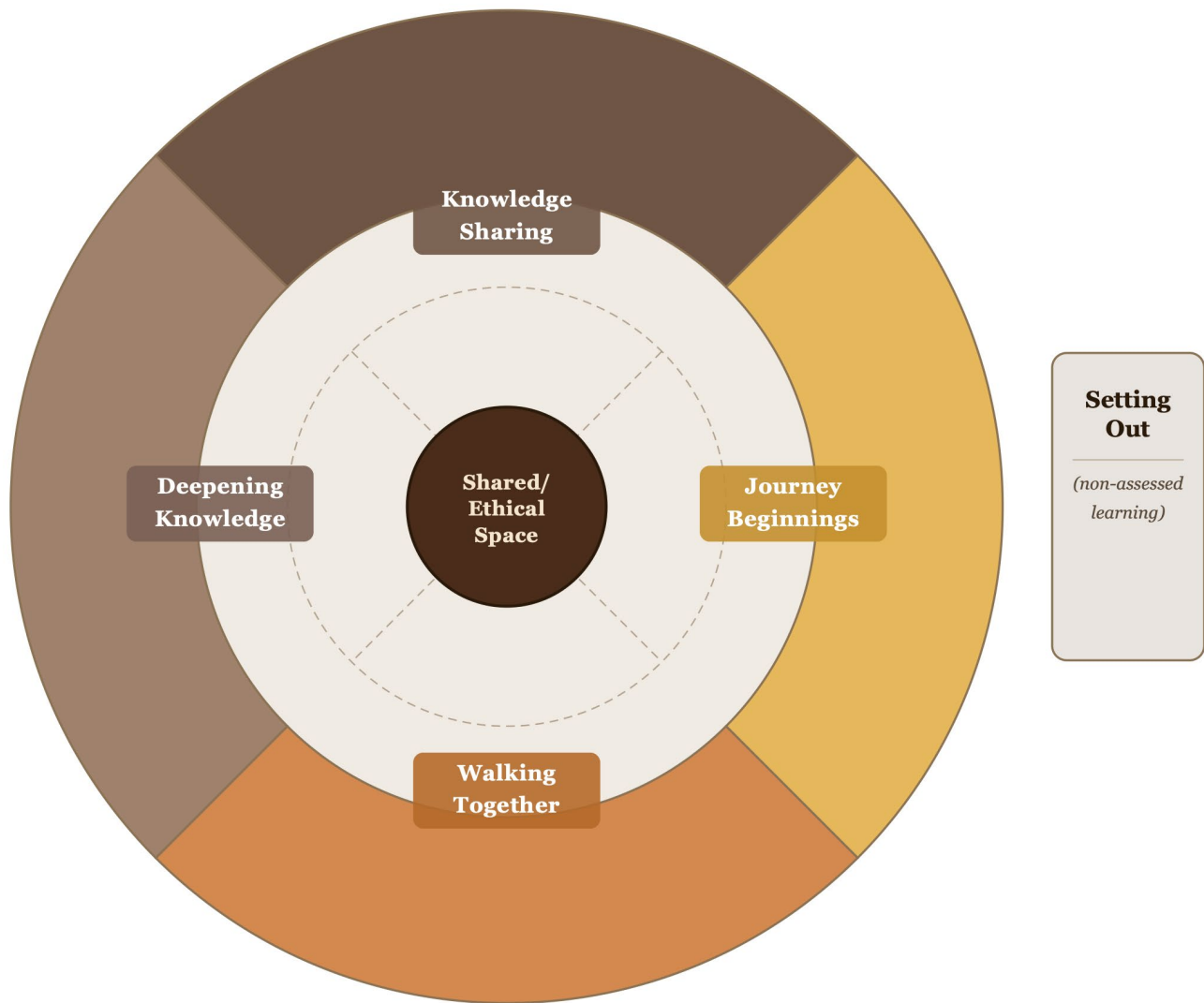


Figure 1: UCalgary Micro-credential and Badge Taxonomy - a Circular Model

Table 1: University of Calgary Micro-Credential and Badge Taxonomy, outlining stages of learning and demonstrating alignment with Bloom's Taxonomy

Recognition/ Credential	Participation/Attendance*	Micro-credentials			
Stage of Learning	Setting Out	Journey Beginnings	Walking Together	Deepening Understanding	Knowledge Sharing
Description	<p><i>Attendance and engagement.</i></p> <p>Learners attend and engage in a learning activity, training, workshop or event. Learners demonstrate a willingness to learn, collaborate and contribute. Receiving a certificate does not require formal assessment.</p>	<p><i>Foundational knowledge.</i></p> <p>Learners build upon and honour prior knowledge and experience, while engaging with new concepts and/or practices. Learners demonstrate understanding of knowledge, vocabulary, and/or a specific skill, are able to locate and recall information, and construct meaning.</p>	<p><i>Applying and analyzing through shared experience.</i></p> <p>Learners use new and previously acquired knowledge and information in different contexts; they draw connections between ideas, collaborate with others, and use knowledge and skills to reflect on challenges and opportunities.</p>	<p><i>Gaining deeper insights.</i></p> <p>Learners evaluate and assess information and concepts across multiple contexts. They demonstrate the ability to critically analyze and reflect on outcomes and are empowered to consider new strategies and perspectives.</p>	<p><i>Contributing back to the community.</i></p> <p>Learners synthesize knowledge from various sources to produce original work or generate new ideas or solutions. They are able to share and reflect on their knowledge and experience to foster collective growth and innovation.</p>
Bloom's Taxonomy Alignment	<ul style="list-style-type: none"> <li>• Attendance</li> <li>• Participation</li> </ul>	<ul style="list-style-type: none"> <li>• Remembering</li> <li>• Understanding</li> </ul>	<ul style="list-style-type: none"> <li>• Applying</li> <li>• Analyzing</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluating</li> </ul>	<ul style="list-style-type: none"> <li>• Creating</li> <li>• Innovating</li> </ul>

\*Note: All micro-credentials require assessed learning; certificates of attendance/participation are not micro-credentials as they do not have this requirement. Faculties/Units may choose to issue attendance or participation badges to recognize this learning.

## References:

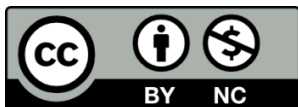
- Bloom, B.S., ed. (1956). *Taxonomy of Educational Objectives Handbook I: Cognitive Domain*. New York.
- LaFever, M. (2016). Switching from Bloom to the Medicine Wheel: creating learning outcomes that support Indigenous ways of knowing in post-secondary education, *Intercultural Education*, 27:5, 409-424, DOI: 10.1080/14675986.2016.1240496
- Krathwohl, D.R. (2002) A Revision of Bloom's Taxonomy: An Overview, *Theory Into Practice*, 41:4, 212-218, DOI: 10.1207/s15430421tip4104\_2

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