University of Colorado **Denver**

Microcredential Working Group Report

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BACKGROUND AND PURPOSE

Microcredentials are a growing trend in higher education and have been increasing at CU Denver in recent years. Although there has been some movement nationally toward common language and standards around microcredential programs and definitions, there is still no standardized approach within the higher education context.

This working group is the first essential step of developing a robust microcredential initiative at CU Denver through the engagement of a range of campus community members. Multiple perspectives are needed in order to begin this initiative to inform decisions regarding program proposal, launch, sustainability, scaling, and accessibility. The members of this working group included participants from all of the following campus groups and representative bodies (a complete list of members appears in Appendix A):

Representatives from five colleges/schools	Continuing and Professional Education
Office of the Registrar	Office of the Bursar
Academic Planning	Office of Information Technology
Strategic Planning (TIPS)	Instructional Design (TIPS)
Student Transitions and Family Engagement	College/School and University Administration
Admissions	Members of various governance groups
Graduate Education	Auraria Library

There are many benefits to including microcredentials within our larger campus curricular plans and infrastructure. First, microcredentials align with both our institutional goal to become a "University for Life" as well as our larger digital strategy, which requires CU Denver to find new ways for learners to access affordable education across their lives and careers.

Microcredentials also offer a range of benefits to diverse learner populations, including:

- Creating additional value for matriculated students for educational experiences that are not traditionally seen on the transcript or credentialed;
- Serving learners through allowing more robust evidence of their skills, competencies, and knowledge;
- Translating traditional academic language (e.g., learning outcomes) into language accessible by employers (e.g., skills, competencies, knowledge);
- Increasing access to underserved learners, particularly those who cannot afford to commit the time or expense to a full degree program;
- Creating more flexibility for learners who may require shorter-form educational opportunities to meet their goals;
- Increasing the pathways for learners to engage with CU Denver through multiple on-ramps and off-ramps to educational programs and opportunities;
- Building partnerships with community members, employers, and industry to address skill deficits that better prepare our learners for the jobs of today and the future.

To support and improve CU Denver's infrastructure for microcredentials, a working group was formed in March 2023. Leveraging the expertise across our colleges, schools, and administrative units, and building on our 2030 strategic plan that positions CU Denver to be a University for Life for all learners, the working group came together to define and create a

roadmap for the infrastructure needed to design and launch microcredentials that meet the needs of Coloradans. This working group reviewed the current state of microcredentials; identified opportunities for potential microcredential program areas; identified the processes needed to ensure the continued quality of our educational activities; and provided recommendations for next steps so that all members of our campus can contribute to developing and maintaining the CU Denver microcredential infrastructure.

WHERE WE ARE NOW

CU Denver Strengths

While it may take some time to work out the details of our microcredential landscape and infrastructure, the foundation for our efforts is strong.

Commitment to serving diverse populations

CU Denver's goal to be the first equity-serving institution in the nation demonstrates our commitment to serving diverse populations. Microcredentials are a tool that creates more access and flexibility for students of all demographics.

Expertise in program development

CU Denver has wide ranging expertise across a variety of characteristics aligned with developing microcredential initiatives. Across our schools and colleges, we have a large selection of for-credit certificate programs, active continuing education activities, and professional learning opportunities both through co-curricular offerings to our students as well as trainings for our faculty/staff.

Centralized instructional design and technology support

Through the recent creation of the Teaching Innovation and Program Strategy (TIPS) Division, CU Denver has centralized supports for the instructional design of programs across all modalities and that are both credit and noncredit. In particular, we have resources to help faculty and staff create more stackable curriculum models that incorporate microcredentials into larger degree programs.

Geographic proximity to employers

Located in a large metropolitan area, CU Denver has the potential to develop new partnerships and strengthen existing relational opportunities from which to build new microcredentials that will help our learners to be workforce ready.

CU Denver Challenges and Opportunities

Even with our strengths, it is important to recognize possible barriers that could impede our microcredential infrastructure:

Limited understanding of the new field, primarily concentrated in certain units

Although there are areas of CU Denver that have experience creating microcredentials, this experience is not consistent across all schools and colleges. There will need to be a broader education and training effort to ensure that the CU Denver community understands and embraces the potential of microcredentials as a curricular offering.

Limited incentives and policies to support non-traditional program development

While incentives have been used in the past for the creation of online courses and programs, there is no current incentive model for noncredit and non-traditional program development such as microcredentials. Additionally, there are gaps in our curricular policies related to the development, approval, and maintenance of microcredential programs.

Market need identification and financial modeling

An ongoing challenge with the creation of microcredentials is understanding the market need. Current market intelligence datasets often focus on degree programs and not smaller-scale educational offerings such as certificates or other forms of microcredential programs. It will be important to engage community and industry partners to better understand where to invest in microcredential program development.

RECOMMENDATIONS

The Microcredential Working Group offers the following recommendations for shoring up and strengthening our current microcredential infrastructure:

Recommendation 1: Adopt common definitions for microcredentials and associated terminology that align with CU Denver's culture and digital strategy.

Recommendation 2: Prioritize identifying, developing, and launching microcredential programs that are designed for the career and academic goals of our specific learner audiences.

Recommendation 3: Establish clear and consistent processes, supports, and resources for microcredential program proposal and development that balance quality and rigor with the need for addressing evolving marketplace needs.

Recommendation 4: Remove barriers and create supports for microcredential program development related to financial, administrative, and technology dimensions.

Recommendation 5: Develop a shared governance infrastructure for faculty, staff, and students to provide administrative review and guidance for emerging questions and concerns arising from microcredential and badging advancements.

Recommendation 6: Create a comprehensive suite of resources for faculty, staff, and administrators who wish to develop microcredential programs both independently and collaboratively.

SUPPORTING DEFINITIONS AND DETAILS

Recommendation 1: Adopt common definitions for microcredentials and associated terminology that align with CU Denver's culture and digital strategy.

The following definitions are recommended for adoption by CU Denver in support of our microcredential initiative. Selected definitions are presented in this section. A full glossary of terms used in this report are included in Appendix B.

Microcredential: An umbrella term for several types of small-scale, skill-based, earned recognitions of proficiency in a designated competency or set of competencies. Types of microcredentials include digital badges, certifications, licenses, endorsements, and assessed PDUs/CEUs.

Microcredential Program: A learner-facing program that awards a microcredential. In order to earn a microcredential through such a program, the skill, competency, or knowledge must be assessed. To provide further clarification, a microcredential is to a microcredential program as a diploma is to a degree program.

Three characteristics of a microcredential program are: (1) It awards a credential, which requires that the skill, competency, or knowledge be corroborated through some form of assessment; (2) It is of smaller scale, focused on a subset of skills or competencies; (3) It focuses on skills or competencies that can be directly linked to career growth, career change, or professional development.

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Terms describing characteristics of microcredential programs.

Programs are either designed as **for-credit** or **not-for-credit.** A special type of not-for-credit program is an **articulated** program. For-credit programs can only be created by academic units; whereas not-for-credit programs can be created by academic or non-academic units.

Articulated: A characteristic of a not-for-credit program that allows it to be transferred to a for-credit program because of design decisions aligning the programs such as by having common learning outcomes, assessments, and/or other attributes.

Programs that are available broadly to all interested and qualified learners are **Open**, while those that are limited to a specific group of learners are **Cohort-based**. Examples of cohort-based programs are: **CU Denver Employee Programs**, available only to CU Denver faculty and staff and **Industry Partner Programs**, which are available to specific external partners.

Embedded Microcredential Programs are those that are not available except through participation in a larger program in which that smaller program exists, such as a skill nested within a course. **Course + Badge** is an example of an embedded microcredential program. Skills that are taught within a course can be badged but cannot be attended except through enrollment in the course. In this model, students are enrolled in a regular for-credit course and also receive a badge for a skill embedded in the course.

Stackable: A characteristic for smaller academic learning activities to be leveraged and/or bundled toward a larger credential. Examples include courses stacking into a badged cluster of courses, badges stacking into a certificate, and certificates stacking into a degree. These are often sequenced in learning pathways.

Bundled Courses: Multiple credit-bearing courses that are distinct from a registered certificate program that can be grouped together to award a microcredential for a specific skill or competency, such as a badge. If the courses are equivalent to the credit hours required for a Certificate program, then considerations should be made as to whether this should be a stand-alone Certificate. These clusters of courses can be considered a Program and also be Stackable to larger credentials.

Competency-based program: Programs that award college credit through demonstrated proficiency and knowledge of a skill or competency rather than through credit per hour units.

Industry-aligned/Professional Standard aligned: A characteristic of a learning activity where it addresses an identified market need and/or is aligned with existing industry standards.

Skill Badge (digital): A kind of microcredential. It is a validated digital record of the demonstrated competency, skill, or knowledge achieved through the learning activity. The badge contains detailed metadata about the learner and their achievements, including such information as who earned it, who issued it, criteria required to earn it, and the means by which competency in the relevant skills was assessed.

Certificates

Certificate programs have a long history as part of CU Denver's offerings, and the understanding of the term has wide acceptance nationally. Additionally, accreditation bodies

have guidance in place for certificate programs. However, the creation of programs that are of equivalent size to traditional certificate programs in the non-credit space are of interest. These non-credit offerings are not only of value to our industry partners and community members interested in up-skilling or re-skilling, but they can also serve as on-ramps into for-credit degree programs, if designed with articulation in mind. For clarity of communication, the term certificate should be reserved for activities that either meet the credit requirements put forth through CU Policy, or, if designed in the non-credit space, include equivalent contact hours and assessment activities so as to meet HLC accreditation requirements, to facilitate transfer to for-credit programs.

> **For-Credit Certificate Programs**: These are defined by CU Denver policy, including credit-hour requirements. The minimum requirement for these programs is 12 credit hours for undergraduate programs and 9 credit hours for graduate programs.

> **Not-For-Credit Certificate Programs**: These are programs covering multiple skills or competencies that are of similar size to for-credit certificate programs. It is recommended that these programs offered through non-credit courses/modules have equivalent hour requirements to their for-credit counterparts. In doing so, the term "certificate" can maintain a level of equivalence across credit status, as well as facilitate transferability to a for-credit space. Doing so will also address potential future requirements of accrediting bodies should these not-for-credit programs become a focus. To maintain equivalence, undergraduate non-credit certificate programs should include a minimum of 150 contact hours and graduate non-credit certificate programs should include a minimum of 113 contact hours.

Two potential exceptions to the use of the term certificate require further consideration. First, a needed exception to the definition of the term certificate is for "professional certificates." These programs are identified with the term certificate by external professional organizations; therefore, the requirements for these programs may differ from CU Policy requirements. A suggested definition is offered below.

> **Professional Certificate Programs**: These are programs covering skills or competencies defined by external standards set by professional organizations or industry. The hour requirements will differ from CU Denver policies defining Certificates because of this external alignment.

The second exception is the use of the term certificates as the artifact awarded for CU Denver employee trainings. Unofficial certificates are a common way of providing evidence of completion of professional learning programs. It is unlikely that these certificates will be confused with those described above; but, the proposed taxonomy by the Badging Working Group takes into account credentialing employee programs through Skill Badges and Recognition Badges, which will soon become available through Credly. Badges could replace unofficial certificates and could serve as valuable records to the learners due to their digital portability.

Recommendation 2: Prioritize identifying, developing, and launching microcredential programs that are designed for the career and academic goals of our specific learner audiences.

The microcredential programs to prioritize are based on the following factors: (1) alignment with the CU Denver Strategic Plan 2030, (2) whether the program has the potential to address the needs of designated learner audiences identified in the Digital Strategy Task Force Report, (3) and if the program can include the prioritized learner-centric characteristics identified by the working group. Second, the decision of whether a program should be included in the initial Microcredential Program launch or be included later was based on consideration of (a) its familiarity to CU Denver and (b) the complexity of its development. Please note that any of these archetypes must meet the three characteristics to qualify as a Microcredential Program as described under Recommendation 1.

Program Availability	Prioritized Program Archetypes
Initial Launch: *Archetypes are already happening at CU Denver. We have the familiarity, infrastructure, and resources to pursue these archetypes immediately, without significant change or additional services.*	Programs with Full Semester Courses (traditional academic courses in any modality)
	Programs with Accelerated Courses (5, 7, 8, or 10-week courses in any modality)
	Certificates (any modality, both undergraduate and graduate)
	Non-Credit Certificates (any modality, level, and duration)
	PDU/CEUs (badge-eligible if assessed)
	In-Person Events (badge-eligible if assessed; includes a variety of structures, such as workshops, conferences, and seminars)
	Online Workshops (any duration, synchronous or asynchronous)
Post Initial Launch: *Archetypes are familiar and may be happening on a smaller scale at CU Denver. However, their higher complexity means there are challenges of scale, technology, demand, and/or others that make them less realistic for pilot launch; they are still archetypes of significant importance and interest, and should be prioritized in a roadmap.*	Stackable Degrees (intentionally designed for learners to earn credentials throughout the duration of the program)
	Professional Certificates (any modality and duration)
	Course Clusters (smaller than a certificate, but still awards a badge)
	Co-curricular Programs (any modality and duration; intended for learners in credit-bearing programs)
	Self-paced Programs (online, any duration, badge-eligible if assessed)
	Embedded Skills (Badges earned within a larger course for specific skills)
Future State: *Archetypes may be complicated to develop, take a significant amount of resources, or involve infrastructure that is not currently in place or slated at CU Denver. These are archetypes that require thoughtful discussion and planning to pursue, and—if adopted—will likely take significant time and investment.*	Competency-Based Programs (curriculum structured around competencies instead of credit hours; learners set their own pace; subject to HLC review and approval)

Needs More Research: *Archetypes are not widely familiar at CU Denver, but have a lot of potential. These archetypes are possibilities for the future, but need to be researched, qualified, and socialized before pursuing.*	Subscription Content (Monthly payments at different tiers for access to a broad range of learning offerings)
	Modularized Programs (breaking a single course down into smaller chunks of stand-alone content)
	Self-Paced, Persistent Access Content (one-time purchases that remain available to learners in perpetuity, even after earning a microcredential)
	Micro Learning Programs (8-10 minute sprints on a very small topic/skill, offered via a mobile platform)

Additional considerations for program prioritization and infrastructure development:

College/School/Unit Differentiators: It is recognized that this report is focused upon the needs of the campus as a whole. With such a broad focus, some of the important differentiators of our individual colleges, schools, and units can be missed. For this reason, additional feedback from these groups should be taken into consideration in decisions about infrastructure development.

Faculty and Staff Projects: For any microcredential program to come to fruition, it requires the passion of a developing faculty or staff member. Consideration of those faculty and staff who are engaged in developing a microcredential program should also be included in infrastructure and developmental prioritization.

Program characteristics

Although the focus of this section is on programs to prioritize, specific characteristics of programs were also identified by the working group as important for addressing the goals of the Strategic Plan 2030. The theme among these prioritized characteristics is learner-centricity and flexibility. The following characteristics of programs are recommended to be prioritized, as well as infrastructure to be developed to support these characteristics.

Program Dimension	Prioritized	Secondary Priority
Learning Format	Mixed Format (a mix of self-paced and facilitated approaches for learning)	Self-paced, facilitated, and micro-learning
Modality	Flexible and Blended	Online
Equity Practices/Pedagogies	Universal design/accessibility, inclusive pedagogy, and personalize/responsive learning	
Offering Cadence/Frequency	Rolling/Continuous	
Stackability	Badges to Certificate, Courses to Certificate	Certificate to Degree
Admission Type	No application process	Application required and Cohort-based models
Employer Partnerships	Offerings for formal partnership(s)	
Credit Status	Non-credit to Credit	Credit, Non-credit

Stackability: A principle that resonated with the working group is that programs should not be dead ends but rather lead to other programs whenever possible. Additionally, these continuing pathways should be made clear to the learners. CU Denver needs resources for efficient creation of meaningful learning pathways that connect not-for-credit to for-credit

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programs, articulates smaller programs with larger programs, and facilitates the combination of multiple programs in more flexible ways that can meet the evolving needs of the marketplace and our communities.

Offering Cadence/Frequency/Length: Infrastructure to support program cadences and lengths other than the traditional semester is vital for continuing and professional education programs, and can also better meet the needs of our diverse learner audiences by providing more flexible offerings.

Employer Partnerships: To promote employee partnerships, resources are needed in the following areas:

a. **Guidance for connecting industry requirements to program development.** The need to base microcredential programs on existing industry standards will be required for many fields. Guidance is needed to facilitate translating these standards into learning outcomes and assessment activities that will meet HLC accreditation requirements.

b. **Evidence of industry need**: Because microcredentials are skills-focused, it is recommended that the language used to describe them have clear alignment with industry. When proposing, designing, and marketing microcredentials, it is recommended that skills descriptions are aligned with terms recognizable to employers, such as NACE[1], Lightcast[TM,2], or skills identified by professional organizations.

Additionally, to avoid diluting the value of our offerings, it is recommended that these programs include justification of a market need or community need, similar to that required for proposing degree and certificate programs. Examples of evidence can include such things as market data, feedback from industry partners, third-party reports, etc. This practice will also ensure programs are addressing a need among our employee or community partners.

Credit for prior learning is also recommended as an area to be developed with microcredentials in mind, particularly as we promote on-ramps from not-for-credit activities that can be applied to for-credit programs.

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[1] https://www.naceweb.org/
[2] Lightcast[TM] (2023), https://lightcast.io/open-skills

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Recommendation 3: Establish clear and consistent processes, supports, and resources for microcredential program proposal and development that balance quality and rigor with the need for addressing evolving marketplace needs.

A characteristic that makes microcredential programs particularly valuable is their potential to address evolving marketplace needs. To be successful, however, microcredential programs must be able to be developed quickly, for example, on a three- to five-month timeline for programs developed for industry partners.

The working group recommends the following strategies and initiatives to ensure efficiency and quality in microcredential development:

Applying to All Microcredential Programs:

- Maintain consistency for processes across the colleges and schools for each category of microcredential program.
- Establish or identify a governance group(s), which can be at different administrative levels depending on the scope and scale of the program, for short-term process development decisions and for long-term structures and policies.
- Establish methods for transparency, such as creating process maps and web-presence through an internal project website.
- Provide community need and/or market analysis supports to guide programmatic decisions about market need and potential on-ramps and off-ramps for learners.
- Include innovators in the development process, to help with determining which processes need to be transitioned and what can be maintained as is.

Applying to For-Credit Microcredential Programs:

CU Denver has processes in place for establishing larger programs, such as degree programs and certificate programs, that ensure both quality and need. Such existing processes can be utilized for the development of microcredential programs as well; however, further exploration of these processes is needed to allow for quick development of these programs.

- Incorporate and build from existing processes
- Develop guidance and supports for creating microcredential programs from existing approved programs, such as bundled courses
- Identify efficiencies and create guidance for development of new microcredential programs that may not have the benefit of building from existing approved programs

Applying to Not-for-Credit Microcredential Programs:

In the not-for-credit space, colleges and schools have established processes for program development, which should be explored to determine what lessons can be learned and infrastructure established to support these efforts across CU Denver as a whole.

- Establish campus-level support structures for both academic and non-academic units for program development.
- Create guidance for CEU- and PDU-awarding programs, as these can have unique characteristics requiring industry partnerships, official transcription, but not always corroboration of learning.

- Create guidance for developing Professional Certificates as well as clear communication that distinguishes these programs from more traditional certificate programs.
- Explore competency-based programs and provide recommendations for moving forward to support their development, including determining methods to convert to credit.

Applying to Articulated Microcredential Programs:

Within the Not-for-Credit Microcredential Programs space, CU Denver can establish on-ramps into credit-bearing programs through design decisions. Specifically, articulating Not-for-credit programs with for-credit programs through such characteristic as having common learning outcomes, activities, assessments, and time requirements, can all facilitate the transfer of these not-for-credit programs into a for-credit space while also having the additional benefit of maintaining quality and rigor, and addressing potential requirements of accrediting bodies.

- Determine accreditation needs for these programs, considering likely future accreditation requirements in the microcredential space.
- Develop guidance to support development of articulated programs, prioritizing articulation with existing, approved for-credit courses that are stackable to larger credentials. Avoid creating unusable credits.
- Explore competency-based programs and provide recommendations for designing them in a way that can contribute to transferring to the for-credit space.

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Recommendation 4: Remove barriers and create supports for microcredential program development related to financial, administrative, and technology dimensions.

The working group recommends the following strategies and initiatives to ensure clear steps and processes for microcredential development:

Financial Strategies & Initiatives

For Developers and Facilitators:
- Establish financial and related supports for program developers and facilitators of microcredential programs. For example:
  - Include development and facilitation of microcredential programs as part of academic load
  - Provide stipends for development or other similar incentives
  - Include program development as part of merit or other recognitions
  - Determine how enrollment in different kinds of microcredential programs count toward compensation
  - Remove barriers for educational innovation, such as consideration of potential negative consequences on course evaluations.
- Provide supports for determining financial viability of programs, including flexibility through different funding streams.
- Identify and share lessons from successes across campus
- Create guidance related to hiring external experts to facilitate microcredential programs

For Colleges/Schools:
- Provide clarification of how microcredential programs benefit the college/school.
  - Determine how learners participating in these programs will be counted toward enrollment numbers, differentiated by program characteristics.

For Learners:
- Examine existing financial aid rules to determine where financial aid can be applied to microcredential programs
- Identify and communicate other financial supports available *through the institution*
- Identify and communicate financial supports available *through partner employers*
- Determine processes to allow students to pursue multiple programs simultaneously and track their progress along various pathways
- Explore possibilities for providing support services to learners of microcredential programs that are outside of the traditional for-credit space
- Identify and communicate benefits of microcredential programs to potential learners, including career-related as well as contributing to key missions of the institution like outreach and research

For the Institution:
- **Industry partners:** Identify partners in our community that are willing to invest in microcredential development, both financially and through identifying cohorts of employee learners.
- **Scalable financial models:** Explore financial models and how those models may impact scalability of microcredential programs

- **Flexible enrollment and funding models**: Provide guidance around funding of programs and enrollment of learners of different categorizations within the same programs (e.g., obstacles related to firewall of D1, D2, and D3).
- **Extended studies**: Revisit extended studies policy to incorporate these new programs and provide clarifications where needed
- **Affordable Financial Models**: Develop consistent and affordable pricing models for microcredential programs that makes them accessible for a diverse population of learners

Administrative Strategies & Initiatives

- Establish seamless user experience where multiple steps can be accomplished quickly, such as applying, paying, and enrolling in a program in one process.
- **Admission:** Examine admission requirement policies and existing guidance to determine what is applicable to the different kinds of microcredential programs in order to remove obstacles to learners.
- **Enrollment:** Establish a consistent and streamlined process for enrolling learners in microcredential programs, particularly those that are in the non-credit space.
- **Billing:** Streamline billing processes for both regular and third-party billing.
- **Learner tracking:** Determine how to track and report on the learners engaged across different kinds of microcredential programs.
- **Metrics:** Determine metrics of success for microcredential programs, using this data to implement iterative improvement processes for microcredential programs and infrastructural support mechanisms.
- **Marketing and Recruitment:** Establish marketing and recruitment strategy for different kinds of microcredential programs.
- **Celebration and alumni benefits:** Establish recognition opportunities (e.g., similar to graduation ceremony) and provide alumni-related benefits where possible for microcredential earners.

Technology Strategies & Activities

- Determine resources available for different categories of microcredential programs, with the goal of providing high quality experiences for all learners. This includes determining access to resources available through the Auraria Library, Health Center, Learning Resources Center, among others.
- Develop and implement strategies to support the utilization of Open Educational Resources.
- Explore opportunities and limitations for system integrations, including Credly, CU-SIS, and a public-facing registration system/portal
- Clarify guidelines for use of existing academic technologies at CU Denver for different microcredential offerings
- Explore technologies that may be necessary for new microcredential archetypes, such as eLearning authoring tools, micro learning platforms, and streamlined content creation tools
- Formalize administration of Credly and associated technology policies, ensuring consistent and secure administration of badges

Recommendation 5: Develop a shared governance infrastructure for faculty, staff, and students to provide administrative review and guidance for emerging questions and concerns arising from microcredential and badging advancements.

As the recommendations from this report are addressed, and new developments arise, a process for review and advising will be necessary. A representative group should therefore be established for this purpose. This group should consist of faculty, staff, and student representatives with representation from the following bodies:

- Faculty Assembly
- Staff Council
- Student Government
- College/School Curriculum Committees
- Graduate Council

- The Office of the Registrar
- Transfer Office
- Career Center
- Teaching Innovation and Program Strategy (TIPS) Division
- Budget Office

Other representatives may also be needed as microcredential programs continue to evolve.

Recommendation 6: Create a comprehensive suite of resources for faculty, staff, and administrators who wish to develop microcredential programs both independently and collaboratively.

The working group recommends the following strategies and initiatives to ensure appropriate professional development resources for those wishing to engage in microcredential development:

- Establish central support services for microcredential programs to include such aspects as:
  - Program templates
  - Development support
  - Launching support
  - Instructional design (for courses and programs of all modalities and formats)
  - Marketing and recruitment
  - Financial modeling
  - Determining program opportunities,
  - Website presence,
  - Learner portal,
  - Back-end administrative support such as determining SIS or other tracking database requirements.
  - Cross-program, cross-course, cross-unit collaborative possibilities for microcredential program development.
- Create self-paced courses and offer short trainings. Distribute materials through a variety of avenues, including newsletters, shared governance, and with colleges/schools/units.
- Collect and archive information on what is working well and share it broadly.
- Establish a space where faculty and staff interested in microcredential programs can share ideas and learn from one another.

NEXT STEPS

These recommendations will serve as the foundation for the road map for CU Denver's Microcredential Initiative. To address these recommendations, many different constituents will be engaged, including schools/colleges and various campus departments (such as the Registrar, CPE colleagues, and the budget office), as well as Faculty Assembly (including EPPC and LETTS committees), UCDALI, Staff Council, and Student Government representatives.

These constituents will also be engaged as the topics covered in this report continue to evolve over time, and as the processes, guidance, and supports recommended here are developed for CU Denver's microcredential programs.

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APPENDICES

Appendix A: Microcredential Working Group Members, Meeting Schedule, and Charge

Working Group Members

Jeremy Lingle | Director of Microcredentials | TIPS (Facilitator)

Cameron Blevins | Associate Professor Clinical Teaching Track & Interim Director of Digital initiatives | College of Liberal Arts and Sciences

Kari Campeau | Assistant Professor of English | College of Liberal Arts and Sciences

Jessica Critten | Instructional Designer | TIPS

Dennis DeBay | Clinical Teaching Assistant Professor | School of Education and Human Development

Daniel DeLaTorre | Assistant Dean | College of Engineering, Design & Computing

Laurel Dodds | Director of Initiatives and Continuing and Professional Education | College of Liberal Arts and Sciences

Jason Drysdale | Director of Program Development | TIPS

Diane Fritz | Geospatial Data Scientist and Lecturer GES Department | Auraria Library

Dawn Gregg | Associate Dean | Business School

Shannon Hagerman | Executive Director of Continuing and Professional Education | School of Education and Human Development

Neena Jain | Co-Director Center for Community Safety & Resilience | School of Public Affairs

Michael Kocet | Assistant Vice Chancellor for Graduate Education

Marjorie Levine-Clark | Associate Dean | College of Liberal Arts and Sciences

Erica Manuel | Associate Bursar | Office of the Bursar

Matthew McCarville | Assistant Vice Chancellor | Office of Information Technology

Lara Medley | Assistant Vice Chancellor and University Registrar | Office of the Registrar

Beth Myers | Associate Vice Chancellor | Academic Planning and Institutional Effectiveness

Timberley Roane | Associate Professor of Biology | College of Liberal Arts and Sciences

Michael "Bodhi" Rogers | Associate Professor and Chair of Physics | College of Liberal Arts and Sciences

Kristen Salsbury | Continuing and Professional Education Program Manager | College of Liberal Arts and Sciences

Kodi Saylor | First Year Teaching and Learning Librarian | Auraria Library

Natalie Schaffer | Admissions Manager | School of Education and Human Development

Richard Strasser | Associate Professor of Music Business| College of Arts and Media

Randy Tagg | Associate Professor of Physics | College of Liberal Arts and Sciences

Lisa VanRaemdonck | Executive Director of Outreach, Partnerships and Professional Learning| School of Public Affairs

Heather Vigeveno | Assistant Director of CRM & Academic Technology | Office of Information Technology

Emilie Waggoner | Director of Student Transitions | Student Transitions and Family Engagement

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Meeting Schedule

March 1: Introductions, Charge, and Process
March 9: Current state of microcredentials
March 16: Prioritizing program characteristics
March 30: Prioritizing microcredential programs

April 6: Definitions
April 13: Proposal Process
April 20: Challenges and Resources (Joint meeting with Badging Working Group)
April 27: Review of final recommendations

Charge

The Microcredential Working Group was created to support and improve CU Denver's infrastructure for microcredentials. Leveraging the expertise across our colleges, schools, and administrative units, and building on our 2030 strategic plan that positions CU Denver to be a University for Life for all learners, we are working to define and simplify the infrastructure for creating microcredentials that meet the needs of Coloradans.

This working group was launched in March 2023 to review the current state of microcredentials; identify opportunities for microcredential programs; identify and create processes to ensure the continued quality of our educational activities; and provide recommendations for next steps so that all members of our campus can contribute to developing and maintaining this microcredential infrastructure. (A second working group on badging was also created to help the CU Denver community define and implement the steps needed to capitalize on our new badging platform, Credly. Learn more about the badging working group and its charge.)

In collaboration with the schools/colleges and various campus departments (such as the Registrar, CPE colleagues, and the budget office), as well as in consultation with Faculty Assembly (including EPPC and LETTS committees), UCDALI, and Staff Council representatives, the working group seeks to provide answers to a series of questions:

Guiding questions:

• Of the range of definitions and categories of microcredentials programs occurring nationally and on our own campus, and considering current activities, potential future directions, and the guidance provided by the 2030 Strategic plan and Digital Strategy Task Force recommendations, what forms of microcredentials will CU Denver prioritize?

• What characteristics need to be considered when creating and teaching microcredential programs?

• What processes already exist that support the development, marketing, and outreach of high quality, relevant microcredential programs?

• What processes and guidance need to be established to ensure the development, marketing, and outreach of high quality, relevant microcredential programs?

• What groups and/or individual people should be responsible for creating, offering, reviewing, and administering these programs and processes?

• What metrics will we use to evaluate the success of our microcredential programs?

• What resources will need to be created to support the development of these programs and who will be the responsible parties for their development?

The working group will conclude in early May, culminating in a report on the suggested processes, guidance, and additional recommendations to be shared with Chancellor Marks, Provost Nakuma, and our broader community.

Appendix B: Glossary of Terms

Within the working group, a number of terms were defined in order to improve communication. The glossary provided here includes both the new terms we recommend for adoption by CU Denver (noted under Recommendation 1) as well as the definitions of other potentially unclear terms that we used in our meetings and in this report.

Learner: A more inclusive term than "student." This term is meant to describe any person seeking to acquire knowledge, and not limited to pursuit of activities that are considered formal learning experiences.

Degree Program: A program that awards an Associate's, Bachelor's, Master's, or Doctoral degree.

Credential: "A formal award from a credible body that corroborates the recipient's knowledge, skill, and competence for employment or further study" (Gaston & Van Noy, 2022).

Microcredential: An umbrella term for several types of small-scale, skill-based, earned recognitions of proficiency in a designated competency or set of competencies. Types of microcredentials include digital badges, certifications, licenses, endorsements, and assessed PDUs/CEUs.

Microcredential Program: A Learner-facing program that awards a microcredential. In order to earn a microcredential through such a program, the skill, competency, or knowledge must be assessed.

Embedded Microcredential Program: A microcredential program that is not available except through participation in a larger program in which that smaller program exists.

Stackable: A characteristic for smaller academic learning activities to be leveraged and/or bundled toward a larger credential. Examples include courses stacking into a badged cluster of courses, badges stacking into a certificate, and certificates stacking into a degree. These are often sequenced in learning pathways.

Bundled Courses: Multiple credit-bearing courses that are distinct from a registered Certificate program that can be grouped together to award a microcredential for a specific skill or competency, such as a badge. If the courses are equivalent to the credit hours required for a Certificate program, then considerations should be made as to whether this should be a stand-alone Certificate. These bundled courses can be considered a Program and also be Stackable to larger credentials.

Competency-based program: Programs that award college credit through demonstrated proficiency and of knowledge of a skill or competency rather than through credit per hour units.

Assessment: Measurement of ability; knowledge acquisition or application, test or performance based[3]

Learning Outcome: Measurable statement that describes skills, abilities, knowledge, or values that learners should be able to demonstrate after completing a learning activity.

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[3] Credly's definition

CU Denver

Knowledge: Awareness of a concept[4]

Skill: Ability to perform a certain task or use certain tools[5]

Competency: Ability to perform a role or apply certain strategies or theories (competencies typically encompass numerous skills)[6]

Industry-aligned/Professional Standard aligned: A characteristic of a learning activity where it addresses an identified market need and/or is aligned with existing industry standards.

Co-Curricular Learning Activity: A Learner-facing Program that is offered to students enrolled in credit-bearing courses that are attended outside of the credit-bearing courses (e.g., training on library research methods offered by the Auraria Library).

Workshop: A single session learning typically offered as a half day, full-day, or weekend module focused on a specific topic in a certain discipline or field involving a hands-on or discussion activity.

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[4] Credly's definition
[5] Credly's definition
[6] Adapted from Credly's definition

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Appendix C: Program Prioritization Process

Prioritization of CU Denver's activities that could be microcredential programs for infrastructure development, and where they should be placed on a development timeline was based on working group discussions and a prioritization activity.
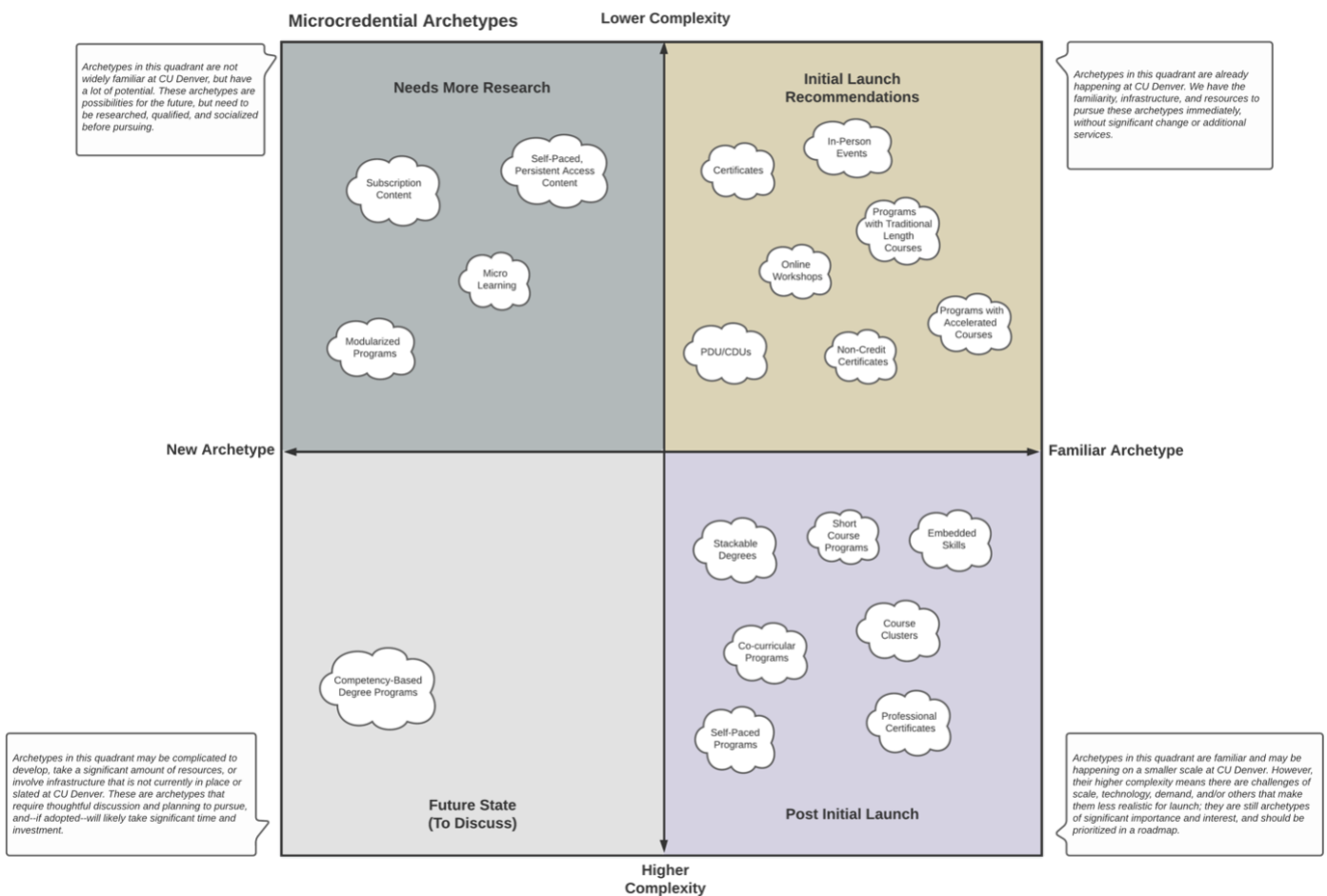
Prioritization for infrastructure development was based on considerations of:

a) Alignment to Strategic Plan (Equity-serving institution, University for life, innovation district)
b) Accessibility for the audiences identified through the Digital Strategy Task Force
c) Dimensions prioritized by the working group (see dimensions in Appendix D)

Development timeline placement was based on considerations of:

a) Familiarity of the program to CU Denver and relatedly, infrastructure being in place to support it
b) Complexity for developing the program

The following figure displays how different program archetypes were categorized.

Microcredential Archetypes — Lower Complexity

Archetypes in this quadrant are not widely familiar at CU Denver, but have a lot of potential. These archetypes are possibilities for the future, but need to be researched, qualified, and socialized before pursuing.

Archetypes in this quadrant are already happening at CU Denver. We have the familiarity, infrastructure, and resources to pursue these archetypes immediately, without significant change or additional services.

Needs More Research
- Subscription Content
- Self-Paced, Persistent Access Content
- Micro Learning
- Modularized Programs

Initial Launch Recommendations
- In-Person Events
- Certificates
- Programs with Traditional Length Courses
- Online Workshops
- Programs with Accelerated Courses
- PDU/CDUs
- Non-Credit Certificates

New Archetype — Familiar Archetype

Future State (To Discuss)
- Competency-Based Degree Programs

Archetypes in this quadrant may be complicated to develop, take a significant amount of resources, or involve infrastructure that is not currently in place or slated at CU Denver. These are archetypes that require thoughtful discussion and planning to pursue, and--if adopted--will likely take significant time and investment.

Post Initial Launch
- Stackable Degrees
- Short Course Programs
- Embedded Skills
- Course Clusters
- Co-curricular Programs
- Self-Paced Programs
- Professional Certificates

Archetypes in this quadrant are familiar and may be happening on a smaller scale at CU Denver. However, their higher complexity means there are challenges of scale, technology, demand, and/or others that make them less realistic for launch; they are still archetypes of significant importance and interest, and should be prioritized in a roadmap.

Higher Complexity

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Appendix D: Program Dimensions

Pedagogy Dimensions

Dimension Category	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Learning Format	Facilitated	Self-Paced	Mixed Format	Micro-learning	MOOC	
Equity Practices/Pedagogies	Inclusive pedagogy	Universal design/accessibility	Personalized/responsive learning			
Quality Norms	Structured course/program design process or review					
Revision Cycle	Revise after first offering	Yearly content revision (rapidly changing field)	3-year revision cycle	As needed for format/modality changes	None	
Intended Learner Audience(s)	CU Denver degree seeking students	CU Denver non-degree seeking students (in state/out of state	Business/Industry partnerships	CU Denver faculty/staff	International	Under 18
Evidence of Learning	Self assessments	Instructor feedback	Quizzes/Assessments	Portfolio review	Pass/Fail	

Structural Dimensions

Dimension Category	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Modality	Online	On Campus	Blended	Hyflex	Flexible	Remote
Offering Duration	Traditional Semester Term	Accelerated/Summer Session	Weeklong	Workshop (1-4 days)	Time-on-task (e.g., 4 hours)	Event
Offering Cadence/Frequency	Fall only	Fall/Spring	Fall/Spring/Summer	Rolling/continuous offering	Other offering schedule	

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Credit Status	Credit	Noncredit	Noncredit to Credit			
Stackability	Badges to Certificate	Courses to Certificate	Badges to License	Courses to License	PDU to Badge/Certificate	Certificate to Degree
Enrollment Scalability	Limited by faculty availability	High scalability potential/readiness	No limit (self-paced or MOOC model)	Progressive growth or steady state expected		
Credit/Badges for Prior Learning	Placed-based experiences	Military or business job skills	Specific, past training experience (military, police, association certifications)	Credit for work experience		

Financial Dimensions

Dimension Category	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Faculty Compensation Model (Teaching & Development)	(TBD based on financial model)	Overload	Service	Pay / hour Or Pay / project	Course releases	
Development Costs	(TBD based on financial model)					
Payment Model	Tuition	Tuition equivalent (D2)	One time fee with permanent access	Subscription model	Bundled payment	Other pricing/payment model
Financial Aid	Eligible	Non-eligible				

Administrative Dimensions

Dimension Category	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6

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Program Ownership/Governance	Housed in school/college/department of origin	Shared between multiple schools	Housed in a single school, governed by an advisory board	Some could also be offered through Office of Graduate Education	Initiated through outside partner	Initiated through individual faculty or SME – consider the need for royalty agreements
Market Intelligence	Report/market data required	Report/market data obtained	Advisory councils consulted	Industry partners consulted		
Admissions Type	Application required	No application process	Cohort-based model			
Credential Type Issued	Badges	Undergraduate Certificate	Graduate Certificate	License/Certification	None	CEU/PDU
Approvals Required	Curriculum Committee(s)	School/College Deans()	Regents	Specialized accreditation requirements	HLC	Potential MOU, Legal, HR, or Risk Management concerns need approvals in some cases
Secondary Accreditor/Professional Organization Standards	Required to meet specific standards	Prefer to meet specific standards	No requirement			
Campus Strategic Goals Alignment	Goal 1: Equity-Serving Institution	Goal 2: University for Life	Goal 3: Research Grand Challenges	Goal 4: Open Innovation District	Goal 5: Best Place to Work	
Employer Partnerships	Offering for formal partnership(s)	Offering for informal partnership(s)	No employer influence/targets	Open to post-launch partnerships		

Technology Dimensions

Dimension Category	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6

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Delivery Platform	Canvas (production instance)	CU Online Open (Canvas Catalog)	Mobile Platform (TBD)	Learning Community (Discord, Slack, etc.)	Other	MOOC
Registration System	Credly	Slate	Canvas Open	A formbuilder (i.e. Formstack, Microsoft Forms, Drupal) and/or Touchnet	Registration system being explored through CPE group	
Learning Technologies	TBD					
CU-SIS Integration	Yes	No				
Badging Platform	TBD					

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