Subcommittee on Stackable Certificates and Micro-Credentials
Council on Academic Affairs

Proposed framework for alternative credential offerings at Ohio State

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This document is intended for Office of Academic Affairs (OAA) leadership, Council on Academic Affairs (CAA) members, and other academic leaders across Ohio State.

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Executive summary

Based on feedback from industry partners, the Office of Government Affairs, and academic units across the university, as well as the changing landscape of higher education and the emerging needs of learners and employers, a subcommittee of the Council on Academic Affairs (CAA) was convened in December 2021 to address interest in new types of pathways and credentials for learners to demonstrate their knowledge from their engagement with Ohio State. The subcommittee was charged with the following:

- Help clarify and define the concepts of **stackable certificates** and **micro-credentials**.
- Help **work with academic units**, in an advisory capacity, as they develop offerings.
- Propose and help implement **an approval and assessment process for CAA**.

This document is intended to serve as a framework to define alternative credentials, create a common vocabulary, and explore how different types of alternative credentials could be leveraged to increase Ohio State's capacity to provide in-demand, relevant curricular offerings that are flexible, less cost, and quickly earned.

Objectives

This document details three objectives to build organizational capacity to implement different types of alternative credentials:

1. Prototype, pilot, and evaluate a limited number of **stackable certificate** programs.
2. Prototype, pilot, and evaluate a limited number of **micro-credential** programs.
3. Expand Ohio State's capacity to **offer alternative credentials at scale**.

Obj. 3: Expand capacity to offer alternative credentials at scale

Obj. 2: Pilot a limited number of micro-credentials

Obj. 1: Pilot a limited number of stackable certificates
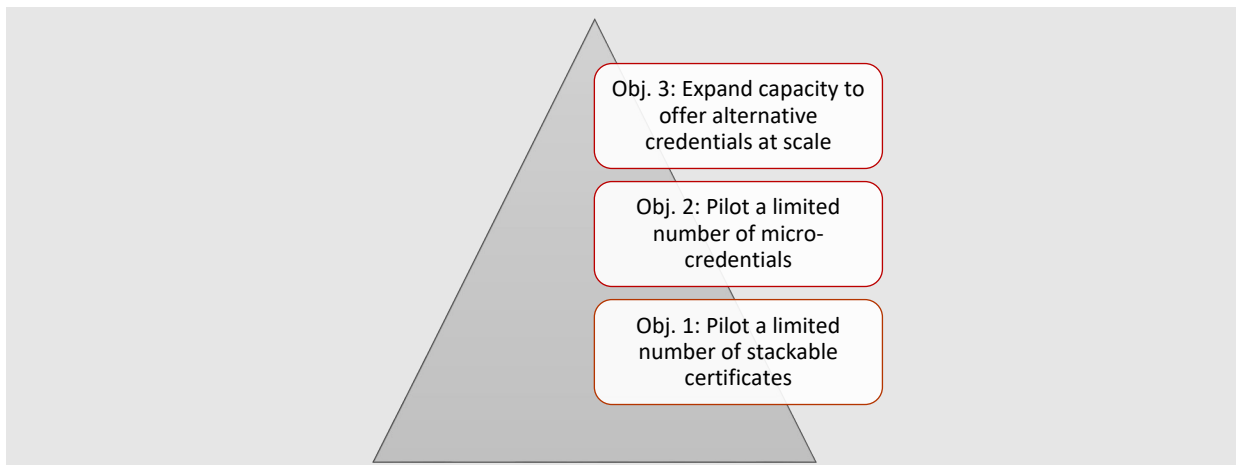
Working toward these objectives will help establish a strong foundation and organizational capacity for future planning, investment in technical infrastructure, testing, implementation, and continuous improvement.

Feedback requested

The subcommittee's recommendations for implementing alternative credentials builds upon various initiatives in higher education and at Ohio State, including strategic enrollment planning and curricular innovations that address present and emerging workforce needs.

There are policies, processes, and resources still needing to be determined and solved during the prototyping efforts which will be addressed via coordination through a standing CAA subcommittee.

The core asks are:

- Does this framework document provide enough information to OAA and CAA to support the next phase for prototyping programs and prioritizing next steps?
- Does this framework document provide the CAA subcommittee on alternative credentials the initial information necessary to begin developing and implementing approval and monitoring processes for alternative credentials?
- Does this framework set Ohio State on a path for continuous improvement and maturation of alternative credentials in ways that are aligned to our academic mission and quality standards?
- Does OAA and CAA endorse entering the prototype phase for alternative credentials?

Defining alternative credentials

Societal changes have unearthed opportunities for institutions of higher ed and the private sector to attract learners with different goals than those seeking traditional undergraduate and graduate degrees. These changes have led to more agile, smaller credentials focused on particular subjects, skills, and/or competencies – often referred to as "alternative credentials."

Associate's Degrees	Bachelor's Degrees	Master's and Professional Degrees	Doctorate	**Alternative Credentials**
	Minors	Tracks		Certificates • Undergraduate • Post-bachelor's • Graduate • Professional
	Undergraduate embedded certificates	Graduate minors		Certifications
		Specializations		Micro-credentials
		Graduate and Professional embedded certificates		
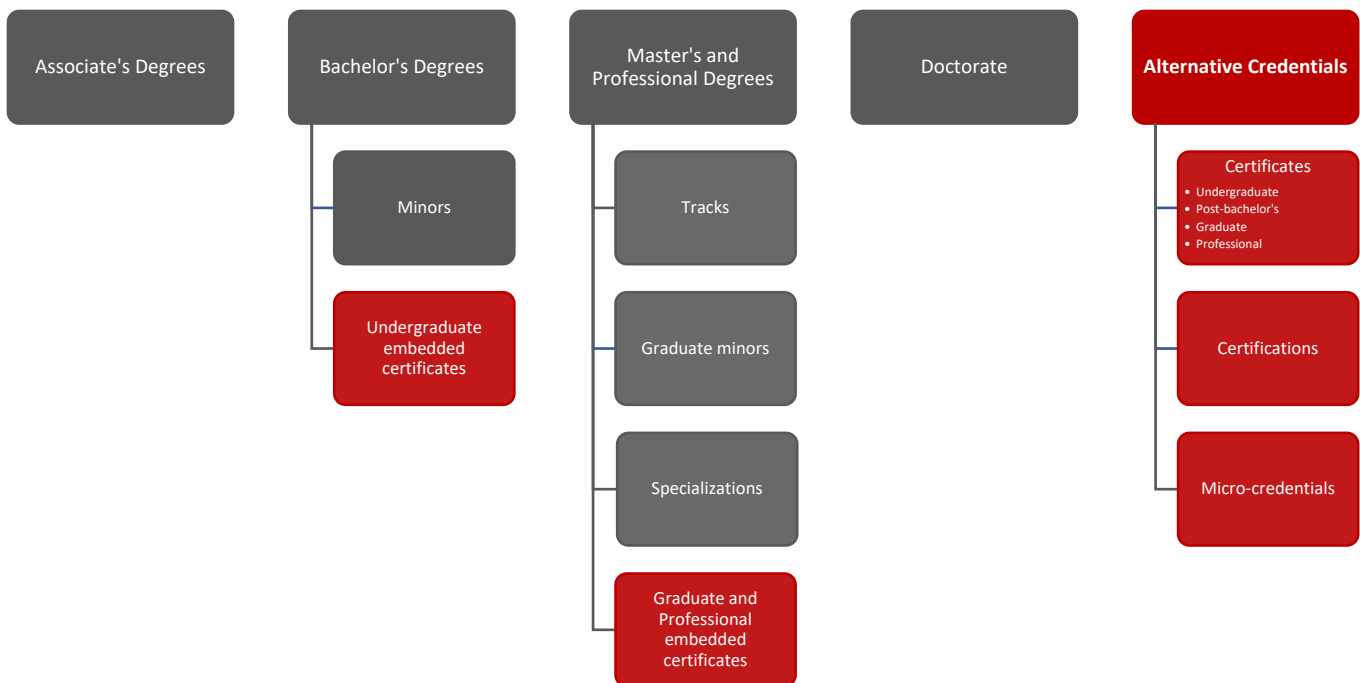
In the absence of formal, standardized definitions of alternative credentials across institutions, agencies, and industries, the subcommittee recommends a standardized vocabulary for framing alternative credentials at Ohio State. The following offers a high-level look at these definitions. A more in-depth analysis will be provided in the following pages.

At Ohio State, certificates, certifications, and micro-credentials fall under the umbrella term of **alternative credentials** — alternatives to the traditional degrees Ohio State has offered for more than 150 years.

- **Certificates** fall under a broad set of three *credit-based* categories: undergraduate, post-bachelor's, and graduate. Except for a few discipline-specific cases at the graduate level,

certificates require fewer credit hours than degrees, with 12-20 credit hours necessary to earn a certificate. Certificates that are 21 or more credits require additional approval.

- **Certifications** can be either *credit-based* or *non-credit based*. Certifications are professional, industry recognized credentials and may also lead to (re)*licensure* or becoming (re)*certified*. Certification requirements are defined by a standard industry-recognized technical, licensure, board, or other eligibility expectation.

- **Micro-credentials** are the newest, evolving category framework for earning *verified **credit-based*** (less than 11.5 credit hours) and ***non-credit based*** alternative credentials. Micro-credentials are intended to evolve as curricular innovation prototypes shape this emerging credential space. Core to micro-credentials is the *demonstration of a competency or mastery of a subject* — based on evidence from modules, (short) course content, self-learning, or specific work experience.

Rather than learners earning a diploma to indicate successful completion, a digital badge is a more contemporary demonstration of completion or of achieving a specific competency.

Curricular innovation to advance learners' abilities to serve current and future workforce needs is a strategic direction in which the institution is headed. It's worth noting the two overarching curricular categories for workforce development programming.

- **Education** refers to teaching and learning content aligned with competencies or objectives associated with enhancing basic and applied knowledge (e.g., theory) and attitudes (e.g., behaviors) among learners.

- **Training** refers to teaching and learning content aligned with competencies or objectives associated with applying knowledge and enhancing functional skills development among learners.

Note: **minors**, **tracks**, **specializations**, and **graduate interdisciplinary specializations** are not considered alternative credentials. Instead, these academic programs of study are described in the OAA Academic, Organization, Curriculum, and Assessment Handbook as concentrated or focused areas of study that function as a subset or supplement to traditional degree programs.

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What are certificates?

The Ohio Department of Higher Education (ODHE) <u>defines a certificate</u> as a formal award certifying the satisfactory completion of an organized program of study at the postsecondary level. Certificates can be designed as building blocks toward future degrees and links between degree programs. They often take less time to complete and are less expensive than full degree programs.

Certificates fall under a broad set of three ***credit-based*** categories: undergraduate, post-bachelor's, and graduate (i.e., Type 1a, 1b, 2, 3a, 3b Academic Certificates). Except for a few discipline-specific cases at the graduate level, certificates require fewer credit hours than degrees, with 12-20 credit hours necessary for completion. Certificates that are 21 or more credits require additional approval beyond CAA.

Certificates can be earned concurrently with a degree program but generally they are intended to be an independent credential, unlike minors and interdisciplinary specializations. An embedded certificate may be requested in the university's approval process when a certificate credential has a different meaning or intent for earners. For-credit certificates are noted on the university's official transcripts. The Office of the University Registrar maintains a list of approved for-credit certificates and known non-credit certificates at: <u>https://registrar.osu.edu/certificates/index.html</u>.

As of the beginning of AY23, students enrolled in Ohio State certificates can apply up to 50 percent of the program's required credits toward a full degree program—creating a time and cost barrier for learners who may be planning to earn the full degree from the outset of the certificate or for the learner who decides to pursue the degree after completion.

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Note, any discrepancies from the official tables provided to the public via registrar.osu.edu are unintentional and should be aligned during the prototyping process.

CRITERIA	UNDERGRADUATE (1)		POST-BACHELOR (2)	GRADUATE (3)	
TYPE	STAND-ALONE (A)	EMBEDDED (B)		STAND-ALONE (A)	EMBEDDED (B)
Description	Designed for post-high school graduates who want to earn a ***for-credit certificate*** by completing courses with undergraduate academic credit in a select topic area.		Designed for post-bachelor's degree students who want to earn a ***for-credit certificate*** by completing courses with undergraduate academic credit in a select topic area to supplement or complement their undergraduate degree program.	Designed for post-baccalaureate students who want to earn a ***for-credit certificate*** by completing courses with graduate academic credit in a select topic area.	
Examples	Turf Management Certificate; Hydraulics Certificate;	Dairy Certificate; Fisher Leadership Certificate	Respiratory Therapy Certificate; Medical Laboratory Science Certificate;	Business Certificate; Geographic Information Systems Certificate; Exposure Science Certificate; Scientific and Technical Writing Certificate;	Medieval Renaissance
Approval	CAA	CAA	CAA	CAA	CAA
Ohio Department of Higher Education (ODHE) approval	21+ credits: yes	N/A	21+ credits: yes	21+ credits: yes	N/A
Maximum credit overlap with degree program	UG Stand-alone: 50%; UG Embedded: 100%; Post-bachelor: 50%; Graduate Stand-alone: 50%; Graduate Embedded: 100%				

CRITERIA	UNDERGRADUATE (1)		POST-BACHELOR (2)	GRADUATE (3)	
TYPE	STAND-ALONE (A)	EMBEDDED (B)		STAND-ALONE (A)	EMBEDDED (B)
Minimum acceptable grade to apply	C- or better			C- or better *and* 3.0+ overall GPA	
Transfer credit	100% of applied courses must be taken at Ohio State				
Examination Mark (EM) credit	100% of applied courses must be taken at Ohio State. EM credit not applicable.				
Outcomes-based	*Upon completion of the academic certificate in* <specify title>*, learners will be better prepared to. . ."* <List max 3 Outcomes>				
Curriculum and credits	Typically composed of undergraduate-level courses equivalent to a minimum of 12 to maximum 20 undergraduate semester credits. 21+ credit hours require additional approvals.			Typically composed of graduate-level courses equivalent to a minimum of 12 to maximum 20 graduate semester credits. 21+ credit hours require additional approvals.	
Admission	Post-high school admission, including high school transcript review by UG Admissions and program (i.e., same process as for full degrees). Minimum GPA aligned with Ohio State undergrad admissions; Official High School Transcripts;	Initially admitted to the university as part of an Associates or Bachelor's Degree program. An embedded certificate program is "declared" in a similar path to majors. Each college or program may have their own pathway into the certificate.	Post bachelor's admission including college transcript review by UG Admissions and program (i.e., same process as for full degrees). Minimum GPA aligned with Ohio State undergrad admissions; Official College Transcripts; Completed Application	Post-baccalaureate admission via Graduate and Professional Admissions (i.e., same process as full graduate degree admissions). Minimum GPA aligned with Graduate School; Official College Transcripts; Completed Application	Initially admitted to the university as part of a graduate degree program. Secondary admission to certificate program based on criteria established by program. Minimum GPA aligned with Graduate School; Official College Transcripts; Completed Application

CRITERIA	UNDERGRADUATE (1) STAND-ALONE (A)	EMBEDDED (B)	POST-BACHELOR (2)	GRADUATE (3) STAND-ALONE (A)	EMBEDDED (B)
TYPE	Completed Application				
Arranged / individual study courses	None				
Minimum grades and GPA to complete	Minimum GPA 2.0/4.0 . . . units may require higher GPA; Only grades of "A" through "C-" may be counted toward the completion of the academic certificate program.			Minimum GPA 3.0/4.0 . . . units may require higher GPA; Only grades of "A" through "C-" may be counted toward the completion of the academic certificate program.	
Student Information System (SIS) record	Yes				
Tuition and fee assessment	Yes	Yes; based on degree program	Yes	Yes	Yes; based on degree program
Pell eligible; direct student loan eligible	Potentially. Must be approved. See Checklist resource below.	Based on degree program	Potentially. Must be approved. See Checklist resource below.	Potentially. Must be approved. See Checklist resource below.	Based on degree program
Diploma issued	No				
Document issued by	Registrar				
Ohio State alumni benefits eligible	No	Based on degree program	No	No	Based on degree program
Certificates table end					

Financial Aid Resource for Certificates

Contact the Office of Student Financial Aid via email ESUE-SFA-Compliance@osu.edu or by calling Vicki Miller, Associate Director of Compliance (614)688-8228, to confirm current program eligibility or discuss options for pursuing aid eligibility.

What are certifications?

Certifications are earned by individuals who pass standardized assessments that recognize knowledge, skill, or competency in a particular specialty. They verify the earner's legitimacy and competence to perform a job.

Currently, at Ohio State, certifications fall under two broad categories: ***credit-based*** and ***non-credit based*** (i.e., Type 5a and 5b Professional Certifications). Certifications are industry-recognized and may also lead to (re)*licensure* or becoming (re)*certified*. If a certification is required by law before engaging in a job, that is *licensure*. Licensure is different than professional certification because it is required by law and obtained through a state agency. Professional certifications are typically earned through a professional organization or educational institution.

Note: Disclosures to learners about whether Ohio State's offerings meet state or U.S. territory expectations are required in any and all U.S. jurisdictions from which students apply and/or plan to accomplish the job the certification affords. More information is available on Ohio State's SARA website: https://go.osu.edu/state_authorization.

Note, any discrepancies from the official tables provided to the public via registrar.osu.edu are unintentional and should be aligned during the prototyping process.

CRITERIA	NON-CREDIT	CREDIT
TYPE	TECHNICIAN / PROFESSIONAL	STAND-ALONE
Description	Designed for individuals who want or need to meet requirements and/or eligibility for licensure or registration exams for **certification** in some particular technical or professional area or skill. Typically involves prescribed education and training culminating in some form of standardized exam to become **certified**.	Designed for individuals who want or need to meet requirements and/or eligibility for licensure or registration exams for **certification** in some particular technical or professional area or skill, such as the Ohio standard teaching license or specialization endorsement. Involves prescribed undergraduate education and training culminating in a standardized exam.
Examples	Emergency Medical Technician (EMT) Certification; Food Safety for Food Handlers Certification;	Orientation and Mobility License; Health Education License: Teacher Leader Endorsement; Reading Endorsement;
Approval	Office of Academic Affairs (OAA) which will inform CAA and Academic Programs Advisory Committee (APAC) as an informational item	CAA
ODHE approval	N/A	Applicable state board (if required)
Stand-alone program	Yes	Yes. May be pursued independent of a degree.
Maximum credit overlap with degree program	N/A	50%
Minimum acceptable grade to apply	N/A	Varies by college and program
Transfer credit	N/A	100% of applied courses must be taken at Ohio State
EM credit	N/A	100% of applied courses must be taken at Ohio State. EM credit not applicable.

CRITERIA	NON-CREDIT	CREDIT
TYPE	TECHNICIAN / PROFESSIONAL	STAND-ALONE
Outcomes-based	*Upon completion of the program in <specify title>, learners will be better prepared to <specify>. . .and eligible to sit for applicable registration or licensure exam.*	*Upon completion of the program in <specify title>, learners will be better prepared to <specify>. . .and eligible for recommendation for license or endorsement.*
Curriculum and credits	Content and minimum number of contact hours may be mandated by a registration or licensure agency/board.	Content and minimum number of contact hours may be mandated by a registration or licensure agency/board, such as the Ohio Department of Higher Education.
Admission	Post-high school admission via the specific unit (i.e., college; department; center; . . .) at Ohio State. Official High School Transcripts; Completed Application	Depends on program. Post-high school admission via the specific unit (i.e., college; department; center;. . .) or UG or Grad/Prof Admissions. Official High School Transcripts; Completed Application or post-baccalaureate admission via the Graduate School. Student declares the license or endorsement program. Minimum GPA aligned with Graduate School; Official College Transcripts; Completed Application
Arranged / individual study courses	N/A	
Minimum grades and GPA to complete	N/A	Based on certification requirements; typically 2.0+ for undergraduate; 3.0+ for graduate
SIS record	N/A	Yes
Tuition and fee assessment	N/A	Default rate
Pell eligible; direct student loan eligible	No	Potentially. Must be approved. See Checklist resource below.
Diploma issued	No	
Document issued	Oversight agency. Dean may award a certificate of completion.	Dean
Ohio State Alumni benefits eligible	No	

CRITERIA	NON-CREDIT	CREDIT
TYPE	TECHNICIAN / PROFESSIONAL	STAND-ALONE

What are micro-credentials?

Micro-credentials are verified, competency-based professional learning, most often designed for post-traditional learners who have previously earned a bachelor's degree. At the most basic level, micro-credentials verify, validate, and attest that specific skills and/or competencies have been achieved.

Micro-credentials differ from traditional degrees, certificates, and certifications in that they are generally offered in shorter, more flexible timespans and tend to be more narrowly focused. Micro-credentials can be offered online, on-campus, or a hybrid of both, but learners demonstrating mastery is core. Rather than learners earning a diploma to indicate successful completion, it's common for learners to earn a digital badge to demonstrate a specific competency or completion.

An amalgamation of factors, such as changing workforce needs, increased value placed on skills-based competencies, and the overall changing learner demographics, have led to a growing appetite for smaller, just-in-time and as-needed learning tailored to individual interests and needs to meet professional and personal goals. For instance, as technology continues to disrupt existing industry sectors and creates opportunities for new ones, learners need to become agile in obtaining the emerging skills needed to remain competitive for jobs or to be considered for promotions without pausing to take years to complete a degree.

Although Ohio State currently does not offer micro-credentials, the current Type 4 Certificate of Completion serves similar functions that micro-credentials may serve.

Considerations when planning alternative credentials

Alternative credentials can play a role in supporting learners in identifying pathways in and out of Ohio State and in creating a curricular mosaic of learning opportunities needed to meet their personal and professional goals. Offerings like micro-credentials and certificates can operate independently to, or fit within, programs within the same field or help connect to options in related programs across the university. Below is a visual representation for how the alternative credential ecosystem could support building out a set of curricular paths for learners. Similar to how sets of courses are designed to create paths to credentials, this is designing sets of credentials to create paths to degrees and/or learning outcomes in non-traditional ways.

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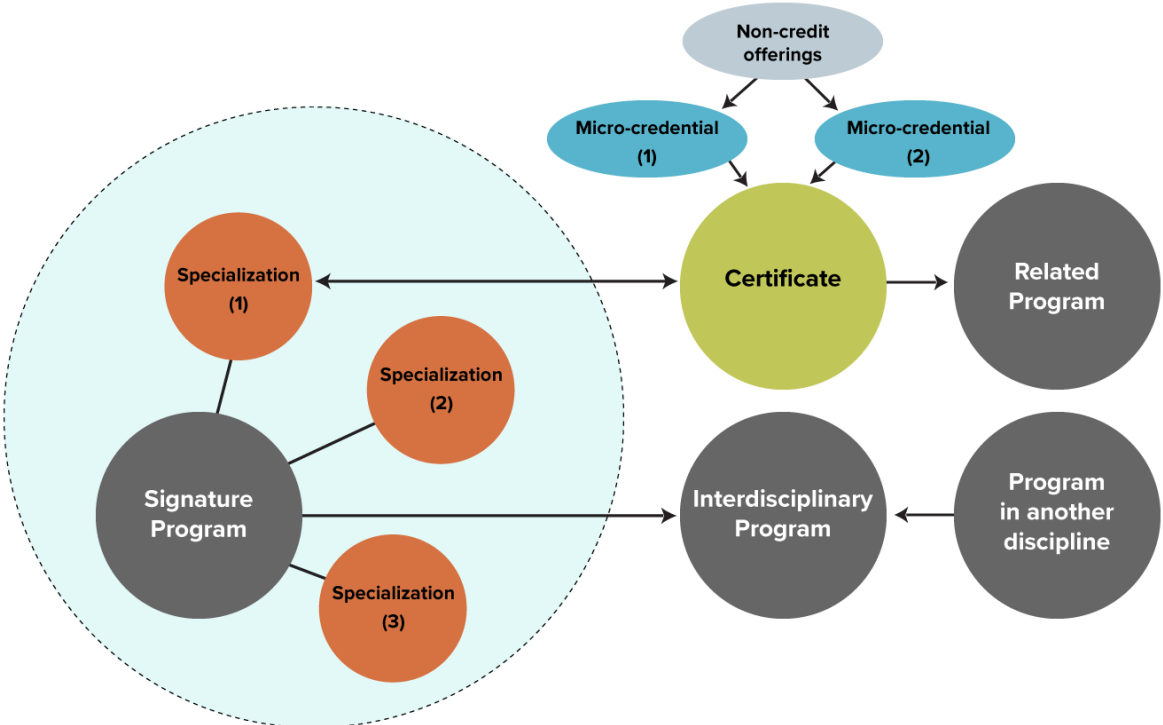
Guiding principles

Exploring greater use of alternative credentials aligns with Ohio State's Shared Values Initiative. The following are guiding principles when considering the creation of impactful offerings that increase access to an evolving portfolio built on quality and transparency:

- Exemplar of academic excellence, driven by Ohio State faculty and governance
- Embedded academic assessment
- Alignment with Ohio State's mission and strategic goals
- College-initiated offering creation and verification
- Central communication and coordination through OAA
- Learner-centric
- Data-informed
- Market-driven
- Transparent
- Portable
- Demonstrative of clear value
- Technology-enhanced to support discovery and inter-connections
- Focused on the whole learner through human connection and community building across modalities and offerings
- Learner enhancement: personal and career benefit, wellness, leadership, and citizenship
- Flexibility in access and choice, particularly to promote equity of a diverse learner population
- Meaningful, agile, and responsive to evolving learners' needs and interests
- Pilot/experiment, experience, and assess modular approaches within and across disciplines
- Contributes to building database of learners with experience and affinity for Ohio State.

See more information about the American Council on Education's Quality Dimensions for Connected Credentials final report: https://www.acenet.edu/Documents/Quality-Dimensions-for-Connected-Credentials.pdf.

Flexibility and adaptability

Critical to success in advancing alternative credentials is providing access and embracing adaptability. It is important to define and develop a framework beyond degrees, certificates, minors, certificates of completion, and courses, to include the ability to:

- Repurpose select content from credit-based courses into accessible teaching and learning topic-specific modules offered for either credit or non-credit
- Add clarity and definition to micro-credentials and stackable credentials.

Assessment

It is important that Ohio State focuses on program quality and accountability in all its offering types. Alternative credentials at Ohio State must include assessment plans that support an initial and continuous affirmation that the credential is warranted and supports learners and their goals. Evaluations should include the academic quality/assessment plan, market need, financial sustainability, and benefit to learners. Ohio State's alternative credentials should benefit learners by directly connecting the offering to career advancing skills and competencies.

There are three primary outcomes by which Ohio State can measure success in delivering relevant and impactful workforce development alternative credentials:

- Employment and promotion: Graduated learners become employed (and/or promoted) as workers in aligned occupations, jobs and sectors leading to careers marked by personal financial stability and growth, plus professional satisfaction. (…filling gaps or voids in the workforce and developing a local workforce more adaptable and resilient to change)

- Impacts to organizations/agencies and employers: Public and private organizations/agencies provide services and/or products that meet societal needs, wants, and/or demands and lead to organizational financial stability and growth, plus, professional satisfaction.

- Impacts to communities: Public and private organizations and agencies contribute to economic and societal stability and growth, filling skilled labor shortage gaps, and enhanced quality of life locally, regionally, and beyond.

Transparency

Ohio State must ensure cost transparency of the cost, learner impact and outcomes, and offering benefits. It is part of our university values, increasingly expected by our learners, and is becoming part of more regulatory requirements from oversight agencies.

Tuition model

Competitive pricing alignment to market and industry trends is important for success. Existing offerings, intended audience, learner experiences, total cost to deliver, impact for learner's employment, and more can influence pricing strategy. There is greater flexibility for pricing with non-credit offerings. The subcommittee recommends OAA continue work with the Office of Fiscal Planning and Analysis for pricing guidance for for-credit offerings.

Note: many alternative credentials are not financial aid eligible, but learners could find state, employer, or grant funding to help offset the cost of an alternative credential. The subcommittee recommends OAA work with the Office of Military and Veterans Services for insight and impact on military connected learners.

Budget model

When considering alternative credential options, it's critical to understand how a new offering would fit into the current marketplace in terms of competition, demand, pricing, and program attributes. It's important to evaluate learning opportunities from both traditional and non-traditional providers, as newer, industry-offered learning opportunities (e.g., Google-offered certificates) may not appear in IPEDS or other standardized reporting. Colleges should have a clear understanding of the total cost required to offer a quality program (i.e., instruction costs, support services) to determine whether an alternative credential could have an appropriate return on investment.

Currently, only degrees and certificates are identified in Ohio State's Student Information System (SIS), and learners enrolled in those plans are considered to be achieving toward a credential. The subcommittee recommends that learners engaging in for-credit micro-credentials would be coded as non-degree students until alternative credentials are labeled in the SIS.

Taxes

Sales tax within Ohio

Online education courses offered by Ohio State are generally considered professional services and not subject to Ohio sales tax when offered directly to an individual. However, if Ohio State contracts directly with a business entity for the purchase of online courses for the benefit of the business' employees, these sales are subject to Ohio sales tax. Any textbooks required to be purchased for the course would also be subject to sales tax.

Sales tax outside Ohio

Sales tax rules vary significantly by state, and the facts and circumstances would need to be analyzed on a course-by-course and state-by-state basis for any fee-based online courses offered to customers outside of Ohio.

Invoices should include a statement such as, "Your purchase may be subject to Use Tax in your state. Please consult your personal tax advisor. Please note, Ohio purchasers are not subject to Use Tax on this purchase." This statement would alert out-of-state learners to their potential individual tax liability without Ohio State as the seller making determinations on a state-by-state basis.

Ohio State's Tax Office monitors sales activity outside of Ohio for economic nexus, which is the threshold to trigger a requirement to charge and remit sales tax as the seller for any taxable sales across the university. Units must report taxes collective to Tax Office to monitor for economic nexus.

Objective 1: Prototype, pilot, and evaluate a limited number of stackable certificate programs at Ohio State

Credits and continuing education units (CEUs) documenting completion of specific education and training as well as those earned via other modes including demonstration of competency-based work experience, can be accumulated and stacked to earn credentials ranging from academic courses, certificates, and/or degrees. There are a variety of types of stackable credentials (Lumina Foundation, 2015; Williamson and Pittinsky, 2016) and approaches to stacking (Naughton, 2020).

What is certificate stacking?

The U.S. Department of Labor defines stackable credentials as those that are "part of a sequence of credentials that can be accumulated over time that typically move an individual along a career pathway or up a career ladder" (U.S. DOL, 2014). Additionally, the ability to stack credentials promotes lifelong learning by lessening the immediate financial and time commitments necessary for traditional degree programs.

Stacking credentials can take on different forms (Williamson and Pittinsky, 2016):

- Vertical Stacking (traditional): Credentials are accumulated/earned in an ordinal hierarchy. This is typically defined by the faculty and/or university structure of what counts to build on the next. Note: only the first pathway can occur within Ohio State's credit overlap policies as of the authoring of this framework.

    o High School Diploma > Associates Degree > Bachelor's Degree > Master's Degree

    o Micro-credentials > Certificates

    o Certificates > Associate's Degree

    o Certificates > Bachelor's Degree

    o Certificates > Master's Degree

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- Example: [Completed Graduate Certificate 1] + [Completed Graduate Certificate 2] + [Capstone project] = [Master's Degree]

- Horizontal Stacking: Credentials have subject-matter connections with no ordinal hierarchy. Instead, a learner collects or accumulates credentials from the educational provider in a defined content area in order to broaden their skills for their particular career path.

    - Professional Certification A + Micro-Credential B + Certificate C = [Broadened skills needed for career opportunities]

- Value-Added Stacking (blended): New credentials build areas of expertise on top of a previously earned credential(s) without the need to achieve a next ordinal credential. This is a stand-alone credential without the learner's future intent of accumulating additional credentials.

    - [Associate's Degree] + Micro-Credential = [Broadened skills needed for career opportunities]

Why consider stackable credentials?

The ability to stack certificate programs independent of a degree can help learners identify on- and off-ramps to Ohio State and design customized pathways to meet their personal and professional goals. Certificates can operate independently to, or fit within, degree programs in the same field or help connect to options in related programs across disciplines.

This subcommittee recommends Ohio State first explore vertical stacking with horizontal stacking as an opportunity for more cross-disciplinary collaboration and innovation after additional data is gathered. Units should consider an intentional blending of stacking options across offerings. Tracking how learners navigate offerings and their success stories doing so can shed light on new programming opportunities and formal paths connecting options within and outside Ohio State.

Promising practices in creating pathways through stackable certificates

Stacking certificates at Ohio State

Ohio State has promising practices already occurring in this space.

The Fisher College of Business currently offers non-credit, alternative learning opportunities that can stack toward additional certifications. For example, an individual could complete a certain body of learning to earn a greenbelt; through further programming at Fisher, they then could master additional skills that stack toward a blackbelt. On the for-credit side, the college has identified three concrete skill sets – prescriptive analytics, predictive analytics, and descriptive analytics – that make up the Specialized Master of Business Analytics program. With policy changes to allow for vertical stacking at Ohio State, Fisher could break each skill set into its own certificate program that could stack toward the full master's degree.

Another example is the model being implemented by a group of faculty from multiple universities. The NSF-funded initiative, titled *QuSTEAM: Convergent undergraduate education in Quantum Science, Technology, Engineering, Arts, and Mathematics*, is led by Ohio State professor Zeke Johnston-Halperin and begins with focus groups and surveys of academic, industrial, and national lab stakeholders to determine the scientific and engineering practices that will be required of the future quantum smart workforce.

This information is then used to create modules that can be packaged and repurposed to meet diverse educational needs, including future quantum professionals and members of the current industrial workforce, community colleges, minority-serving institutions, and other bachelor's and graduate degree-granting institutions. Modules are built using in-person, online, and hybrid delivery modalities to account for content and instruction from different institutions, industrial partners, and national lab participants.

This example incorporates several promising practices:

- Addresses a critical future workforce need for skilled professionals in quantum science
- Offers content to multiple universities
- Creates modules at different levels of complexity that can be stacked to tailor a credential for community college or baccalaureate institutions
- Provides options for existing workforce to select modules for upskilling
- Offers flexibility in delivery model, benefitting both learners and instructors.

Stacking certificates beyond Ohio State

Ohio State is one of 37 public institutions of higher ed in Ohio and part of a larger university system available for partnerships. Opportunities with key transfer partners, such as Columbus State Community College, or part of larger state-wide efforts, such as those developing around the arrival of the Intel plant in Licking County, provide opportunities to connect, build off, or augment others' offerings to create accessible learning pathways.

Across Ohio, programs administered through the Ohio Department of Higher Education (ODHE) such as *Ohio Means Internships and Co-ops* could be leveraged to enhance the student experience with certificates, stackable certificate programs, or credentials. This program invests "state and private dollars to increase the number of internships and co-ops for employers and students in key industries to close the skills gap, increase student completion, and give Ohio a competitive advantage in the global human capital talent marketplace." Coupled with a certificate or stackable certificate program, internships and co-ops could be used to complement certificate content and expand the possible application of newly acquired skills in the workplace.

A second ODHE program with potential relevance is the *Choose Ohio First* program. Primarily a scholarship program, the *Choose Ohio First* program is designed to strengthen Ohio's competitiveness within STEM disciplines by providing funding to Ohio colleges and universities to support students in innovative academic programs. Participating universities and colleges award scholarships to students desiring a certificate, associate degree, baccalaureate degree, or graduate degree in eligible STEM and STEM education fields. This program focuses on programs that are integrated with regional economies and meet statewide educational and workforce needs.

The College of Food, Agricultural, and Environmental Sciences (CFAES) partners with local, regional, and national industries and organizations, as well as donors, faculty members, and staff to ensure Ohio's workforce is prepared for the future. The National Coalition of Certification Centers (NC3; https://www.nc3.net/) is a network in which CFAES Wooster is engaged for generating industry-recognized credentials. A priority is to embed the training associated with these types of certificate/credentials into coursework offered at Ohio State ATI, so that upon completion of a suite of for-credit courses at ATI, the student is prepared/eligible to sit for the NC3 certification exam. The learner has the potential to achieve several industry-recognized certificates in addition to their associate degree.

The Ohio Talent Development Network (OTDN; https://www.ohiotalent.org/) is a network of career and technical centers and two-year colleges providing cost-effective access to assessments and training programs that would likely be cost prohibitive to the average Ohioan. With Ohio State's Wooster

campus' Business Training and Educational Services a participating member, there is potential to further engage the OTDN to explore stackable credentials.

To support the pre-workforce/emerging workforce, 4-H Pathways to the Future is a college and career readiness curriculum targeted at high school students in grades 9-12. The first SPARK EXPO (**EX**ploring **P**athway **O**pportunity) was held in June 2022. The program was designed to cover a breath of topics from career exploration and interest to skill development in time management and work ethic, as well as academic skill development and preparedness.

Considerations when developing pathways through stackable certificates

Associate's vs. bachelor's – More students stacked certificates onto associate's degrees to earn bachelor's degrees than onto bachelor's degrees to earn graduate degrees, and they most often earned them at the same institution (Daugherty, Kramer, Anderson & Bozick, 2020). We will need to evaluate and understand baccalaureate and post-baccalaureate learners' primary drivers so to best serve them with this new type of offering.

ROI for students – Ohioans who have stacked post-secondary certificates have seen a 16-37 percent increase in earnings, mostly middle-class wages. The average annual increase was $9,000 for those who stacked. Ohio State must be mindful of the potential for a learner's return on investment when pricing future offerings and ensure the full cost of a pathway to a degree through stackable certificates does not exceed the cost of earning the degree directly.

Industry alignment – Understanding the current and future needs of industry is critical to success with stackable certificates. Ohio State will be successful in its endeavor to add stackability when learners and employers' workforce needs are being met.

Tuition reimbursement – Do employers' tuition reimbursement programs generally cover stackable certificates in addition to traditional degree programs? Ohio State should leverage existing corporate tuition reimbursement offerings, and in cases where companies do not offer tuition assistance, we must learn what credentials they value in their particular industry and use that feedback to guide further program development.

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Flexibility – Learners interested in certificates and stacking certificates toward a future degree value flexibility when it comes to delivery mode, time to completion, and transferability. Flexibility should be a guiding principle when considering stackable certificates and alternative credentials more generally. Tracking how learners navigate offerings can give insight to new programming options, success stories, and formal paths connecting to options within and outside Ohio State.

Stackable certificates: gaps and recommendations

Working to meet Objective 1 to prototype, pilot, and evaluate a limited number of stackable certificates will raise new questions and offer critical insights that can inform:

- Decisions about the scale and scope of alternative credentials that will be offered at Ohio State
- Continued revisions of Objective 3 (expand university capacity to offer alternative credentials at scale) and associated gaps and recommendations
- Ongoing planning and implementation of alternative credentials.

The following gaps and recommendations are intended to spark discussion and should not be considered exhaustive.

1.a. Ohio State policies, guidelines, processes

Gap	Recommendation
Currently, the OAA Academic Organization, Curriculum, and Assessment Handbook and related guidelines and websites (e.g., Graduate School Handbook, Registrar website, etc.) do not comprehensively address alternative credentials, including stackable certificates or micro-credentials. Currently, the maximum credit hour overlap between an academic, for-credit certificate (embedded and stand-alone) and a degree is 50 percent, and a certificate can only overlap with one degree or certificate.	Build upon this document to edit definitions and policies while prototyping and piloting a limited number of stackable certificates. As a part of pilot testing, Ohio State should build upon offerings that exist and (a) increase the maximum credit hour overlap between an embedded certificate and a degree to 100 percent, (b) maintain the maximum credit hour overlap between a stand-alone certificate and degree at 50% (per current interpretation of HLC guidelines), and (c) allow more than one certificate to overlap with a degree.
Currently, for-credit certificates are awarded at the end of each term, the same time as awarding of	Since ODHE will accept census dates at different times for credit-bearing programs that fall outside of

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Gap	Recommendation
academic degrees in alignment with the academic calendar. Awarding for-credit certificates at the same time as degrees may limit students' and programs' ability to stack earned certificates and minimize time to degree completion.	traditional course timelines, Ohio State should investigate whether the university (or academic units) can award for-credit alternative credentials anytime instead of requiring alignment with the academic calendar. Consider the potential impact this change could have on the student experience and university operations, as well as with any reporting requirements and timelines.
Currently, learners who earn an academic certificate are not considered Ohio State Alumni unless they have also earned a full degree. Ohio State degree earners (recognized alumni) receive attention and programming for life-long engagement.	Work with the Ohio State Alumni Association and its board to determine opportunities to increase options and services for earners of credentials other than degrees.

1.b. Staffing and management

Gaps	Recommendations
Programs do not have access to central instructional design support for the development of new alternative credential programs.	As a part of prototyping and piloting stackable certificates, the university should draft a document that summarizes instructional design support they may benefit from receiving as they develop and propose future stackable certificates. Examples may include: (a) Crafting ELOs (b) Strategies for building resilience and managing stress to support well-being, cognitive engagement, motivation, persistence, learning outcomes, and program completion (c) Designing learner assessments (d) Developing program assessment plans and submission protocols (e) Alignment to industry skills, competencies, and examples (f) Integrating technology capabilities to track course activities to learning outcomes (g) Establishing meta-data related to credentials.

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Gaps	Recommendations
Units proposing stackable pathways may need support with identifying and arranging authentic learning experiences in alternative credential and degree-seeking programs (e.g., internships, field-experiences, community-based learning), which may help address goals related to academic excellence and workforce development.	As a part of prototyping and piloting stackable certificates, the university should draft a document that summarizes support from which programs may benefit receiving to identify and arrange internships and other authentic learning experiences. The document should be informed by those individuals and units participating in prototyping.

1.c. Proposal approval process

Gaps	Recommendations
Currently, the university does not have a process for approving proposals to establish stackable certificates or micro-credentials.	Ohio State should pilot a curriculum review and approval process for stackable certificates that consists of: (1) Programs should complete an intent form and template and obtain program- and college-level approval. (2) CAA Subcommittee D reviewing and approving proposals should establish new stackable certificate pathways (stacking into degrees). (3) A reaffirmation process for continuing or ending alternative credentials after an agreed-upon timeframe should be developed.
Proposers and reviewers would benefit from a proposal template to communicate policies, facilitate the review process, and to support alignment with strategic priorities.	Draft/revise curriculum approval instructions and proposal templates utilized to prototype and pilot stackable certificates to support an efficient, faculty-engaged approval process that addresses university values and strategic priorities.

1.d. Assessment

Gaps	Recommendations
Currently, there is no central university database of learners enrolled in (or who have completed) Type 5a	For the limited number of stackable certificates that will be prototyped, pilot programs' required use of the

Gaps	Recommendations
or 5b professional certification programs, or the outcomes of learners enrolled in Type 1a, 1b, 2, 3a, 3b, 5a, or 5b programs. Instead, any certificate and professional certification assessment data that has been collected is stored across multiple academic programs and units. The lack of centralized data collection and storage limits the university's ability to track and monitor enrollments, completions, or outcomes of certificate/certification learners or programs.	university's LMS (i.e., Canvas for credit-bearing certificates/certifications or ScarletCanvas for non-credit certifications) to collect enrollment, completion, and assessment data for learners participating in on-ground, distance, and/or hybrid certificate and professional certification programs. Required use of the LMS throughout the pilot phase will enable the university to prototype data requirements and determine whether a more robust IT solution is needed to collect, track, and submit enrollment, completion, and assessment data. Until the U.S. Dept. of Education, HLC, or ODHE publish expected metrics, an internal benchmark should be established and met (e.g., 80% completion rate).

1.e. Technical infrastructure

Gaps	Recommendations
Currently, proposals for certificates and professional certification are not submitted using the curriculum.osu.edu portal. Additionally, proposers are not able to revise proposals submitted to the curriculum portal. As the volume of alternative credential proposals increases, it will become increasingly challenging to track and manage proposals at various steps of the approval process.	Prototype using fillable PDFs or forms and extract data to Excel to create a dashboard of prototyped and piloted stackable certificate proposals. DocuSign could be used to track proposal approvals throughout the review process. The process and spreadsheet can be used to prototype data and functionality needs for future investments in a more robust curriculum management system.
Currently, OAA, academic deans, Registrar, Graduate School, and other offices/staff can search the CAA website to access approved curricula for degree programs and alternative credentials; however, there is not a readily accessible database to locate approved curricula and relationships among alternative credentials and degrees (e.g., certificates embedded within degree programs).	Leverage university tools and data storage solutions to prototype a digital repository for storing all stackable certificates and related degrees. The data may store: (a) proposal metadata (e.g., proposing program and unit, date of approval, SIS plan/subplan or other identifier), (b) curriculum requirements, (c) total credit hours or seat-time, and (d) approved stackable relationships among alternative credentials and/or degrees.
Currently, there is no universal identity management (IdM) solution for all use-cases or central customer	Work with OTDI in determining how to bring data elements together and a connected identity strategy

Gaps	Recommendations
relationship management system (CRM) that would support tracking students through various offerings across the university.	to be learner-centered in tracking how individuals engage with the university and actively support them in finding options to extend their education and have secure access to the appropriate support, licenses, systems, and applications.

1.f. Tuition, funding, and budget model

Gaps	Recommendations
Units will need to determine pricing for programs so that alternative credentials and stackable pathways are appropriately priced for the field, market, and to incentivize degree completion.	Pilot an operational model (e.g., committee that includes OAA, OTDI, Registrar, Fin Aid, Admissions, Business & Finance, etc.) to work collaboratively to be a central knowledge to programs. Co-develop and prototype a pricing resource as a committee. Work with faculty, chairs, and/or college leadership to learn the issues that impact tuition/funding. Create an intake form for the committee and then use info to inform the proposal approval template.
Certificates in the for-credit space typically follow the university's applicable cost per credit hour. Ohio State must ensure the total cost associated with stackable certificate pathways does not exceed the cost of achieving the degree into which the certificates would stack.	CAA should work with the following units when piloting and implementing stackability: • Office of Financial Planning and Analysis for tuition guidance • Office of Military and Veterans Services for insight and impact on military-connected learners • Office of the University Registrar regarding financial aid considerations related to certificates or stacking.
Revenue model that considers stackable certificate pathways	Revenue from certificates should flow based on the level and modality of the enrolled student. More work will need to be completed in this area in advance of a pilot.

1.g. Branding, marketing, and communication

Gaps	Recommendations
External and internal members of the Ohio State community do not know how stackable certificates can be implemented to best serve current and potential students. Students will need guidance over how to navigate the stacking process and educated over polices that impact how their credits can work towards future credentials.	Begin drafting a communication plan to share the following information with external and internal members of the Ohio State community (including prospective learners, current learners, faculty, advisors, other staff): (a) definition of stackable certificates, (b) rationale for stackable certificates, (c) university-approved stackable certificates and their curriculum/completion requirements, (d) how to obtain admission to and/or enrollment into a stackable certificate, (e) how departments can best utilize stackable certificates to the benefit of our current and prospective student population. The draft communication plan should address: • A content-marketing campaign (what a stackable certificate is); centralized inventory and web-based portal of Ohio State certificate offerings. • Initiative and actual offering campaign to market and recruit for enrollment offerings. Both are needed, but they achieve different paths to stackable certificate offerings at Ohio State. This is a key component of digital marketing. This effort needs to be developed in a way that is learner-centered and focused on the experience to learn about offerings.

Where to get started with stackable certificates

Stackable certificates inventory

All CAA known and approved stacking certificates should be listed on an Ohio State certificate inventory dashboard or site housed within a unit of the Office of Academic Affairs. The inventory will be updated as certificates are eligible for stacking.

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Stackable certificates submission guide

The following examples are designed to provide a foundation for faculty and staff looking to develop proposals to create pathways through stackable certificates at Ohio State. These examples will continue to evolve as stacking becomes more common at the university.

Units proposing a pathway through stackable certificates need to complete an intent form at: Qualtrics Form [e.g., a link like: go.osu.edu/stacking-certificates]. After submission, a member of CAA's Stackable Credentials Committee (SCC, likely Subcommittee D) will follow-up within five business days to assist with preparing the necessary materials for the full proposal.

SAMPLE:

Stackable Certificates Intent Form

The Stackable Certificate Intent Form gathers information such as the working name of the stacked pathway, intended audience, value propositions, and criteria for earning the credential. All information gathered through this form are directly applicable to the full proposal and can help to determine whether a stackable certificate pathway is the right option for the certificates in question. After submission, a member of the Stackable Credentials Committee (SCC) will follow-up within five business days to discuss the proposal.

For questions related to micro-credentials, please contact the appropriate person below.

Name & Title	Assistance Area	Contact Info
	Process	
	Curriculum	
	Market Assessment	

Proposal Overview

All following fields are required.

Working name of the stacking certificate pathway option:

[text field]

Type of stacking: (*choose one*)

- ☐ Vertical into an associate's degree
- ☐ Vertical into a bachelor's degree
- ☐ Vertical into a graduate or professional degree
- ☐ Horizontal
- ☐ Value-added

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List approved certificate programs, program codes, and modes of delivery of each:

[text field]

Overall mode(s) of delivery for entire stacked pathway: (*select all that apply*)

- ☐ In-person
- ☐ Online
- ☐ Hybrid
- ☐ Undetermined

Anticipated first enrollment term and year pathway would be approved and:

[text field / dropdown] [include option for flexible start date, non-traditional term]

Rationale for Development

Describe the purpose of creating a stackable pathway option in the following questions.

Who is the intended audience(s)? (*500 character maximum to provide supporting information*)

[text area]

What value will a stackable pathway provide the identified audience?

500 character maximum to provide supporting information)

[text area]

Describe the expected learning outcomes at completion of the stacked credential. (*500 character maximum to provide supporting information*)

[text area]

Explain the identified need for the stacking pathway based on market assessment and related data, including any collaboration with employers. (*500 character maximum to provide supporting information*)

[text area]

What other institutions (academic or otherwise) offer similar pathway options? (*500 character maximum to provide supporting information, including links*)

[text area]

Assessment Plan

Describe how the learning outcomes will be assessed. (*500 character maximum*)

[text area]

Describe how the learning outcomes information will be used. (*500 character maximum*)

[text area]

Provide a timeline for implementing the assessment plan. (*500 character maximum*)

[text area]

Contact Information

Provide the contact information of the individual with whom the micro-credential committee will discuss this submission.

First Name:

[text field]

Last Name:

[text field]

Ohio State Username (name.#):

[text field]

Unit name:

[text field]

SAMPLE:
Stackable Certificates Evaluation Checklist and Rubric

Proposal Checklist

- ☐ Unit proposing and packaging the stackable certificate pathway has the authority and expertise to do so.

- ☐ Name and description are clear, easy for learners to understand, and distinguished from similar pathway options at Ohio State (see inventory for active list).

- ☐ The earning criteria is meaningful for employment at each transitional phase of the stackable pathway.

- ☐ Evidence is provided that the pathway is valued in the current and/or future workforce. This may include educational standards or professional standards of practice and evidence from industry partners.

Proposal Evaluation Rubric

PROPOSAL EVALUATION RUBRIC ITEM	MEETS	DOES NOT MEET	UNSURE
Description			
Offering type and design appropriate for audience / intention			
Instructor expertise			
Earning criteria appropriately assessed			
Skills and/or competencies are relevant in the marketplace			
Enrollment projections and TCO (total cost of delivery) indicate a sustainable offering			

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PROPOSAL EVALUATION RUBRIC			
ITEM	MEETS	DOES NOT MEET	UNSURE
Stakeholder engagement, data sources, and labor market forecasts, among other strategies			
Demonstrated need and opportunity, anticipated enrollments against minimum break-even total cost of delivery (or identified revenue source)			

Objective 2: Prototype, pilot, and evaluate a limited number of micro-credential programs at Ohio State

Micro-credentials represent an emerging and new-to-Ohio State form of alternative credential. They are verified, competency-based professional learning, most often offered online and designed for post-traditional learners who have previously earned a bachelor's degree. At the most basic level, micro-credentials verify, validate, and attest that specific skills and/or competencies have been achieved.

As of September 2022, Ohio State is not accredited by the Higher Learning Commission (HLC) to provide for-credit competency-based education programs and would need to begin the approval and review process with HLC to do so. Micro-credentials that are competency-based must occur as non-credit and any for-credit recognition of competency earned must follow the standard credit-transfer process.

Why consider micro-credentials?

Micro-credentials could allow Ohio State an opportunity to serve learners who are rethinking and altering their professional journeys and help them re-skill and up-skill to meet their goals.

For institutions of higher education, there are many potential benefits to offering micro-credentials:

- Support university equity and access initiatives

- Motivate students toward completion of a credential or degree program by highlighting progressive attainment of competencies

- Support academic/industry partnerships through credentials that meet industry requirements

- Provide more specificity to potential employers about skills and competencies learned.

- Supplement an existing degree program with complementary skill sets

- Create a path from non-credit to credit programs.

- Provide a path from a stand-alone credential to a degree program.

- Provide short-term immediate competency development opportunities valuable for ongoing professional development.

- Afford learners options where they can choose where, how, and when to present endorsed and authentic evidence of an experience, skills, or competency. They can customize and control a series of these from personal, professional, educational, and other experiences to create a powerful skill portfolio

- Support options whereby instructors can teach critical concepts, themes, and content in innovative and creative ways meeting the needs of in-demand areas

- Facilitate lifelong learning by allowing individuals to leverage their alma mater to get just-in-time benefits (President Johnson has referred to this as the *Education Cloud*).

Considerations for implementing micro-credentials at Ohio State

Unanswered questions around micro-credentials

- Currently, those who earn a full degree are considered alumni. Should the definition of who an Ohio State alumni or who an Ohio State buckeye is be expanded? What learning opportunities does a person have to engage in to be considered someone who is part of Buckeye Nation?

- What access to resources, services, and support should micro-credential earners have? Access to university resources (e.g., Libraries, VDI (virtual desktop, Adobe Creative Cloud, etc.). A person's identity dictates what access a person has to resources. Currently, those who engage in non-credit opportunities do not have an identity with the university, therefore they have no access to systems such as these.

- What policies apply to micro-credential earners? For instance, all Ohio State students have to abide by certain codes of conduct (e.g., responsible use of computer resources). It will be important to update wording to ensure they are applicable for all alternative credential earners.

- Should Ohio State work with HLC to obtain approval for for-credit competency-based education? When?

- What is the admission criteria and process for a micro-credential vs. for-credit, non-degree learner?
- What are the admission criteria? To stack, when and how should admission criteria be identified and affirmed? What paths out of programs are possible?
- Are for-credit micro-credentials open enrollment with no GPA minimum for admission? Do we pause on the for-credit prototypes of micro-credentials until having HLC approval, or can these occur concurrently?
- How should Ohio State streamline and make consistent prior learning assessment or articulation for academic credit by evaluation processes?
- How much credit hour overlap may there be across different forms of alternative credentials?
- Can verified CEUs or co-curricular experiences be converted to college credit?
- Are micro-credentials eligible for financial aid, scholarships, or other financial awards?
- How will retention reporting be impacted when credentials are earned before a full degree or completion of a degree?
- Who will coordinate and oversee data governance and expectations to have micro-credentials discoverable and transparent?
- How will Ohio State enforce branding and consistency for badges?
- How will these learners gain advising and other academic support resources?
- What obligations does Ohio State have for reporting enrollment in microcredentials to various stakeholders, such as accrediting bodies, clearinghouses, etc.?
- How will our structures and practices support reporting requirements?
- What opportunities or impacts are there to our military connected learners?
- What role / overlap can micro-credentials play with certificates if there's a credit-hour equivalency?
- To be coordinated and supported by the university and be learner-centered / easily found, are students to be served through a coordinated unit outside the colleges? What data connections and services are desired to make this a meaningful engagement for learners and units?
- What connection does the individualized degree play in this? Can a learner earn an individualized degree via a series of micro-credentials or earn micro-credentials enroute to an individualized degree?
- How are different learners (e.g., gender, age, ethnicity) affected by micro-credentials? Who benefits, who does not?
- Would ensuring convenient times (after traditional business hours), locations (online or even at the workplace), and university support increase participation?

- What is the type of credential that the employers will value (discussions with College of Food, Agricultural and Environmental Sciences Career Development Manager indicate employers don't want to wade through stacks of information – they want an easily recognizable and meaningful credential)? How will Ohio State approach research with companies and market data to ensure those credentials being brought forward do provide value?
- What mechanisms are in place to protect a learner from oversubscribing themselves and adding more coursework than is feasible in pursuit of additional credentials?

Micro-credentials: gaps and recommendations

Working to meet Objective 2 – prototype and pilot a limited number of micro-credentials – will provide insight on what the university will need to do to expand capacity to offer alternative credentials at scale. Working toward Objective 2 would enable:

1. A limited number of programs to propose and pilot micro-credentials.
2. A CAA Subcommittee to pilot reviewing proposals and recommending updates to proposed definitions and university policies, approval processes, and draft proposal templates.
3. The university to prototype databases and processes that may inform investment in IT systems and other resources, as well as prototype changes in operations and procedures before offering alternative credentials at scale (including certificates, certifications, micro-credentials, and stackable alternative credentials).

The following gaps and recommendations are intended to spark discussion and should not be considered exhaustive.

2.a. Ohio State policies, guidelines, processes

Gaps	Recommendations
Currently, the university has multiple entities of authority that determine learner roles and access rights. As learners who engage with the university increasingly expand beyond students seeking traditional degrees, and if learners will have flexibility to seek alternative credentials along with (or apart from) traditional degree programs and across their lifespan, it will be critical for the university to establish	Utilizing a design-thinking and prototyping approach, convene a university team to develop a learner identity management framework that outlines recommended learner roles and associated rights and responsibilities. The outcome may be a document that includes recommended: (a) learner roles (including degree-seeking and non-degree-seeking), (b) how learners will be labeled and tracked through

Gaps	Recommendations
a central identity management framework for supporting various learner roles.	"admission" and enrollment in credit-bearing and/or noncredit-bearing learning experiences, and program completion, (c) access rights to university resources and services enacted at various stages of admission and program completion (e.g., IT management of name.#, Financial aid eligibility, Orientations and training, Student Life support, Recognition at ceremonies, Alumni Affairs, etc.), and (d) responsibilities such as required BuckeyeLearn training and whether the Code of Student Conduct applies to all learners (including non-degree seeking learners enrolled through Ohio State Extension and Extended Education) or only to degree seeking students. Also, consider how to transparently share information about access rights and responsibilities with learners, academic units, and support units. Consider how to use existing frameworks in the process, such as moving from non-degree to admission and the intra-university transfer process to move across programs. This requires definitions for how learners and programs are defined in systems and in practice. There are also codes of conduct developed for various non-credit audiences, such as via Extension or 4-H to determine whether a general code may apply at a foundational level allowing specific activities to build from.
Currently, the OAA Academic Organization, Curriculum, and Assessment Handbook and related guidelines and websites (e.g., Graduate School Handbook, Registrar website, etc.) do not comprehensively address alternative credentials, including stackable certificates or micro-credentials.	Continue to edit definitions and policies drafted in the Ohio State Alternative Credentials Guidance Document while prototyping and piloting a limited number of micro-credentials. As a part of the pilot, test credit-bearing and noncredit-bearing micro-credentials to help inform edits to the Alternative Credentials Guidance Document. Determine whether this document becomes an appendix to the OAA handbook.
A growth in noncredit certifications and micro-credentials could potentially widen access barriers to enrolling in and completing credit-bearing courses and/or degree programs. Also, current students may find noncredit offerings more attractive if there is a	Draft a noncredit-to-credit articulation document while prototyping and piloting a limited number of micro-credentials (e.g., consider using seat-time conversions to establish guidelines for how completed noncredit offerings may convert to an undergraduate,

Gaps	Recommendations
pathway for converting noncredit-bearing experiences to university credit and toward a credential.	graduate, or professional independent study credit hour). Consider how to use existing frameworks in the process, such as principles and resources from the Office of Military and Veterans Services. Determine whether this is local or an OAA role and responsibility to support protocols for conversions. Consider a rubric to help determine guidelines.

2.b. Staffing and management

Gaps	Recommendations
Programs do not have access to central instructional design support for the development of new alternative credential programs.	As a part of prototyping and piloting micro-credentials, draft a document that summarizes instructional design support programs may benefit from receiving as they develop and propose future micro-credentials. Examples may include: (a) Articulating knowledge, competencies, and/or skills learners will gain (b) Strategies for building resilience and managing stress to support well-being, cognitive engagement, motivation, persistence, learning outcomes, and micro-credential completion (c) Designing assessments to enable learners to demonstrate knowledge, competencies, and/or skills (d) Developing program assessment plans (e) Build in the programmatic design an orientation and a point of contact for learners. Ensure enough staff support to accommodate additional learner demands.

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2.c. Proposal approval process

Gaps	Recommendations
Currently, the university does not have a process for approving proposals to establish stackable certificates or micro-credentials.	Pilot a curriculum review and approval process for micro-credentials that consists of: (1) Programs completing a proposal template and obtaining program- and college-level approval. (2) CAA Subcommittee D reviewing and approving proposals to establish new micro-credentials. (3) Reaffirmation process for continuing or ending alternative credentials.
Proposers and reviewers would benefit from a proposal template to communicate policies, facilitate the review process, and to support alignment with strategic priorities.	Draft/revise curriculum approval instructions and proposal templates utilized to prototype and pilot micro-credentials to support an efficient, faculty engaged approval process that addresses university values and strategic priorities.

2.d. Assessment

Gaps	Recommendations
Currently, there is no central university database of learners enrolled in (or who have completed) Type 4 certificate of completion programs, or the outcomes of learners in Type 4 programs. Instead, any assessment data that has been collected is stored across multiple academic programs and units. The lack of centralized data collection and storage limits the university's ability to track and monitor enrollments, completions, or outcomes of certificate/certification learners or programs.	For the limited number of micro-credentials that will be prototyped, pilot programs' required use of the university's LMS (i.e., Canvas for credit-bearing micro-credentials or ScarletCanvas for noncredit-bearing micro-credentials) to collect enrollment, completion, and assessment data for learners participating in on-ground, distance, and/or hybrid micro-credentials. Piloting required use of the LMS will enable the university to prototype data requirements and to determine whether a more robust IT solution is needed to collect, track, and submit enrollment, completion, and assessment data. Until the US Dept. of Education, HLC, or ODHE establish expected metrics, an internal benchmark should be met (e.g., 80%).

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2.e. Technical infrastructure

Gaps	Recommendations
Currently, proposals for Type 4 certificates of completion are not submitted using the curriculum.osu.edu portal. Additionally, proposers are not able to revise proposals submitted to the curriculum portal. As the volume of alternative credential proposals increases, it will become increasingly challenging to track and manage proposals at various steps along the proposal approval process.	Prototype using fillable PDFs or forms and extract data to Excel to create a spreadsheet of prototyped and piloted micro-credential proposals. DocuSign could be used to track proposal approvals throughout the review process. The process and spreadsheet can be used to prototype data and functionality needs for future investments in a more robust curriculum management system.
Currently, OAA, academic deans, Registrar, Graduate School, and other offices/staff can search the CAA website to access approved curricula for degree programs and alternative credentials; however, there is not a readily accessible database to locate approved curricula and relationships among alternative credentials and degrees (e.g., certificates embedded within degree programs)	Use spreadsheets to prototype a digital repository for storing all micro-credentials. The spreadsheet may store: (a) proposal metadata (e.g., proposing program and unit, date of approval, credit-bearing or noncredit-bearing, alpha-numeric program identifier), (b) curriculum requirements, and (c) total credit hours or seat-time.
University staff and learners will need a way to track and confirm which micro-credentials learners have started and completed	While efforts are underway to identify and implement an end-to-end solution for creating, managing, and issuing badges or digital credentials, prototype using the LMS (i.e., CarmenCanvas or ScarletCanvas) to track learners' progression toward completing micro-credentials. Issue an Ohio State-branded PDF certificate of completion that learners can download via the LMS.
Ohio State currently does not have a university-wide badge provider (e.g., CanvasBadges, Credly, VirtualBadge). Long-term, it is possible learners could add their micro-credential to a comprehensive learner record.	Students who earn a credit-bearing micro-credential will receive a notation on their transcript in recognition of the achievement, and will also be awarded a digital badge upon completion to decide how they wish to share and to whom. Non-credit programs result in a digital badge but no transcript notation.

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2.f. Tuition, funding, and budget model

Gaps	Recommendations
Programs will need to determine pricing for programs so that alternative credentials and stackable programs are appropriately priced for the field, market, and to incentivize degree completion.	Pilot an operational model (e.g., committee that includes OAA, OTDI, Registrar, Financial Aid, Admissions, Fiscal Planning and Analysis, etc.) to work collaboratively to be a central knowledge to programs. Co-develop and prototype a pricing resource as a committee. Work with faculty, chairs, or college leadership to learn the issues that impact tuition/funding (e.g., instructor teaching load and compensation, program fees, etc.). Create an intake form for the committee; and then use info to inform the proposal approval template. Determine instructor eligibility and recognition.

2.g. Branding, marketing, and communication

Gaps	Recommendations
External and internal members of the Ohio State community do not know how Ohio State defines alternative credentials, how students are admitted to alternative programs, and requirements learners must complete to earn alternative credentials	Begin drafting a communication plan to share the following information with external and internal members of the Ohio State community (including prospective learners, current learners, faculty, advisors, other staff): (a) definition of alternative credentials, (b) rationale for alternative credentials, (c) university-approved alternative credentials and their curriculum/completion requirements, (d) how to obtain admission to and/or enrollment in an alternative credential program, (e) what learners will be awarded to confirm successful completion of an alternative credential. The draft communication plan should address: (a) A content-marketing campaign (what an alternative certificate is); centralized inventory and web-based portal of Ohio State alternative credential offerings.

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Gaps	Recommendations
	(b) Initiative and actual offering campaign to market and recruit for enrollment offerings. - Both are needed, but they achieve different paths to alternative credential offerings at Ohio State. This is a key component of digital marketing.

How should micro-credentials be implemented at Ohio State?

Micro-credential proposals should entail *demonstration* or evidence of completion of topic (individual module, "course," module or course cluster, or documented and assessed experience) to earn a badge (documentation of competency).

For non-academic units who are unaccustomed to the curricular approval and assessment process, refer to the OAA Handbook that outlines the process.

As of September 2022, **Ohio State is not accredited by the Higher Learning Commission (HLC) to provide for-credit competency-based education degree programs** and would need to begin the approval and review process with HLC to do so. HLC does not monitor alternative credentials like micro-credentials. They are interested in partnering with Ohio State to help support the development of micro-credentials.

Micro-credentials are not typically aligned to licensure or maintaining professional requirements like a certification.

Micro-credentials are most likely described at Ohio State about learners gaining *competencies* (which can be based in assessing knowledge, skills, or behavior), participating in activity (via a certificate of completion), or earning CEU credit for engagement in a recognized activity by a professional organization.

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Note, any discrepancies from the official tables provided to the public via registrar.osu.edu are unintentional and should be aligned during the prototyping process.

TYPE	COMPETENCY			CERTIFICATE OF COMPLETION	CONTINUING EDUCATION UNIT (CEU)
	KNOWLEDGE	SKILLS	BEHAVIORS		
Description	The combination of skills, knowledge, and behavior that is exercised to effectively perform something efficiently or successfully.		The specific ability that can be applied in a specific setting to accomplish a predefined result.	Designed for individuals, including working professionals, who want to earn a workforce development *Certificate of Completion* by completing minimum number of equivalent contact hours of continuing education modules and/or courses, with or without continuing education units (CEUs), in a select topic area. These individuals may not have academic foundation or interest in pursuing programs requiring academic credit.	Measure used in continuing education programs to assist the professional to maintain their license in their profession. CEUs are based upon industry standards of one CEU per **ten hours** of class time, excluding meals and breaks. When offering CEUs via distance learning, methods for determining hours of class time include referencing the average number of hours spent completing a pilot program offering, the hours for a similar face-to-face training, or similar for-credit course activity hours. For help determining contact hours for new CEU programs, see credit hour estimation.
Examples				Geographic Information System Workshop (8hr) Certificate of Completion; Project Management Course (8hr) Certificate of Completion; Emergency Response Worker Course (24hr) Certificate of Completion); TechCred	https://it.osu.edu/ceu-award-program Foundations of Health and Wellness Coaching (4.79);

TYPE	COMPETENCY			CERTIFICATE OF COMPLETION	CONTINUING EDUCATION UNIT (CEU)
	KNOWLEDGE	SKILLS	BEHAVIORS		
Approval	OAA will inform CAA and APAC as an informational item	Yes. Ohio State is not accredited for competency-based degree programs.	OAA will inform CAA and APAC as an informational item	OAA will inform CAA and APAC as an informational item	N/A
ODHE approval	No		No	N/A	N/A
Stand-alone program	Yes	Yes	Yes	Yes	N/A
Maximum credit overlap with degree program	N/A		N/A	N/A	N/A
Minimum acceptable grade to apply	N/A				
Transfer credit	No		N/A	N/A	N/A
EM credit	No		N/A	N/A	N/A
Outcomes-based	*Upon completion of the competency-based workforce development course (or program) in* <specify title>, *learners will be better prepared to. . ."* <List max 3 Outcomes>		*Upon completion of the skills-based workforce development course (or program) in* <specify title>, *learners will be better prepared to. . ."* <List max 3 Outcomes>	N/A	*Upon completion of the workforce development course (or program) in* <specify title>, *learners will be better prepared to. . ."* <List max 3 Outcomes>
Curriculum and credits	N/A			Non-credit continuing education modules/courses, including individual *Short Courses* and *Workshops*, or, a required series of non-credit courses. Programs with course credit must be	

| TYPE | COMPETENCY | | | CERTIFICATE OF COMPLETION | CONTINUING EDUCATION UNIT (CEU) |
	KNOWLEDGE	SKILLS	BEHAVIORS		
				<12 credits.	
Admission	N/A	N/A		N/A	
Arranged / individual study courses	N/A				
Minimum grades and GPA to complete	N/A		No	N/A	N/A
SIS record [need separate SIS tool]	Yes	Yes	No	No	No
Tuition and fee assessment	N/A		No	No	No
Pell eligible; direct student loan eligible	N/A		No	N/A	N/A
Diploma issued	No		No	No	N/A
Document issued	Registrar; Badge	Registrar; Badge	Dean; Badge	Dean; Badge	Dean; Badge
Ohio State alumni benefits eligible	No		No	No	No
Non-credit to Credit transfer pathway	Yes				

Where to get started with micro-credentials

Micro-credentials inventory

All Council on Academic Affairs known and approved micro-credentials should be listed on a Ohio State micro-credential inventory site housed within a unit of the Office of Academic Affairs. The inventory will be updated as micro-credentials are eligible for enrollment or are retired. The inventory will denote which micro-credentials are active or retired. For retired micro-credentials, information will include the month and year the micro-credential was no longer able to be earned.

Micro-credentials submission guide

To support units interested in pursuing micro-credentials, below is a proposed submission guide for consideration:

The purpose of this Micro-Credential Guide is to provide a foundation for submitting proposals to develop micro-credentials at Ohio State. This is a living document and will continue to evolve as micro-credentials become commonplace for the university. This guide is designed as a resource to be used by faculty and staff throughout the micro-credential process.

Support

For questions related to micro-credentials, please contact the appropriate person below.

Name & Title	Assistance Area	Contact Info
	Process	
	Curriculum	
	Market assessment	
	Skills/competency alignment and career mapping	
	Graphic design	

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It is recommended to complete a micro-credential intent form at: Qualtrics Form [e.g., a link like: go.osu.edu/micro-credentials]. After submission, a member of the Micro-Credentials Committee (MCC, likely Subcommittee D) will follow-up within 5 business days to assist you with preparing the necessary materials for the full proposal form.

Sample: Micro-Credential Intent Form

The micro-credential intent form gathers information such as the working name of the credential, intended audience, the value proposition, and criteria for earning the credential. All information gathered through this form are directly applicable to the full proposal form and can help to determine whether a micro-credential is the right solution. After submission, a member of the Micro-Credentials Committee (MCC) will follow-up within 5 business days to discuss the micro-credential.

All fields are required.

Working name of the micro-credential:

[text field]

Type of micro-credential: (*choose one*)

- Competency-based
- Skills-based
- Certificate of completion
- CEU
- Undetermined

Mode(s) of delivery for micro-credential: (*select all that apply*)

- In-person
- Online
- Hybrid
- Undetermined

Anticipated first enrollment term and year:

[text field / dropdown] [include option for flexible start date, non-traditional term]

Rationale for Development

Describe the purpose of the micro-credential by providing the following information.

Who is the intended audience and what value will the micro-credential bring them? Include in the description specific competencies or skills gained at completion. (*500 character maximum to provide supporting information*)

[text area]

Explain the evidence of need for the micro-credential based on market assessment and related data, including any collaboration with employers. (*500 character maximum to provide supporting information*)

[text area]

What other institutions (academic or otherwise) offer similar programs? (*500 character maximum to provide supporting information, including links*)

[text area]

Learning Outcomes

Upon completion of the micro-credential, learners will be better prepared to:
(*three outcomes maximum*)

[text field]

[text field]

[text field]

Assessment Plan

Describe how the learning outcomes will be assessed. (*500 character maximum*)

[text area]

Describe how the learning outcomes information will be used. (*500 character maximum*)

[text area]

Provide a timeline for implementing the assessment plan. (*500 character maximum*)

[text area]

Contact Information

Provide the contact information of the individual with whom the micro-credential committee will discuss this submission.

First Name:

[text field]

Last Name:

[text field]

Ohio State Username (name.#):

[text field]

Unit name:

[text field]

Sample: Micro-Credential Full Proposal

In general, micro-credential approvals follow a similar path as other credentials as outlined in Ohio State's OAA Academic Organization, Curriculum, and Assessment Handbook. See pages 69-70 (As of June 2022)

Description

Each micro-credential submission should provide a brief description introducing the purpose, intended audience, and competencies or skills gained. The description should be written in complete sentences and be no more than 75 words.

Type

Competency-based, skills-based, certificate of completion, CEU

Instructor Expertise in Content Area

Explanation of how the instructor(s) involved in the credential are appropriately trained and skilled to facilitate the offering.

Earning Criteria

The earning criteria should describe what a learner must do to satisfy the micro-credential requirements. The criteria should be a rigorous, observable demonstration of the skill or competency intended and is the final step in the process for earning the micro-credential.

Skills

Explanation of how skills should increase a micro-credential's value in the job market by conveying the industry skills it represents.

Meta-Data Conventions

Ohio State desires to be part of larger systems at play to share transparency about credentials it provides. This includes providing descriptors and metadata that allows credentials to be shared and found by potential students that are accessible and can fit into larger systems of Comprehensive Learner Records. Examples include:

- Credential Transparency Description Language (CTDL) https://credentialengine.org/credential-transparency/—a common language that allows credential providers to catalog, organize, and describe their credentials.

Meta-data allow analysis of micro-credentials by topic and areas of interests. Every micro-credential will automatically have these tags:

- Taxonomy (#Competency-For, #Competency-Non, #Bootcamp, #Completion, #CEU)
- Title
- Issuer (#[College / Unit])
- Content or description
- Learning outcomes
- Language
- Delivery mode (in-person, blended, online, other)
- Start and end date of delivery, or on-demand
- Learner effort (estimated hours for time to completion)
- Resources needed (e.g., technology, books, software, etc.)
- Cost
- Assessment type

Additional metadata will be added to allow learners to isolate micro-credentials based on subject matter. It is important these data are thoughtfully selected and used with an intentional purpose. Additional meta-data may be added such as:

- Industry alignment
- Micro-credential aligns with a NACE (National Association of Colleges and Employers) skill.
- NACE skills are different from the skills outlined by Lightcast.
- Professional standards of practice or conventional expectations in the industry
- AAC&U standards
- External accreditation standards
- Expiration date

- Level of learning (e.g., Novice, intermediate, advanced; or, undergrad, grad, professional, continuing ed)
- Eligibility (e.g., Ohio State student only, public)
- Industry support (e.g., a statement from a company or industry group)
- Articulation abilities (e.g., non-to-for-credit)
- Consortium for the Assessment of College Equivalency (CACE)
- CASE (Competencies and Academic Standards Exchange)
- CLR (Comprehensive Learner Record)

Delivery Mode(s)

Micro-credentials may be in-person, hybrid, or online.

Effective Date

When is the admission start and end date of the micro-credential? Is it on-demand? When does the content expire? When should learners be ready to update their knowledge?

Enrollment Projection

Include market assessment related to contract, job trends / postings for skills or competencies identified.

At what enrollment level will this micro-credential option be considered to be halted?

External Approvals

Include any relevant professional organizations, accreditation, or other oversight requirements related to the offering.

Support and Costs

Sufficient Resources

- Adequacy and availability of facilities and staff, including off-campus field experience sites
- Projected resource needs and plans to meet those needs

Justifiable Expenses

- Additional faculty
- Course additions or deletions
- Include syllabi for new courses
- Necessary budget adjustments

- Available and anticipated funding

For-Credit only Items

Total credit hours; list of required courses and elective courses

Course Syllabi

Short form syllabi that include title, number, credits, pre-requisites, course description, course objectives, and content topic list. All courses must also be submitted in curriculum.osu.edu in their full format.

Out-of-State Physical Presence Activities

Certain out-of-state activities may result in the need for Ohio State to seek authorization. Please consult with the Office of Technology and Digital Innovation if the credential includes the following out-of-state experiences:

- **Field experiences** (e.g., clinicals, internships) required may activate licensing board authorization requirements in the state. For example, a state licensing board might require credential approval, faculty licensure in the state, or approval of a clinical placement.

- **Online options** where the learner may complete activities outside Ohio.

- **Placing more than 10 students** at a placement site in another state may result in the need to seek authorization. This ensures that students completing traditional programs within the state have adequate access to placement opportunities.

- **Establishing a physical presence** (e.g., owning or leasing space for classrooms, offices, or student support services) may result in the need to seek authorization.

- **Face-to-face contact** (e.g., requiring students to meet in person or offering a course for more than 20 hours) may result in the need to seek authorization.

For-Non-Credit only Items

Additional Information

- Identify the anticipated price for the micro-credential
- Instructions for how to enroll, access, and seek support are complete, accurate, and logical
- Time to completion
- Frequency of providing the micro-credential

Sample: Micro-Credentials Evaluation Checklist & Rubric

Proposal Checklist

- Unit issuing the micro-credential has the authority and expertise to do so.
- Name and description are clear, easy for learners to understand, and distinguished from similar micro-credentials at Ohio State (see inventory for active list)
- The earning criteria is a rigorous, observable demonstration of the skill or competency described.
- The skill or competency described can be transferred to an authentic work environment and performed at the level described.
- Metadata are accurate and align with the predominate themes of the micro-credential. Any aligned NACE, professional standards, AAC&U, or other data are included.
- Assignment or evaluation matches the skills or competency described and showcases what the earner knows or can do.
- An instrument to measure skill or competency is provided and is valid, transparent, and objective to measure the stated skill or competency.
- The threshold to earn the micro-credential is defined by a rigorous and reasonable score on the instrument.
- Evidence is provided that the skills or competencies are valued in the current or future workforce. This may include educational standards or professional standards of practice.
- The learner audience targeted will benefit professionally by this offering. Since micro-credentials support rapid up-skilling and re-skilling, and subsequently contribute to global mobility, CAA requires the recognition of the unique value for micro-credentials to be enablers of learner autonomy, agency, and control.
- The artifact to provide evidence can be easily shared electronically.

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Proposal Evaluation Rubric

PROPOSAL EVALUATION RUBRIC			
ITEM	MEETS	DOES NOT MEET	UNSURE
Description			
Offering type and design appropriate for audience / intention			
Instructor expertise			
Earning criteria appropriately assessed			
Skills and/or competencies are relevant in the marketplace			
Enrollment projections and TCO (total cost of delivery) indicate a sustainable offering			
Stakeholder engagement, data sources, and labor market forecasts, among other strategies			
Demonstrated need and opportunity, anticipated enrollments against minimum break-even total cost of delivery (or identified revenue source)			

Objective 3: Expand Ohio State's capacity to offer alternative credentials at scale

Fitting alternative credentials into existing Ohio State offerings

As of June 2022, the State of Ohio is exploring micro-credentials at a state-level. There are no state-level incentives, policies, or guidelines in place, nor have the public or private institutions connected to create a common framework. The Ohio State alternative credentials effort will continue to evolve and change to fit with maturation of this emerging education offering space.

Alternative credentials are designed to meet emergent needs of various stakeholders, including learners, employers, post-secondary education providers, and state systems of higher education. As the cost of higher education increases, alternative credentials offer a potential affordable pathway to continuous learning. With the rapid changes in knowledge and skills required in emerging industry, there are several areas of benefits alternative credentials can support, including educational access and excellence, autonomy, employment, and lifelong learning engagement. In sum, building in alternative credentials means Ohio State can expand the size, diversity, connections, and networking strength of the *Buckeye Community*.

Benefits units may realize by implementing alternative credentials:

- **Learner motivation to persist.** Providing shorter education offerings with quicker ROI can give a learner tangible evidence of accomplishment and lead to something that can be publicly posted

and shared (via sites such as LinkedIn or Social Media). Credentials with assessment and evidence backing provides recognition specific skills and competencies have been mastered and research shows a positive effect on persistence. (West and Randall, 2016) Further, the clarity of learning outcomes can help learners internalize and communicate about the skills and competencies they have gained.

West, R. & Randall, D. (2016) The case for rigor in open badges. *Digital Badges in Open Education.* Routledge: New York.

- **Development of a complementary skillset.** Alternative credentials can help learners distinguish themselves in the marketplace through mastery in skills and competencies that complement their main field of study. Citizens today have multiple careers that can span sixty years and involve numerous job changes across many distinct areas. They and their employers are seeking varied credentials that provide immediate value in jobs and can provide the development of a complementary skillset.

- **Pathways to, or back to, Ohio State.** For post-traditional learners looking to start or return to college, micro-credentials can be used to segment offerings into smaller curricular bundles that stack toward a greater credential. After an extended time away from education, it can be intimidating to commit to a full degree. Allowing learners to start small and build credentials gradually can provide a motivating, welcoming pathway to Ohio State. Alternative credentials may also provide meaningful off-ramps, in some cases, to provide acknowledgement for skills and competencies earned. This can be critical for learners who experience disruption, life changes, or are responding to the rapid invention of new jobs and categories of work across local, regional, national, and even transnational occupational needs. This pathway concept has been identified as an area for university growth via the "education cloud" concept discussed in 2021 by President Johnson.

- **Addressing needs of university partners, such as business, P-12, community members, or consortia.** Employers are looking for ways to up-skill their employees to be able to promote from within, whether due to pending retirements, position changes resulting from new technology, or simply overall organizational goals. School districts and other entities may seek niche alternative credentials Ohio State can provide to help their employees stay up-to-date in new and emerging areas. Also, alternative credentials can provide professional learning to small businesses and community organizations in ways that extend university outreach.

- **Lifelong learning for individuals pursuing professional and personal goals.** This is a way to engage the global community, including Ohio State alumni, students, faculty, and staff to be lifelong learners at their institution. To be *the* source for lifelong learning for alumni can be part

of a holistic recruitment strategy. Flexible, online alternative credentials could be developed to refresh skills, up-skill and/or prepare individuals for a change in career. This can include units providing in-house programs for their students, staff, and faculty and consider how to advance a wider-breadth of connections and skills to advance unit goals.

- **Translating experiential and co-curricular activities into credentials.** Adding specific learning outcomes/assessments to these experiences can help learners to articulate, and employers understand better, the skills and competencies mastered while associated with Ohio State. Since alternative credentials are relatively focused on a key competency or skills, students are able to realize a clear return on investment when a particular outcome is sought.
- **Innovation and Creativity.** Thinking about curricula in new ways can open doors to interdisciplinary offerings and new audiences. Expanding alternative credentials also opens Ohio State to more units providing in-house professional learning programs for students, staff, and faculty. With the emphasis on skills and competencies, opportunities exist to expand and leverage authentic learning experiences.

Non-Credit To Credit Pathways

It is possible some non-credit alternative credentials provide a path to credit, allowing learners to develop industry-related competency and then continue into for-credit options.

Pathways like this are successful when built in consultation with industry or community partners' input, as well as constructed with faculty in the relevant fields. If a credential is determined to lead into for-credit options, it should be approved by the units' curriculum committees to ensure learning outcomes alignment. This option can be an important bridge to introduce new learners to the university and its instructors while generating interest to persist toward a for-credit credential.

More information about expanding access to credit for prior learning assessment may be found on the American Council on Education's website: https://www.acenet.edu/Programs-Services/Pages/Credit-Transcripts/Credit-Accepting-Institutions.aspx.

Examples of Trademarked Alternative Credentials Titles

Other universities in the alternative credentials space offer their programs through third party platforms, such as Coursera, Udacity, and so on. These platforms have trademarked names referring to alternative credentials provided via their sites which restricts how Ohio State can name and describe their offerings. A few examples include:

- Coursera trademarked MasterTrack.

- Udacity trademarked Nanodegree.

- edX trademarked MicroMasters.

- Edevate trademarked MicroDegree.

To support units interested in pursuing micro-credentials, below is a proposed submission guide for consideration:

Appendices

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Appendix A: Committee members

- **Anika Anthony**, Co-Convener, Associate Professor (Education Studies); Associate Vice Provost and Director, Michael V. Drake Institute for Teaching and Learning
- **Robert Griffiths**, Co-Convener, Chief Digital Learning Officer, Office of Technology and Digital Innovation
- **Eric Bielefeld**, Professor, College of Arts and Sciences
- **Mike Bisesi**, Professor, College of Public Health
- **Alissa Comella**, AVP Corporate Business Development, Enterprise for Research, Innovation, and Knowledge
- **Lisa Delaney**, Assistant Registrar, Office of the University Registrar
- **Tara King**, Associate Professor-Clinical, College of Nursing
- **Jeanne Osborne**, Assistant Dean, College of Food, Agricultural, and Environmental Sciences
- **Andrea Pfeifle**, Associate Vice Chancellor, Interprofessional Practice and Education
- **Emma Read**, Associate Dean, College of Veterinary Medicine
- **Greg Rose**, Dean, Marion Campus
- **Randy Smith**, Vice Provost for Academic Programs, Office of Academic Affairs
- **Ben Tepper**, Senior Associate Dean, Fisher College of Business
- **Todd Thomas**, Extended Education Program Coordinator, Office of Technology and Digital Innovation
- **Jan Weisenberger**, Professor, College of Arts and Sciences

Contributing colleagues

- Graduate School
- Fisher College of Business
- Ohio State ATI
- Adrienne Bricker, Office of the University Registrar
- Rachel Nash and Jennifer Marinello, Graduate & Professional Admission
- Julee Conrad, Undergraduate Admissions
- Vicki Miller, Office of Student Financial Aid

Appendix B: Alternative credentials glossary

Definitions are built on the work of the Lumina Foundation, Educause, and others.

Active/Retired: Programs enrolling students are considered active; prior programs that provided evidence of skill or competency that are no longer enrolling students are retired.

Assessment item: the questions learners answer or the tasks they must complete

Award: The act of providing a learner a badge.

Badge: use of digital technologies to represent competencies and various learning achievements; electronic badges should include meta-data on the evidence of learning and link back to sponsoring institution and evaluation criteria. Badges are a way of representing and acknowledging achievement of skill acquisition at a more granular level than a college degree.

Badge Levels: Badges can be stacked with increasing levels to demonstrate the increased skills or competency demonstrated by the learner.

Certificate: a formal award certifying the satisfactory completion of an organized program of study at the postsecondary level

Certification: mastery of or competency in specific knowledge, skills, or processes that can be measured against a set of accepted standards

Competency: Learnable, measurable and/or observable knowledge and skill-sets gained

Comprehensive Learner Record: Digital envelope that creates a secure and verifiable digital record of student learning and employment records supporting all nature of academic and workplace recognition and achievements, including courses, competencies and skills, and employer-based achievements and milestones.

Consumer: A learner who accesses learning content.

Curriculum.osu.edu: Ohio State's course and program curriculum approval portal.

Expire: The end-date when the issuer no longer verifies that particular skill or competency for a learner.

Learner Activity: Activities designed by the instructor to create the conditions for learning

License: legal permission, typically granted by a government agency, to allow an individual to perform certain regulated tasks or occupations. Licenses are based on pre-determined, standardized criteria,

involving educational programs of study, assessments, and/or work experience and are time-limited requiring periodic review and renewal.

Grantor: The entity providing the badge.

Inventory: The collection of active and retired credentials.

Issuer: Entity providing the credential and making the promise to the trustworthiness of the credential.

Learner: The person who is receiving the educational content.

Metadata: a set of data that describes and gives information other about other data.

MOOC: A massive open online course (MOOC) is a model for delivering learning content online to any person who wants to take a course, with no limit on attendance. MOOCs are increasingly used as vehicles to deliver micro-credentials.

Post-traditional learner: Post-traditional learners are students who frequently must balance life, work, and their education. These students are typically ages 25 and older, care for dependents, and work full time while enrolled, and are often connected to the military.

Short course: a learning program providing content or skills training in a short period of time.

Stackable credential: part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications and help that individual move along a career pathway and further education.

NACE Skill: The National Association of Colleges and Employers skill identified for career readiness. There are eight career competencies.

OAA-MCC: The Council on Academic Affair's Subcommittee D, Micro-credentials Committee.

Revoke: Removing the recognition of earning a badge or certification from a learner.

Appendix C: Phases, timeframe, and tasks

Phase	Timeframe	Tasks
Initiation	Jan – Mar 2022	-Reviewing reports, websites, and other publications -Articulating priorities, goals, values, concerns, opportunities -Identifying related policies, guidelines, constraints
Proposing	Mar – June 2022	-Drafting proposal documents (OAA Recommendations, Ohio State Policies, Proposal Templates & Rubrics) -Seeking input from university stakeholders (Academic and Support Units, ERIK, APAC, OAA)
Endorsement	Aug – Sept 2022	-APAC endorsement -Graduate Council endorsement -CAA Endorsement, etc.
Piloting & Planning	Oct 2022 – Jan 2023	-Pilot approval of stackable certificates (to support information gathering and to inform Planning and Execution) -Updating Ohio State policies and websites (OAA, Registrar, Graduate School, Admissions, etc.) -Website landing page(s) on stackable certificates -Editing/formatting proposal documents -Marketing materials/toolkit -Internal announcements and communication

Execution	SP23, SU23, AU23, SP24	-Go Live (programs can submit proposals) -Meetings to identify/address secondary and tertiary issues that surface during implementation -CAA update -APAC update -Graduate Council update
Evaluation	Beginning Jun 2024	Follow systematic plan of evaluation. Report results to internal and external stakeholders. Conduct continuous quality improvement.
Continuous Improvement	Beginning Jun 2024	-Continue identifying and addressing implementation issues -Update Ohio State policies and websites -Periodic CAA updates

Appendix D: Key resources

Ohio State Workforce Development Committee Documents

- Categories and Criteria for Academic Certificate Programs:
  https://registrar.osu.edu/certificates/certificate_document_october_2018.pdf
- The Conceptual Elements for Framing and Defining Workforce Development at The Ohio State
  University: https://buckeyemailosu-
  my.sharepoint.com/:b:/g/personal/griffiths_44_osu_edu/EQ3ApdApd45NvsgcHfxA1vEBBw5TA
  oT3DWrZu7D7rgn8Fw?e=clhqXS
- Ohio State Workforce Development Implementation Plan: https://buckeyemailosu-
  my.sharepoint.com/:b:/g/personal/griffiths_44_osu_edu/ETtGvvmR2txHvOAqhyUi2J0BDtqovic
  yNSyFfckbhWywdA?e=RHgzso
- Ohio State Framework of Categories and Descriptions of Credit-Based and Non-Credit Based
  Education and Training for Workforce Development and Credentialing: https://buckeyemailosu-
  my.sharepoint.com/:b:/g/personal/griffiths_44_osu_edu/Eamd2JBD-
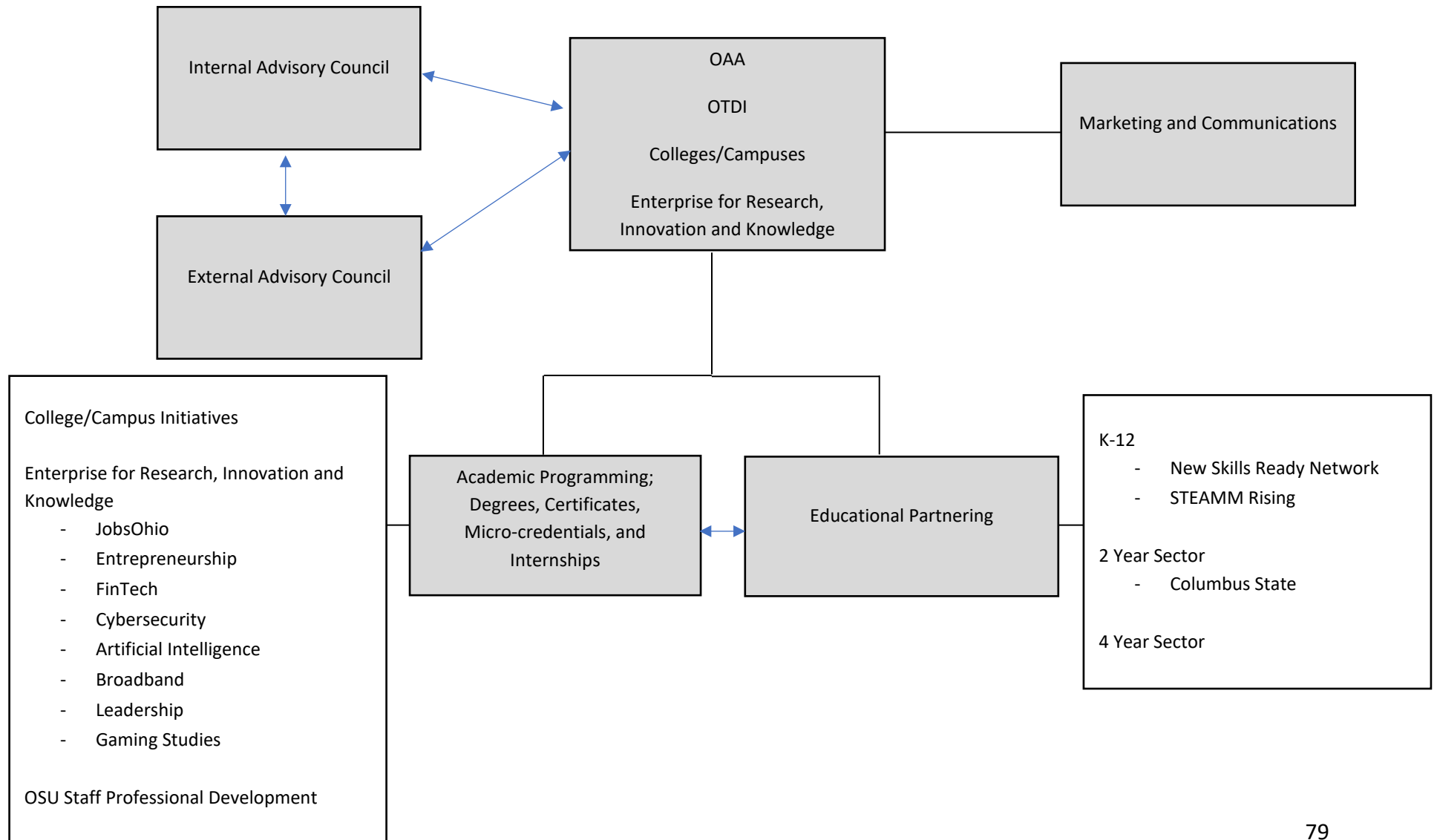 stAh5WKEM65ip4BvPKUzl06k9_ZkwVl0T5Ptw?e=eu61s0

Key Guiding Documents

- AACRAO Alternative Credentials: Considerations, Guidance, and Best Practices:
  https://www.aacrao.org/docs/default-source/work-groups/alternative-credentials/alternative-
  credentials-considerations-guidance-and-best-practices.pdf
- AACRAO Meeting the Moment: Transforming the Digital Credentials Space:
  https://www.aacrao.org/docs/default-source/research-docs/meeting-the-moment-digital-
  credentials-report.pdf?sfvrsn=35555be3_2
- American Council on Education's *Quality Dimensions for Connected Credentials* final report:
  https://www.acenet.edu/Documents/Quality-Dimensions-for-Connected-Credentials.pdf
- EAB Enrollment Growth Strategy Resource Center:
  https://eab.com/research/enrollment/resource-center/enrollment-growth-strategy-resource-
  center/
- Big10 Academic Alliance, After the Pivot: Strategic Evolution of Online Education in the
  Research University: https://teachingonline.iu.edu/doc/BTAA_AfterPivot1.pdf

- Foundation of Digital Badges and Micro-Credentials: Demonstrating and Recognizing Knowledge and Competencies: https://link.springer.com/content/pdf/10.1007/978-3-319-15425-1.pdf
- Lumina Foundation's Connecting Credentials: A Beta Credentials Framework: https://www.luminafoundation.org/wp-content/uploads/2017/08/connecting-credentials.pdf
- Microcredentials and Badges at Pen State: Status and Future Considerations (Fall 2020): https://s3.amazonaws.com/edu.psu.libraries.scholarsphere.prod/store/5f330dd4082761b4a48fd6344220e610.pdf
- Modern Campus, Shifting Paradigms: Understanding Institutional Perspectives on Microcredentialing: https://moderncampus.com/pdfs/shifting-paradigms-understanding-institutional-perspectives-on-microcredentialing.pdf
- OECD, The Emergence of Alternative Credentials: https://www.oecd-ilibrary.org/docserver/b741f39e-en.pdf?expires=1660928107&id=id&accname=guest&checksum=C51CB0A0D2AEC0F33C953F96C57D3EB0
- Rutgers Complementary Credentialing and Digital Badges: https://senate.rutgers.edu/wp-content/uploads/2019/07/S1805ICACReportCredentialingApril2019Revised.pdf
- SUNY Micro-Credentialing Task Force Report and Recommendations: https://system.suny.edu/media/suny/content-assets/documents/academic-affairs/Micro-Credentialing-TaskForce--Report.pdf; https://system.suny.edu/academic-affairs/microcredentials/
- UPCEA Hallmarks of Excellence in Credential Innovation: https://upcea.edu/wp-content/uploads/2020/05/UPCEA-Hallmarks-of-Excellence-in-Credential-Innovation-May-20-2020.pdf
- UPCEA Hallmarks in Professional and Continuing Education: https://upcea.edu/wp-content/uploads/2017/09/UPCEA-Hallmarks-of-Excellence-in-Professional-and-Continuing-Education.pdf

Appendix E: Ohio State Workforce Development Programming Framework

Alternative credentials are part of the overall university effort to advancing new types of academic programming for workforce development.

Internal Advisory Council

External Advisory Council

OAA

OTDI

Colleges/Campuses

Enterprise for Research, Innovation and Knowledge

Marketing and Communications

College/Campus Initiatives

Enterprise for Research, Innovation and Knowledge
- JobsOhio
- Entrepreneurship
- FinTech
- Cybersecurity
- Artificial Intelligence
- Broadband
- Leadership
- Gaming Studies

OSU Staff Professional Development

Academic Programming; Degrees, Certificates, Micro-credentials, and Internships

Educational Partnering

K-12
- New Skills Ready Network
- STEAMM Rising

2 Year Sector
- Columbus State

4 Year Sector

Appendix F: Identified funding needs

To build out an effective ecosystem for alternative credentials, a partnership across the university will be necessary. OAA support will be needed to provide incentives for units to participate in curricular development, technical infrastructure to deliver content and for learners to find content, and personnel costs to develop and support programs.

Technology

A partnership across OAA will be necessary to prioritize resources and funding to develop and support the technical infrastructure necessary to update systems and processes to allow for alternative credentials:

- CRM – Universal Customer Relationship Management System to follow a learner across all engagements with the university, including non-credit and for-credit participation [in conversation]
- Nudging, marketing automation, predictive analytics, chatbot, and audience intelligence functions
- Virtual front door; web widgets with transparency for total cost, refund policy, and learner success
- Curricular Management System to bring courses, programs, and other learning opportunities together into one tool to discover and support outcomes connections.
- Non-credit Identity Management (IdM) [in conversation]
- Non-credit SIS [in conversation]
- Digital credentials [Registrar]
- Badging [Registrar]. Badges at Ohio State should follow IMS Global data standards: *https://www.imsglobal.org/initiative/digitalcredentials*. Providing an Ohio State badge requires working with the Registrar's office to provide the necessary metadata and university-approved branding for badges to be earned via the university's badging system (to be determined; e.g., CanvasBadges, Credly, VirtualBadge) and connect into a comprehensive learner record network.
- Blockchain [Registrar]
- Course aggregation partnership for pipeline or scaled degree programs (e.g., Coursera) partnerships
- Adaptive courseware
- Skills / Competency / Assessment tool to monitor progress toward outcomes, including if there are any certification requirements that may currently occur outside Ohio State systems.

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- Payment tool connected with registration system [not coordinated currently]

People

A partnership between OAA and academic units is required to identify the roles and responsibilities, as well as services provided, by people to support alternative credentials, for example:

- Instructors
- Advisors
- Program coordinators
- Coordinating Workforce Development Committee
- Coordinator of university non-credit providers, e.g. Bootcamp vendors
- Marketing
- Learner success coach
- Virtual job fairs, networking, resume reviews
- Visual Designer (for badges)
- Data Steward (for CLR - Comprehensive Learner Record, metadata of learner outcomes, database, etc.)
- Data visualization (for Tableau dashboards, analytics, student success / learner lead generation)
- Faculty professional learning coordinator

Marketing and outreach

Internal and external communication and marketing is critical for supporting the community to understand this emerging space and the offerings Ohio State provides, as well as ensuring alignment to industry needs.

- Costs for market research
- Costs for marketing and digital advertising
- Identifying paths and opportunities among offerings, including non-credit and for-credit.
- Faculty and academic leaders professional learning, including continuous outreach effort to academic units that:
- Communicate the value proposition of alternative credentials by focusing on learning outcomes.
- Explain alternative credentials considerations, such as alignment to industry, how they fit into existing offerings, and the factors of cost to deliver.
- Discuss the importance of learner interaction with the instructor and cohort and that regular and substantive interaction across modes are a critical, and required, hallmark of quality education.
- Align around learner consistency and the importance that Ohio State provides alternative credentials that are valued, trusted, digital, standardize, verified, machine-readable, portable, and interoperable.