UNIVERSITY SYSTEM OF GEORGIA

Career-Focused Microcredentials

An Implementation Guide for Institutions

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Acknowledgments

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Overview

The concept of "microcredential" is not entirely new to higher education. With the advent of Massively Open Online Courses (MOOCs) in the early 2000s, the notion of short-term credentials that concentrated on specific skills or knowledge areas began. Most MOOCs were free; for a fee, the learner could choose to have their work assessed for verifiable credentials. The rebranding of MOOCs to include badges, nanodegrees, digital credentials, alternative credentials, etc., has occurred over the years (Brown et al., 2021). However, the underlying premise of allowing a person to obtain a short-term credential to close a knowledge gap or enhance career skills remains the same. During the COVID-19 pandemic, many workers used their time at home to improve their knowledge of current job-related skills or gain a new skill to make a career change. Coming out of the pandemic, we have seen a shift in the perception of the value of a 4-year degree. This change in perception, coupled with enrollment challenges, has catalyzed higher education institutions to rethink how they package and promote existing degree options (Matkin, 2018; McGreal & Olcott, 2022).

A review of the literature uncovered two different types of microcredentials: 1) Non-credit professional development credentials such as badges or completion certifications, and 2) For-credit credentials that can be obtained by those already possessing a degree, existing students who want to augment their skillset for a specific career, or members of the existing workforce for whom a credential would lead to career advancement. These for-credit credentials could stand alone or, when packaged together, could lead to the attainment of a degree (Brown et al., 2021; McGreal & Olcott, 2022; Perea, 2020; Ashcroft et al., 2021). Several institutions across the United States have begun re-packaging their traditional degrees into smaller microcredentials to respond to changing demands from industry and prospective students and to meet workforce needs in high-demand career areas (Appendix A: Resources from Other U.S. Institutions and Systems).

Potential Benefits

Career Opportunities and Advancement

A 2023 study of employers in industries including financial services, health care, logistics, entertainment, information technology, and others conducted by Collegis Education and The Online and Professional Education Association (UPCEA) on the use and acceptance of microcredentials indicated that "95% of employers were familiar with microcredentials" (Collegis Education, 2023). Further, "Among the leaders surveyed from over 500 organizations, 76 percent said pursuing microcredentials demonstrates an employee's willingness to develop their skills, 63 percent said it shows initiative, and 60 percent said it is an easy way to communicate employee competencies and skills. Eighty percent of respondents said that stackable credentials leading to a degree enhanced their appeal" (Greenberg, 2023). Similarly, a survey from Coursera in 2021 indicated that "89% of students in the survey agreed or strongly agreed that earning an entry-level professional certificate or microcredential will help them stand out to employers and secure jobs when they graduate. For their part, 92% of employers

agreed or strongly agreed that a professional certificate strengthens a candidate's job application, and on average, employers were 76% more likely to hire a candidate who had earned an industry microcredential" (Kelly, 2022).

Impact on Recruitment, Retention, and Progression

A review of literature related to student recruitment found that if students saw a clear pathway to relevant job-related knowledge and skills, they were more likely to enroll in a microcredential (Ashcroft et al., 2021). Further, the flexibility of stacking several credentials into a degree program made prospective students more likely to continue and obtain a 2- or 4-year degree. Consistently, the literature reflects that learners are more likely to continue when they see multiple, manageable milestones on their path to careers (Everhart et al., 2016).

Pedagogical and instructional design theories have proven that relevance is the key to helping students remain motivated to learn and progress toward a degree. As part of the microcredential design, the more the competencies are connected to employable knowledge and skills, the more likely a student will progress toward the credential. The literature reinforces this notion and suggests that favorable completion rates among students exist when credentials and competencies are mapped to the content or courses required for the credential (Fain, 2016). It is important to note that microcredentials differ from competency-based instruction in that with microcredentials, courses and assessment policies remain in their current format, intentional connections of competencies are mapped, and tracking of student attainment of the competencies is in the form of level of achievement. In addition, "by showing learners what their career journey might look like and how they might successfully develop the knowledge, skills, and the credentials for it, colleges can increase the rates of learner retention and learner engagement…" (Parks & Parrish, 2017). In their research focused on stackable credentials within the health professions, Giani and Fox found that "many students who completed short or very short programmes went on to earn longer credentials or maintained their enrollment" (Giani & Fox, 2017).

Potential Impact on Georgia

Data from the 2022 American Community Survey 1-year estimates indicate that among those adults in Georgia aged 25 and over, 27% have a high school diploma or equivalent, 19.1% have some college, and 8.7% have an associate degree. The same data indicates that Georgia had an estimated 60.6% employment rate and 7.3% military veterans. The USG Career-Focused Microcredential would allow each of these groups to achieve a college credential, and, in some cases, their existing experience could be assessed as prior learning and applied toward the credential. In addition, students at institutions with approved interdisciplinary studies degrees at the associate's, bachelor's, and master's levels could design a degree that best meets their career goals by stacking relevant credentials. If offered as certificates, Pell eligibility could be maintained by students if the certificates met the federal gainful employment requirements. Finally, these credentials would respond to Governor Kemp's request to sustain and grow Georgia's current workforce and support the economic competitiveness and community impact goals in the USG Strategic Plan 2029.

Definitions

Badge: A credential that indicates student achievement of specific skills or competencies gained through certified learning experiences, workshops, or programs. Digital badges can be awarded, verified, and displayed online. If offered for credit, badges are under nine credit hours and are not eligible for Federal Financial Aid if not embedded within an existing degree program.

Certificate: A credential that indicates the completion of a cohesive curriculum that is more coursework than a badge but less coursework than a degree program.

Certification: A credential that indicates mastery of knowledge, skills, and abilities of competencies identified by a recognized entity such as a licensing body, disciplinary organization, or industry. Certifications usually contain a cluster of competencies that lead to an industry-awarded certification.

Competency: A clearly defined and measurable knowledge or skill obtained through instruction, resulting in a credential. If competencies are not included in an approved Competency-Based Education program, they should be viewed similarly to student learning outcomes and aligned with content.

Degree: A recognized and approved credential that consists of a defined curriculum and results in a diploma at the associate level or higher.

Level of Achievement: A designated level that indicates acceptable competency attainment.

Stackable Credential: A portion of a sequence of credit-bearing or non-credit-bearing credentials that can be achieved over time and lead to a degree. Non-credit-bearing credentials can be articulated to degree programs or assessed as prior knowledge through institutional processes if the student decides to pursue a degree.

Standalone Credential: A credit-bearing or non-credit-bearing credential designed to meet a specific knowledge or skill area associated with a high workforce demand or one developed in partnership with industry to meet an existing need. Non-credit-bearing standalone credentials can be articulated to degree programs and assessed as prior knowledge if the student decides to pursue a degree.

Types of Career-Focused Microcredentials

Career-focused microcredentials can effectively prepare more Georgians for career opportunities and advancement while helping institutions increase enrollment by aligning high-demand workforce areas with existing curricula. Microcredentials may be offered as part of continuing and professional education or as credit-bearing clusters of courses. Designed in one of two formats—(1) non-credit professional development leading to badges, certificates, and

industry-sponsored certifications, or (2) credit-bearing badges, certificates, and USG Nexus degrees—these credentials would enable students to pursue programs that align with their personal and career goals (Appendix B: Student Options for Credentials). Regardless of the chosen option, assignments and coursework should be connected to competencies to ensure that student achievement of competencies is tracked and can be verified for credential awarding.

Classification of Career-Focused Microcredentials

As mentioned above, career-focused microcredentials can be categorized as badges, industry certifications, or certificates. The motivation for creating the credential should inform the decision about the type of credential offered. The table below can serve as a reference for making the best choice based on workforce demand, industry needs, and student demographics.

	Badge	Certification	Certificate
Credential Option			
• For Credit	X		X
• Professional Education	X	X	
Student Type			
• High School Graduates	X	X	X
• Existing Workers	X	X	X
• Some College/No Degree	X	X	X
• College Graduates	X	X	X
Reason for Credential			
• Employer Requested Training	X	X	X
• Workforce Demand in Service Area	X		X
• Instruction toward Industry Sponsored Credential		X	

Professional Education Badges and Certifications

Professional education opportunities are part of the core mission of all USG sectors. Microcredentials in this category usually fulfill a need identified by an employer. However, if your institutional service area has many returning adult students with some college and no degree or degree-holding students seeking career advancement, offering a professional education credential might give those individuals an easier transition back to college. Professional education can provide a pathway to a credit-bearing certificate if the credential is designed with an academic department. Students can complete a professional education course, request a prior learning review to obtain credit for the equivalent course, and continue pursuing a for-credit microcredential.

Credit-Bearing Badges and Certificates

Credit-bearing badges and certificates can all be standalone and offered to students as individual opportunities. However, when several related microcredentials are offered, students can stack these certificates to obtain enough credits for an associate's, bachelor's, or master's degree.

Standalone Microcredentials

The stand-alone badge or certificate would be the best option for potential students who are not yet ready to commit to a degree, already possess one, or seek career advancement. Badges focused on specific high-demand job-related competencies could be an option for non-degree students or students who are already enrolled in a degree program and want to increase their skills in a particular area. Undergraduate versions of these credentials could be developed as certificates of less than one year (CER0) or at least one year but less than two (CER1). Core classes could be part of the coursework and could be included if the Core course content aligns with workforce-related competencies for the credential. Post-baccalaureate certificates of CERG, CERM, or CERP could be developed if the job demands more advanced knowledge, skills, and abilities. Institutions should follow the USG Certificate Guidelines in Section 2.3.1.2 of the Academic and Student Affairs Handbook when designing these credentials.

Stackable Microcredentials

If multiple credentials are offered at your institution, these stand-alone credentials could be stacked to meet the credit requirements for a degree (Appendix C: Stacking Options for Credentials). When providing this option for students, Core IMPACTS requirements at the associate and baccalaureate levels will still need to be met. Offering badges for completing the career competencies aligned with each IMPACTS domain can assist students in meeting these requirements.

Regardless of the credential type, institutions should review BOR, USG, and institutional policies and procedures related to admissions requirements, prior learning credit, transfer credit acceptance, and accreditation reporting requirements if the credential is credit-bearing. Certificates could also be eligible for financial aid if gainful employment regulations are met and students are enrolled in the required credits per semester. If a certificate is used to award the credit-bearing credential, financial aid directors should be involved in determining whether the credential is eligible for federal financial aid.

Framework for Developing USG Career-Focused Microcredentials

The design and development of career-focused microcredentials require a different approach than the one frequently used when designing courses and programs. These credentials rely heavily on aligning competencies in specific workforce-related areas with content delivery. The process combines some principles of competency-based education and backward design elements similar to those used in accredited fields requiring specific curricular outcomes. A vital step in the development process is intentionally connecting specific workforce competencies

with content and thresholds for successful completion. The framework in this section guides the design, development, and implementation of microcredentials. While the process can be applied to continuing and professional education credentials, the remainder of this document will focus on developing credit-bearing micro-credentials. (Appendix D: Institutional Development Framework).

Analyzing the Need

The first step in any curriculum design and development process is analysis. In this phase, institutions should examine workforce demand in their service areas, the job skills and training required by industries and employers, and prospective student demographics.

Analyzing Workforce Demand

Two versions of the Mapping Employment Demand with Local Institutions (MEDLI) tool (statewide and by service area) are available to analyze workforce demand. MEDLI combines information from the Georgia Department of Labor and the Unified High Demand Career List (Georgia Workforce Development Board, 2024) with a crosswalk of Classification of Instructional Program (CIP) codes to Standard Occupational Classification (SOC) codes. Using either the statewide tool or the Local Workforce Development Area (LWDA) tool, institutions can examine high-demand job areas, the associated educational requirements, and the expected salary information for workers. Each job area is displayed with its SOC code and a list of related instructional program codes. Additionally, the MEDLI tool for LWDA includes an Institutional Service Area (ISA) feature that quickly provides institutions with a list of Local Workforce Development Areas (LWDA), Metro/Non-Metro Employment Service Areas, and Georgia counties within a 50-mile radius of the main campus.

Additional workforce-related data can be obtained from the Georgia Labor Market Explorer website, the Carl Vinson Institute of Government's Qlik site, and Chmura's JobsEQ or Lightcast databases. The Georgia Labor Marker Explorer website enables access to local area profiles, including industries, population projections, and top employment areas, for a quick snapshot of Georgia's various counties and workforce zones. Using Qlik, institutions can access GA County Labor Data for more detailed information about occupations, typical education, projected employment, and Standard Occupational Classification (SOC) Codes. JobsEQ or Lightcast are also valuable resources during this stage. The customizable reports in these databases can provide information on industries, education requirements, and occupation gaps within an institutional service area or the state of Georgia. If your institution cannot access JobsEQ, you can submit a request for assistance obtaining reports.

Connecting with Industry Partners

Local industries and employers are vital in identifying job-related training needs within your service area. Building a partnership with local businesses, industries, and military installations allows you to tailor your credentials to meet the specific demand for their employees' career advancement. To stay aligned with workforce needs, creating an advisory board with these partners would be advantageous to guide the process. Furthermore, partner engagement in the

development process might lead to endorsements of the credential or funding opportunities for employees to enroll in the credential.

Prospective Student Analysis

Institutions should carefully analyze the intended audience for the credential to attract potential students, considering that interest may also come from outside that intended group. When considering prospective students, it is essential to remember that they could be recent high school graduates, individuals with some college but no degree, workforce members needing additional training for advancement, current or former military members, or individuals looking to change their careers. While each of these groups seeks to obtain the knowledge and skills necessary for a job, their variety of backgrounds and experience means that institutions should consider the acceptance of prior learning experiences when recruiting these students. In addition, courses should be offered using various delivery methods and during times convenient to the intended audience.

Design and Development

The design and development phase begins by identifying high-demand credential focus areas that align with institutional strengths and workforce needs. Once an area is selected, the process proceeds by following the standard steps for curricular development. The only difference is that the competencies will replace student learning outcomes when aligning content, assignments, assessments, and courses.

Selecting Credential Focus Area

After analyzing the data on workforce needs, the next stage is to use the top demand areas to select the general credential focus area and possible sub-areas that best align employment demand with the institution's strengths, expertise, and ability to deliver the credentials. These focus areas should be related to the CIP code found when analyzing workforce demand. CIP Codes are required for all degrees, majors, certificates, and courses.

Defining Competencies

Once you define the career area of focus, a clearly defined set of competencies is essential for developing career-focused microcredentials. Competencies will serve as a guide to identifying thematic areas for the credentials, assist with identifying content, and provide a roadmap to show prospective students how the credential aligns with growth areas within their present or future careers. However, it is important to note that this guidance does not imply a design of competency-based education. Instead, competencies should be viewed as student learning outcomes at the course level and, as discussed in a later section, aligned with the content that comprises the courses taught as part of the credential.

Competencies can be identified using various sources. The U.S. Department of Labor/Employment and Training Administration Occupation Information Network (O*NET), AI-supported queries, employers, alumni, military installations, and professional organizations can all provide valuable information. If you begin with O*NET, utilize the SOC codes obtained from

MEDLI and search O*NET to identify an initial list of job-specific knowledge, skills, and abilities (KSAs) for each occupation, as well as any additional training, licenses, or credentials required in Georgia for that job category. KSAs in O*NET are arranged from the most general to the most specific. The initial view typically presents the broadest KSAs, making it crucial to display all of them for a complete list. AI-supported queries focusing on the questions below can produce a list of competencies related to high-demand areas, enhancing the preliminary list found in O*NET. As with any AI query, reviewing the AI-generated list for accuracy is important.

- What would an employee need to know to work in the job area?
- What would an employee need to know how to do to perform the tasks associated with the job?
- Are any specific abilities needed for the job?

Once you have developed the initial list of KSAs, confirm it with your advisory board, industry partners, or employers. Interviews and focus groups are the most common verification methods when engaging with individuals and businesses. The process should start by asking the same questions in the AI query. These interviews aim to evaluate the identified competencies for accuracy or to uncover missing items from the list. Additionally, asking the same questions can help you discover further knowledge, skills, and abilities needed for the specified career area.

Identifying Credential Clusters

After verifying the competencies, the next step is categorizing them into themes to enhance your credential offerings. While all credentials can stand alone, individual credentials that focus on a specific area are generally developed when there are few competencies related to the job area, when an employer or industry identifies a particular training need, or if there is significant workforce demand for specialization within your service area. If several competencies are related to a job area and the workforce demand analysis indicates a need for workers with various levels of knowledge, skills, and abilities, select themes organized by complexity level using Introduction, Intermediate, and Advanced categories. If different levels of complexity are warranted, the multiple credentials created could incentivize students to return for additional microcredentials and stack them toward a degree.

Mapping Competencies to Content

This design stage involves mapping competencies to content rather than courses. If related courses already exist at the institution, review their content and map it to the competencies to assess coverage and identify gaps. For stand-alone credentials, the content aligns with the level required for the job. If your credential cluster indicates the need for increasing complexity, the content should progress from introductory to advanced levels. For example, at the undergraduate level, the introductory credential might include material from 1000-2000 level classes, the intermediate from 2000-3000 level classes, and the advanced from 3000-4000 level classes. Once the mapping is complete, assess coverage and determine whether existing courses can be utilized or if new courses need to be developed. Remember, because schools

within the USG are not authorized for competency-based education, each microcredential should include courses that will be recorded on a student's transcript.

Aligning Instruction and Competencies

Once the alignment of content and competencies is complete and the courses have been selected or designed, proceed with the usual process of choosing methods of instruction, assignments, and student assessment measures. Similar to courses with learning outcomes, each method should align with the type of competency being addressed. For instance, if the credential is primarily skill-based, the instruction and assignments should enable students to practice and work towards mastering the skill. An example of this within an Introduction to Data Administration credential might include:

- **Competency:** Set up and build an SQL database.
- **Instruction:** Use a scaffolded approach to show students how to install and set up an SQL database.
- **Assignment:** Use a problem-based approach and give students a scenario where an SQL database would be needed.

Identifying Levels of Achievement for Assessment

The final stage in design and development involves establishing the acceptable level of achievement necessary to master each competency or the required performance level for the job. At this point, it is advisable to engage industry partners or advisory boards to help determine the appropriate level of achievement for each competency. A strategic approach is to create a table mapping competencies, content or courses, assignments, and achievement levels. This table can be integrated into the Brightspace (D2L) Competency Tool to automatically assess student attainment of credential competencies and generate reports to monitor students' progress toward credential attainment.

Implementation

Once the credential is developed and ready for implementation, it is essential to consider delivery methods that align with the provided content and the potential student population. Questions to consider include the following:

- Does the credential content lend itself to online, hybrid, or face-to-face offerings?
- If the credential is offered face-to-face, should the classes be scheduled outside the standard 8 – 5, Monday through Friday class meeting times?
- Does the course content allow delivery in fewer than 15 weeks (e.g., 5 weeks, 8 weeks, etc.)?

Evaluation

As with any academic program, it is crucial to have a plan for evaluating the effectiveness of the credential. Since microcredentials are closely associated with high-demand careers—some of which may change frequently—it is also vital to develop a plan for regularly reviewing the

competencies and content to ensure that the credential meets the needs of employers and potential students.

Additional Areas to Consider

Regardless of the type of credential developed, policies and guidelines must still be considered before offering. Some of the areas of consideration are outlined below. Appendix E includes a comprehensive list of related USG policies.

Admissions Requirements

Admissions requirements for Career-Focused Microcredentials should follow policies and procedures outlined in the Board of Regents Policy Manual, the USG Academic and Student Affairs Handbook, and any additional institutional policies.

Financial Aid and Gainful Employment Reporting

Any credential developed as a certificate program will require paperwork to be submitted to the U.S. Department of Education to assess financial aid eligibility and gainful employment reporting requirements. Financial aid officers at each institution should participate in the development process to ensure adherence to guidelines and submission of necessary paperwork. For more information about financial aid eligibility, please contact Tracy Ireland, Associate Vice Chancellor for Student Affairs and Services, at the University System Office.

USG Approval Process

Career-focused microcredentials require University System Office (USO) review and approval, just as existing certificates do. Institutions must submit requests to create, modify, deactivate, or terminate these credentials via Smartsheet. The review and approval process typically takes up to one month. Once approved, these credentials will be added to the list of authorized programs an institution can offer in the DMA. No student can enroll in or be awarded a microcredential unless it is on the institution's list of authorized programs. (Note: Embedded badges and certificates are not considered microcredentials since they do not result in separate credentials awarded on a transcript.)

The following guidelines are provided to assist institutions with developing badges or certificate-based credentials.

- Credentials proposed and offered by an institution should be consistent with the mission of the institution.
- Credentials shall be consistent with degree programs offered by the institution.
- Credentials should be within an area of high workforce demand or developed in partnership with industry to meet an existing need.
- Credentials offered as certificates should be nine or more semester credit hours but 59 semester credit hours at most.

- Credentials require that students meet the institution's admission requirements and that the courses offered be at the institution's approved level (e.g., a two-year institution may not award a graduate certificate).

Coding Credentials

A coding scheme is being developed for career-focused microcredentials, designed as badges or certificates. The scheme will track the number of programs, student retention, progression, and completion. Further information on the coding of these credentials will be forthcoming.

Awarding of Credentials

The awarding of Career-Focused Microcredentials will vary based on the type (badge, certification, certificate) and whether the credential is credit-bearing. If you create a badge or certification, your institution should establish mechanisms to track student completion of requirements and confer the credentials. If you develop for-credit certificates, you should adhere to the existing process for awarding standalone certificates. In either scenario, a digital system that awards and describes the credentials and competencies would allow students to display their achievements on platforms such as LinkedIn.

Accreditation Considerations

Institutions designing Career-Focused Microcredentials should consult with their institutional accreditor about reporting requirements for new programs and non-degree credentials to determine if notification or approval is needed before implementation.

Summary

This implementation guide has been created to help institutions analyze, design, and develop career-focused microcredentials that align with high-demand career fields and workforce needs. While these credentials can be created as non-credit-bearing professional education or offered as credit-bearing badges or certificates, the crucial part of the process is aligning workforce-based competencies with high-demand areas. Institutions interested in developing microcredentials and seeking additional information should contact Jill Lane, Associate Vice Chancellor for High Demand Careers.

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Appendices

Appendix A: Resources from Other U.S. Institutions and Systems

- Commonwealth of Learning: Designing and Implementing Micro-Credentials: A Guide for Practitioners
- Digital Credentials Consortium: Knowledge Base
- eCampus Ontario: Microcredentials Toolkit
- Georgia State University: GSU's Microcredential Initiative
- Georgia Tech: Microcredentials & Digital Credentials
- Indiana University East: Micro-Credentials
- Kennesaw State University: Micro-Credentials
- Oregon State University: Microcredentials
- State University of New York: Building a Quality Microcredentials Program
- State University of New York: Microcredentials Information Site
- University of Wisconsin – Milwaukee: Microcredentials Policy and Toolkit
- University of Central Oklahoma: Micro-Credentials
- University of Nebraska Omaha: Skills, Badges, and Microcredentials
- University of Colorado Boulder: Microcredentials
- The University of Texas System: Integrating Microcredentials into Undergraduate Experiences
- Wichita State University: Undergraduate Alternative Pathways

Appendix B: Student Options for Career-Focused Microcredentials

Below are several scenarios that could assist students in choosing the correct type of Career-Focused Microcredential.

Scenario 1: Career-Focused Professional Development Microcredential

Student 1 is already working and may or may not have a college degree. They are not interested in college credit; they only require a credential for career advancement, which could be obtained through continuing education.

Scenario 2: Stand-alone Career-Focused Microcredential

Student 2 is working and has little to no college credit from previous enrollment at an institution of higher education. They can opt for a Pre-Baccalaureate Career-Focused Certificate that lasts less than one year (CER0) or more than one year (CER1).

Scenario 3: Stand-along Career-Focused Microcredential (prior military training/experience)

Student 3 has been in the US Air Force and completed military coursework in pilot qualification/reclassification, which carries an ACE recommendation of the following credits: 3 hours in advanced aircraft systems, 6 hours in jet equivalency training, 3 hours in crew resource management, and 3 hours in strategic planning. These prior learning credits may be applied toward one or more stand-alone certificates, depending on the program selected.

Scenario 4: Stackable Career-Focused Microcredential (non-applied science or allied health)

Student 4 has little to no college credit from previous attendance at an institution of higher education and may wish to pursue a degree. They could choose a Pre-Baccalaureate Career-Focused Certificate of less than one year (CER0) or more than one year (CER1), stacking these certificates until they accumulate 60 credit hours for an associate degree or 120 credit hours for a bachelor's degree. The credits would include transfer credit, prior learning, core courses, and disciplinary coursework.

Scenario 5: Stackable Career-Focused Microcredential (applied science or allied health)

Student 5 has some or no college credit from previously attending an institution of higher education and may want to pursue an Associate of Applied Science or a Bachelor of Applied Science degree. They can choose a Pre-Baccalaureate Career-Focused Certificate of under one year (CER0) or over one year (CER1) and then stack those certificates until they earn the 60 hours required for the AAS or the 120 hours needed for the BAS. Credits in each program would include a combination of transfer credit, prior learning, core courses, and discipline-specific coursework.

Scenario 6: Stand-alone Graduate-Level Career-Focused Microcredential

Student 5 holds a bachelor's degree and seeks a graduate-level credential to improve career opportunities. They can opt for a Post-Baccalaureate Career-Focused Badge or Certificate (CERG).

Scenario 7: Stackable Graduate-Level Career-Focused Microcredential

Student 6 holds a bachelor's degree and aspires to pursue a master's degree focused on developing specific skills to enhance career opportunities. The institution provides an interdisciplinary master's degree option; therefore, the student could stack several credentials (Post-Baccalaureate Badges or Certificates) related to targeted career areas and fulfill the 30 credit hours required for a master's degree.

Appendix C: Stacking Options for Credentials

Depending on the number of credit hours associated with a credential, students can combine multiple credentials (badges, certificates, etc.) to meet the credit hour requirements for a degree program. The examples below relate to non-applied science undergraduate degrees; applied science and master's degrees would follow the same format.

Stacking Option for Associate of Arts & Associate of Science

	Option 1	*Option 2*	*Option 3*
Credential 1	15	15	30
Credential 2	15	15	30
Credential 3	15	30	
Credential 4	15		
Total Credits	**60**	**60**	**60**

The example below provides an option for stacking four 15-credit microcredentials toward an associate's degree in data analytics.

Certificate 1: Data Analytics Foundations (15 credits)
Certificate 2: Programming for Data Analytics (15 credits)
Certificate 3: Data Analysis Techniques (15 credits)
Certificate 4: Data Analytics Applications (15 credits)

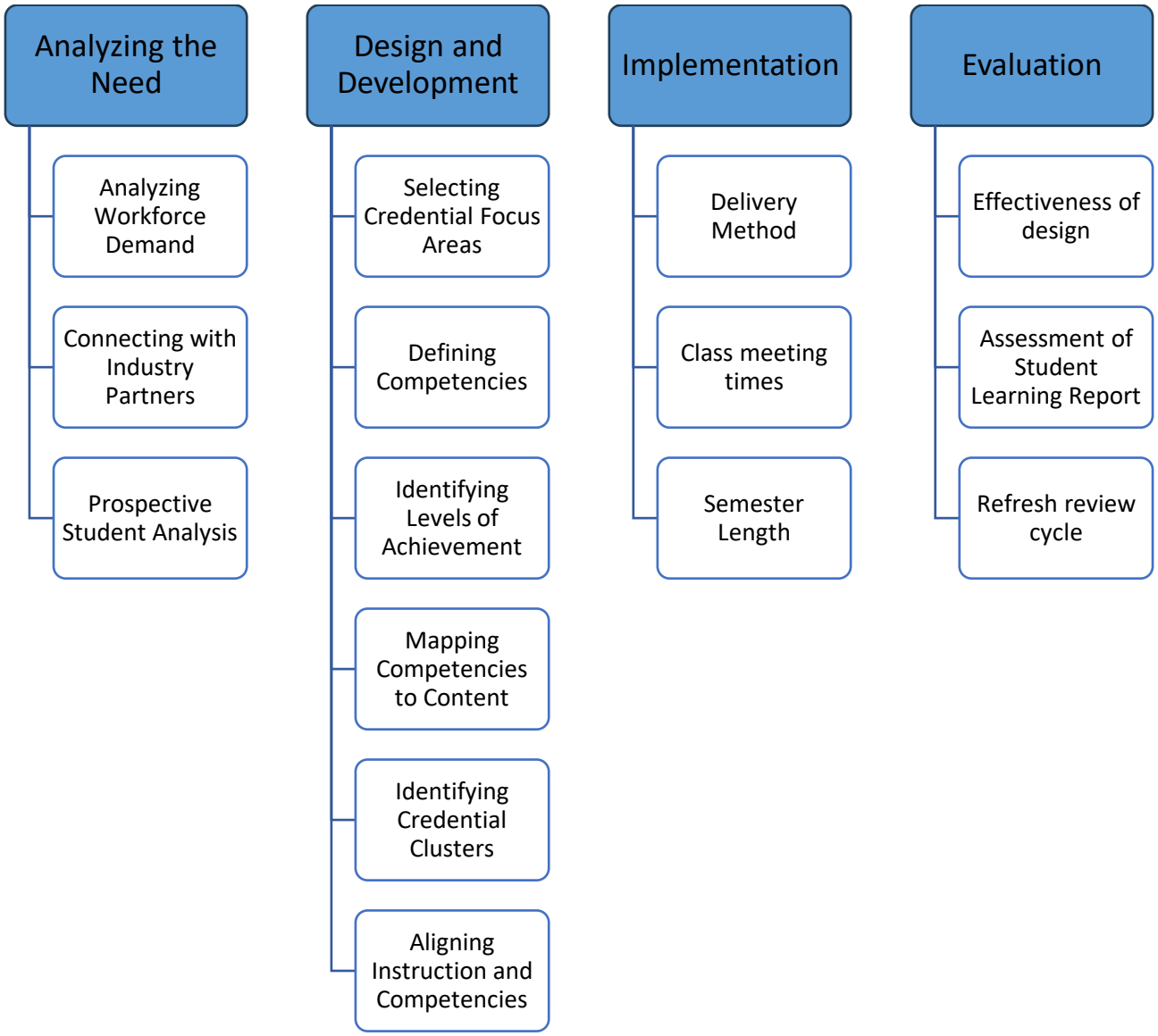
Stacking Option for Bachelor of Arts, Bachelor of Science, etc.

	Option 1	*Option 2*	*Option 3*	*Option 4*
Credential 1	15	15	15	30
Credential 2	15	15	15	30
Credential 3	15	15	30	30
Credential 4	15	15	30	30
Credential 5	15	30	30	
Credential 6	15	30		
Credential 7	15			
Credential 8	15			
Total Credits	**120**	**120**	**120**	**120**

The example below adds 60 more credit hours to the above example to illustrate an option for a bachelor's degree in data analytics.

Certificate 5: Advanced Data Analysis & Modeling (15 credits)
Certificate 6: Data Science Disciplinary Specialization (15 credits)
Certificate 7: Research Applications for Data Analytics (15 credits)
Certificate 8: Cybersecurity and Data Protection (15 credits)

Appendix D: Institutional Development Framework



Appendix E: USG Policies and Procedures for Consideration

Board of Regents Policies

3.3.6 Academic Credit Earned Through Extra-Institutional and Prior Learning

- 3.3.6.1 Course Credit Earned from Military Experience
- 3.3.6.2 Course Credits for Standardized Examinations

3.6.1 Creation of Academic Programs

4.2.1 Admission Requirements for Programs Leading to an Associate or Baccalaureate Degree

- 4.2.1.1 Freshman Requirements
- 4.2.1.2 International Freshman Requirements
- 4.2.1.3 Exceptions to Freshman Requirements
- 4.2.1.5 Transfer Requirements
- 4.2.1.6 International Transfer Requirements
- 4.2.1.7 Exceptions to Transfer Requirements
- 4.2.1.8 Non-Traditional Requirements
- 4.2.1.9 Persons Aged 62 or Over

4.2.2 Admission Requirements for Undergraduate Programs Not Leading to the Baccalaureate Degree

- 4.2.2.1 Admission to Career Programs
- 4.2.2.2 Admission of Non-Degree Students
- 4.2.2.3 Admission of Postbaccalaureate Students

4.2.3 Additional Admission Policies

- 4.2.3.1 Institution Admission Requirements

Academic and Student Affairs Handbook Policies and Procedures

2.3.1 Degrees, Majors, and Certificates

- 2.3.1.2 Certificates

2.3.8 Minor Programs of Study

2.4.10 Transfer Rules

2.16 Academic Credit for Extra-Institutional and Prior Learning

- 2.16.1 Course Credit for Military Experience
- 2.16.2 Course Credit for Standardized Examinations

3.1.1 Admission Requirements for Programs Leading to an Associate or Baccalaureate Degree

- 3.1.1.5 Transfer Requirements
- 3.1.1.6 International Transfer Requirements
- 3.1.1.7 Exceptions to Transfer Requirements

3.1.2 Admission Requirements for Undergraduate Programs Not Leading to the Baccalaureate Degree

- 3.1.2.1 Admission to Career Programs
- 3.1.2.2 Admission of Non-Degree Students
- 3.1.2.3 Admission of Postbaccalaureate Students