Syracuse University
Microcredentials

Standards for the Development and Awarding of Digital Badges At Syracuse University:

Guidance, Governance and Graphics

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What's New In These Standards

We have continued to work with particular areas of the University to continue to refine the procedures and guidance for digital badge awards. The work has gone well, and we thank the members of these University units for their patience, help and perspectives, all of which have continued to improve the overall experience for everyone involved.

We've continued to evolve the infrastructure associated with microcredentials and digital badges/digital certificates, and that includes the form we use to gather information about the digital credentials that various units around the University want to issue. This latest version of our standards reflects these upgrades so that you have the latest. We look forward to working with you!

Background and Context of These Standards

As digital validation of individual accomplishments has grown in both professional education and higher education, certain principles have emerged that seem to be guiding the field regarding these concepts. Social media platforms, including those more oriented to professional profiling such as LinkedIn, are fast becoming the go-to sources for individual professional profiles in digital form. There we can find a geometrically increasing incidence of "digital badges": graphical icons about various accomplishments which, when clicked, provide authorized details about the accomplishment from a neutral source. It is appropriate then, for Syracuse University to have an overall approach to providing its community with such evidence of various accomplishments as well.

Why are we the ones issuing these standards? The College of Professional Studies has historically been the coordinator of professional Continuing Education Units (CEUs), as well as the issuer of paper certificates of achievement, completion, or attendance for SU courses that do not involve college credit. So, it is appropriate for the Office of Microcredentials at the College to build on those services to also provide the infrastructure and standards for microcredentials and digital badges/digital certificates that are issued by Syracuse University. Our office educates, coordinates, informs and implements digital microcredentials at Syracuse University. This document outlines the rationale, appearance, procedures and governance for digital badging and digital certificates at Syracuse University. It is a living document that will continue to adapt with the changing needs of the University and of the community we serve.

Respectfully submitted,

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Concepts of Microcredentials and Digital Badging

Microcredentials – A Working Concept Definition

A microcredential is evidence of a discrete achievement of some kind that results from a having fulfilled a specific set of measurable requirements. In higher education, while it is sometimes described as a set of achieved learning outcomes consisting of the completion of instructional components, this is not necessarily the only way to view a microcredential.

By its very nature, the term "microcredential" consists of two parts: First, "micro" suggests that it is a granular, or atomic, level of discrete achievement. Therefore, it does not suggest that one must achieve a series of something in order to qualify as having achieved a microcredential. Second, "credential" suggests that it is referring to a designation, a label, an achievement or a qualification of some kind.

Microcredentials earned at any level can be combined into more complex microcredentials if appropriate. Any microcredential that can be combined with others to create at least a portion of a more complex microcredential is therefore considered to be "stackable". Numerous studies in recent years have identified a growing popularity for the creation of, and the earning of, stackable microcredentials. A given microcredential may be found combined into several higher-complexity microcredentials, just as an English 101 course may be found on the transcripts of many undergraduate students earning many types of degrees. We are all familiar with an Associate's degree being stackable into a Bachelor's degree. Courses completed in a Master's program may also stack into a Doctoral program. In the same way, a workshop resulting in a Python Programming microcredential may be stackable toward a more complex microcredential representing skills and/or knowledge of Data Analytics. Technically, the resulting "stack" of combined microcredentials is known as a "bundle" or "collection", representing multiple layers of microcredential grouping, and a specific sequence defined among them would be known as a "pathway".

People create resumés, or *curriculum vitae* (CV), that summarize such achievements, both granular and stacked. Their credentials are described along with official employment experience, the publication of research, the designation of honors and other relevant components of the person's background. All these work together to tell a story about that person by listing their accumulated credentials. In fact, the sum total of an individual's experience and credentials will create that individual's ***brand***.

Requirements for Microcredentials

The first step in the process involves defining component modules of assessed achievement in the form of microcredentials, and then determining how a combination of such modules could be sequenced into a higher-level microcredential bundle. When a person completes all the microcredentials involved in that bundle, they will also earn the microcredential that is represented by the bundle. Unlike either the Carnegie standard of a credit-hour, or the Continuing Education Unit (CEU), at the present time there is no universal standard level of effort, contact time or assignment work that has been established for microcredentials. However, there is general agreement in the field that ***a microcredential must involve some activity on the part of an individual that has been both assessed and validated as having equaled or surpassed an established benchmark that is required by, and represented by, the microcredential.***

Digital Badges serve as a representation of that achievement in digitally validated form:

General Concepts of Digital Badging

Each microcredential at each level of complexity generally carries with it some official evidence: A wall plaque, a paper certificate that is signed or looks otherwise like an official commemoration, a trophy, an official letter from a body that is designated as authorized to award something or to pronounce the achievement of something – there are many forms. In a manner of speaking, each item that serves as evidence of an earned microcredential at any level can be thought of as a "badge". The term "medal" is another type of badge that one might earn: Olympic athletes compete to achieve a level of skill and endurance defined by official judges of the competition, and the top three in each competition earn a badge that proclaims this achievement in the form of a bronze, silver or gold medal that can be worn or displayed. A Nobel Prize is another example of a medal awarded for scholarly achievement.

In the military, or in youth scouting programs, achievements are most often indicated by a special pin (actually known as a badge) that is worn on the dress uniform. Each pin looks different and designates a different achievement – taking a course and passing an exam, demonstrating a project, surviving combat in a particular theatre of war, promotion to a rank, demonstrating courage, or combining multiple achievements in a particular sequence that results in a top-level achievement overall, such as being designated as an "Eagle Scout" (which could be referred to as a "bundle" or "collection"). The more achievements that one accumulates, the more that the uniform of that individual is loaded with the badges that serve to symbolize these achievements, therefore literally announcing the story and experience of the individual wherever they wear the uniform.

Therefore, badges, in any form, are the evidence that an achievement at some level of complexity has been earned whether it was awarded for achievements that were instructional, competitive, experiential or honorary.

What Digital Badges are NOT

It is sometimes said that a particular department is "offering a digital badge program in such-and-such a subject", or that a participant can " take four badges". This is NOT an appropriate use of the digital badge term. Badges are not clear indicators of a particular type of program – they are simply the markers given to those who have achieved something. Therefore, the correct method to refer to the above would be the offering of a "program of study in such-and-such a subject that results in the earning of a digital badge".

It might be argued that, if we can refer to a "degree program" that results in the awarding of a degree, then why can't we refer to a "badge program" that results in the awarding of a badge? The counter-argument would be that digital badges can, and have been, awarded for degree programs as well as many other kinds of achievements. So what would you call such a program under those circumstances – a badge program or a degree program? Let us also not forget that we now see "micro-degrees", "nano-degrees", "executive degrees" and other such programs out there that may or may not be universally understood. In addition, we have "certificate programs" of many kinds, offered by numerous types of organizations at all levels with varying criteria of accomplishment. These days, describing something as a "certificate program" because it results in the awarding of a physical or digital certificate, allows very little understanding of what criteria might have been involved in its successful achievement. So, let's not add more to the confusion – let's instead keep

the term "program" separate from the name of the marker earned or awarded for its achievement – is it a diploma, a certificate, a digital badge, a combination, or something else?

Syracuse University should also resist the temptation to categorize a digital badge as a layer in a sequence of levels of instruction. Digital badges, as stated above, are not a type of learning program. They are simply a marker of an achievement, one of which might be the completion of a learning sequence. Some institutions have formulated taxonomies that indicate specific levels of complexity or effort in learning, which eventually culminate in degree programs. These taxonomies place digital badges and other related terms along a taxonomic structure. We applaud the effort to attempt to bring clarity to a rather confusing universe of terms, as well as to try to formally link every known term to a specific level of possible complexity in a learning hierarchy. It may seem to bring order out of the apparent chaos we find in the field of alternative credentials. However, this imposes a particular meaning to each credential term, and we know that there is not such a universal understanding. That is why, in an April 2023 meeting of the Leadership Council on Credential Innovation of the University Continuing and Professional Education Association (UPCEA), it was formally decided to suggest that each institution needs to develop its own common understanding of alternative credential terminology. It was recognized that it would be nearly impossible to universally control how terms were used among various institutions, but that it would be important for any individual institution to be specific about what terms it uses. That is why this present document approaches the topic from the view of any accomplishment, not restricted to learning, that could involve credit-bearing, non-credit-bearing, or honorary/experiential achievements of many kinds, and with many differing types of earning criteria.

Digital Authentication Systems

Over centuries, the issue has been how to ensure the authenticity of earned credentials. We know that Universities keep records of who was officially awarded degrees. To authenticate any such claim of having earned such a credential, we need only to go back to the issuing organization to determine if the claim is valid. Resumés, or *curriculum vitae* (CV) are considered "official", and it is understood that someone may research the items on that document in order to validate the claims. It is further understood that to present false evidence on such a document could result in disciplinary action by an employer who hired someone on the faith that it was valid. In the military, such action can result in the removal of the credential, symbolized ceremonially in the past by physically "stripping" the badge from the soldier's uniform in public.

With online professional profiling systems, such as LinkedIn, a person's story of learning and experience is presented digitally, and entries that would normally be visible only on the person's resumé can now be highlighted in the online profile for anyone to view. Therefore, we are now at a point where people are scanning their physical certificates, even letters of achievement, and displaying them proudly on their LinkedIn online profile and other media. However, anything that can be scanned and presented as an image can be counterfeited. While consequences of the use of false certification online can also result, the fact remains that the nature and scale of the use of these online profiling systems suggests that there needs to be a better way to identify whether or not a displayed achievement is authentic, and to what extent the earning criteria for that achievement can be defined or clarified.

In recent years, information technology has been employed to increase the likelihood that a given microcredential, or digital badge, is authentic. Today, there are clearing houses, such as Accredible, Credly, Canvas Credentials, and others, which provide specific information about not only the type of digital badge

awarded and the date it was earned, but also information about what was necessary to achieve it, the awarding organization, the full name of the awardee and a set of specific encrypted keys that are necessary to gain access to this information. Digital badges are set up as digital icons, and when clicked, these icons take the user to a specific page on that official platform where the digital badge is amplified and the digital badge's background information can be seen and verified. Only the official digital badge can function in this way, and organizations subscribe to these clearing houses to award such a digital badge to a recipient. The result is an online source of authentic individual microcredential information, much like the few official online credit bureaus serve as the global source of authentic individual financial credit information.

Digital badges are heavily used by organizations and employers to both offer, and authenticate, various microcredentials. As of this writing, international open badge standard clearing houses like Accredible and others declare that tens of millions of digital microcredentials are shared and hosted on those platforms.

Syracuse University uses the Accredible clearing house (https://www.accredible.com/solutions/badges). Using an Open Badge Protocol, all digital badges awarded will be able to be shared by the recipient on various platforms. The Open Badge Protocol is a product of the IMS Global Learning Consortium (IMS) and standardizes the manner in which digital badges are defined, awarded and shared. The IMS Open Badge Protocol can be found at the following link: (https://www.imsglobal.org/sites/default/files/Badges/OBv2p0Final/index.html)

Digital Badge Relevance

The awarding of a Syracuse University-branded digital badge should be reserved for situations in which the digital badge is earned directly through, in collaboration with, or as a result of influence from, Syracuse University. Many industry-specific digital badges, such as those awarded by certain commercial entities upon successful completion of that entity's examinations (e.g. Cisco certification, AWS certification, PMI certification, etc.) have perceived value independent of Syracuse University. However, situations where such digital badges are combined with specific efforts of SU may be represented by an SU digital badge, or a co-branded digital badge, pertaining to that unique combination. A digital badge labeled with SU's brand should always signal that something particular was contributed by Syracuse University that is relevant to our community.

We also recommend ensuring that a digital badge conveys some relevant value to external viewers. Viewers should always be able to determine what was the point of awarding a digital badge – what skill, knowledge or capability it represents. We must be particularly concerned not to award a digital badge for very vague descriptions of skills. For example, consider the student who has earned a digital badge for "Communication", "Leadership", or perhaps "Critical Thinking". We at the University may understand the point of these awards, but the question to ask is, how can we best design such markers of achievement so that each title conveys something that this person can do that would be understood by external parties as well? So, we might want to offer instead a digital badge for achieving "Persuasive Communication", "Voluntary Team Leadership", or "Problem Analysis and Recommendation". These titles provide the recipient more options to leverage these awards for their future growth and benefit.

Learning-related SU digital badges should not be awarded simply for attendance in class or at an event. There should always be a validated knowledge or skill competency by the time a learning-related digital badge is

awarded. So, even if attendance at a panel discussion is a part of a learning sequence for theater staging approaches for example, there should be some assessment of that experience in order to validate that the intended competency was gained through it. In addition to the confirmation of attendance, an exam, assignment, project or interview regarding staging practices would be an essential criterion that would help to validate that a measured achievement of knowledge or competency was actually demonstrated by the participant. ***It is the set of earning criteria listed with the digital badge which helps external evaluators and employers to determine how to value the achievement of a particular digital badge against their own competency expectations. Therefore, it is our obligation as best practice to ensure that the earning criteria specified for our digital badges are actually validated.***

Digital Badging Example

The following is an example of a shared posting of a microcredential on LinkedIn by an individual:

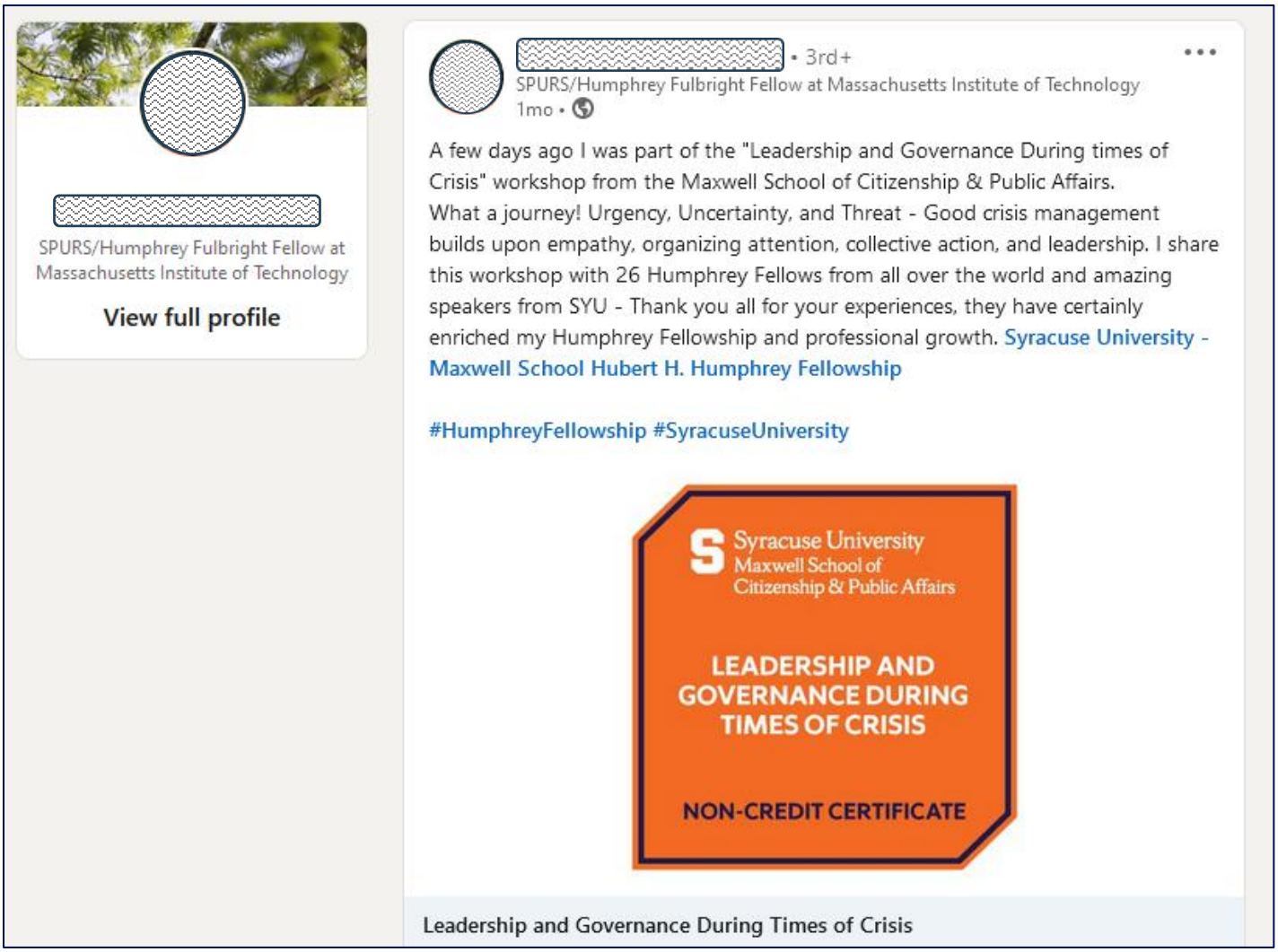

Figure 1 - Example of Individual Sharing a Digital Badge on LinkedIn

The above example shows one way that an individual can share a digital badge on either their profile or in a posting. Note that the icon is the actual digital badge. If one clicks on that icon, the next screen that appears is from the microcredential clearing house as shown in Figure 2.

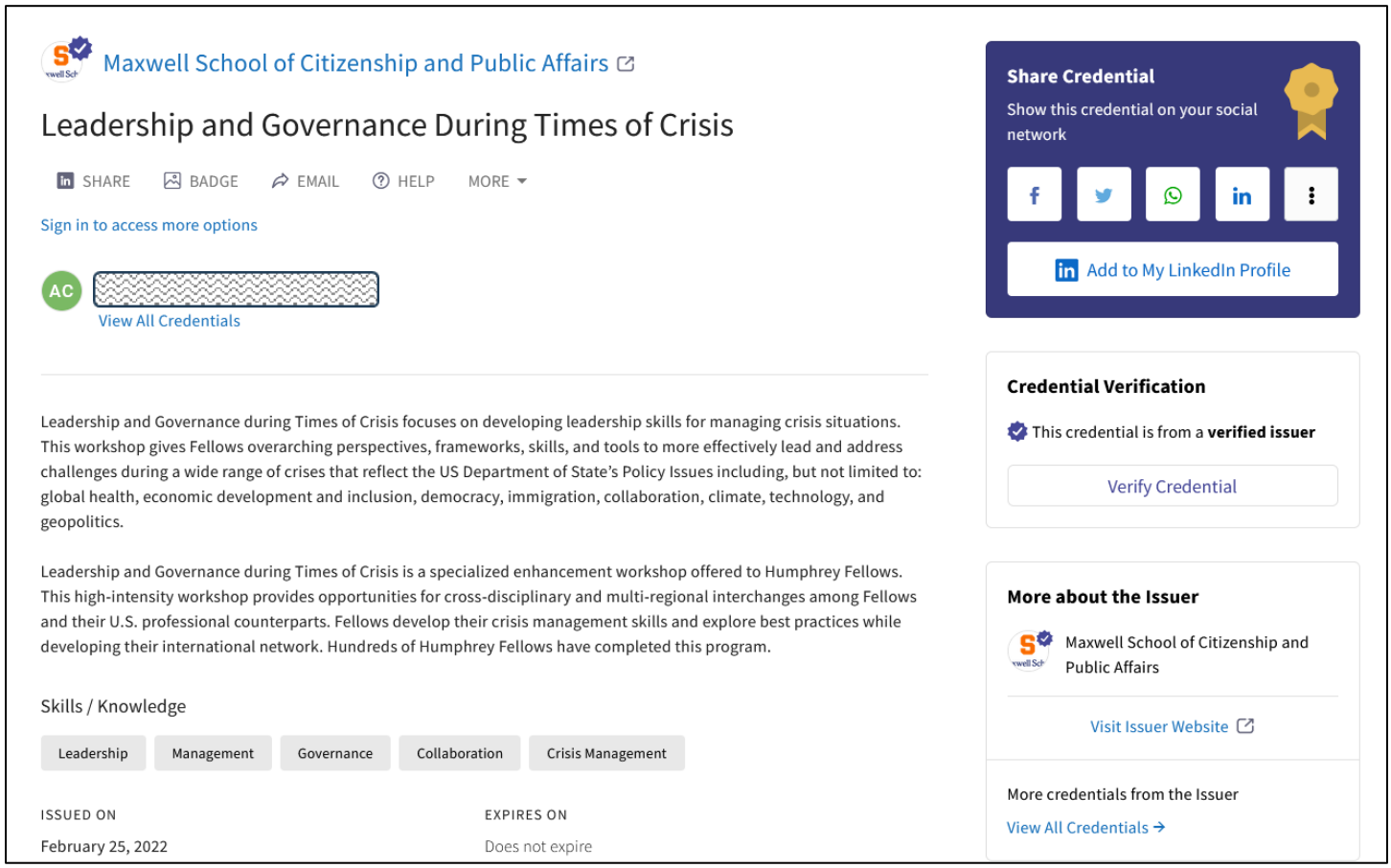

Figure 2 - Metadata Displayed by the Microcredential Clearing House.

In the above screen, one can see detailed information about the earning of the microcredential. If one chooses to click on the "Verify Credential" button, additional processes will occur that demonstrate that the digital badge is current and valid, as seen in Figure 3.

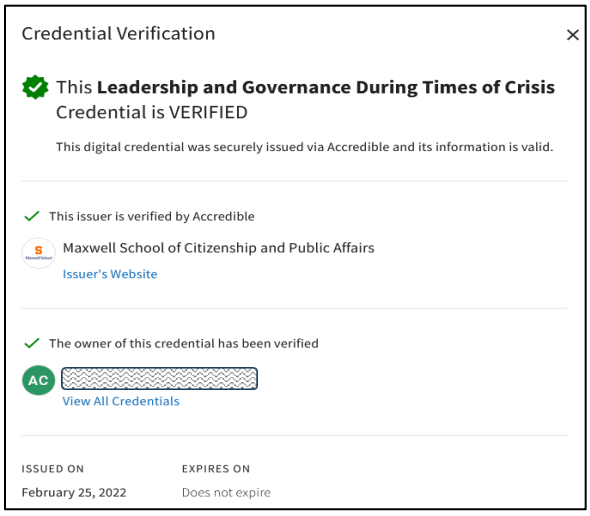

Figure 3 - Display of Information Verifying the Digital Badge

Summary – Concepts of Microcredentials and Digital Badging

- A microcredential is a discrete achievement of some kind that results from a having fulfilled a specific set of measured requirements.
- Microcredentials are awarded to recipients by an issuer organization which also validates that the recipient deserves the microcredential through having achieved its earning criteria.
- Microcredentials can be combined into more complex microcredentials if appropriate, and if it is agreed that doing so respects the original nature of the microcredentials as well as the overall more complex microcredential, or credential, into which they are combined. Any microcredential that can be combined with any other microcredential to create at least a portion of a more complex microcredential is therefore considered to be "stackable".
- A stack of microcredentials is known as a "bundle" or a "collection".
- A microcredential at any level of complexity can be evidenced by a digital badge and/or digital certificate. However, we want to ensure that a digital credential for that particular microcredential level is appropriate.
- A digital badge or digital certificate is a special electronic process that is presented as an icon image containing a hyperlink to detailed evidence regarding the microcredential that it symbolizes, and which is issued to the recipient only by a central clearing house that maintains that detailed evidence. The encryption of digital badges prevents their duplication without the permission of the clearing house as well as the original awarding organization. The clearing house allows any viewer to verify the details of the digital badge, including how it was earned and verification of its authenticity and currency.
- Digital badges are heavily used by organizations and employers to both offer, and authenticate, various achievements.
- Syracuse University uses the Accredible clearing house. Using the IMS Open Badge Protocol, these digital badges can be shared by the recipient on various platforms.
- The awarding of a Syracuse University-branded digital badge should be reserved for situations in which the digital badge is obtained directly through, in collaboration with, or as a result of influence from, Syracuse University. Therefore, digital badges awarded by certain commercial entities upon successful completion of that entity's examinations (e.g. Cisco certification, AWS certification, PMI certification, etc.) would not involve receipt of an SU digital badge because these have objective value in, and of, themselves. However, successful completion of situations where such digital badges are combined through specific programs at SU may be represented by an SU digital badge, or a co-branded digital badge, pertaining to that unique combination.
- It is the set of earning criteria listed with the digital badge which helps external viewers, evaluators and employers to determine how to value the achievement of a particular digital badge against their own competency expectations. Therefore, it is our obligation as best practice to ensure that the earning criteria specified for our digital badges are actually assessed to enforce the authenticity of the skills represented by the digital badge.

Governance of Digital Badging at Syracuse University

Overview

The use of digital badges to mark various forms of achievement is part of the University's goal to stimulate life-long learning, to align skill development directly with professional career goals, and to establish a standard, visible and public record of an honor, achievement and/or a successful completion of a measured set of requirements. Microcredentials can be used to segment any program of learning or achievement into smaller sections of accomplishment that stack toward a more complex, or comprehensive microcredential, allowing higher-level completion to seem more possible to participants. Numerous studies have shown that microcredentials can motivate participants to persist in a larger sequential program if they can achieve intermediate steps along the way.

Benefits to the University:

Digital badges are meant to be seen and shared. By sharing authenticated SU digital badges on social channels, recipients tend to build awareness of the microcredential, the department/school/college, and the University to users whom we may not have had the chance to attract otherwise. Digital badges also tend to influence others - prospects are more likely to be receptive to marketing efforts if the signals are amplified by those coming from people they know or follow, who have earned microcredentials from Syracuse University in the past.

The Roles Involved in the SU Digital Badging System

The following describes the various roles within the Digital Badging system at Syracuse University:

- **Organization** – Syracuse University
- **Administrator** – The College of Professional Studies, Office of Microcredentials: Oversight and administration of the digital badging creation and awarding process, standards enforcement and digital badge management software platform. The Administrator will provide periodic reports and analyses to University leadership concerning all digital badging activity at SU.
- **Issuer** – The name of a University Unit which acts as the sponsor of digital badge awards related to that Unit. Schools, Colleges and central administrative units (HR, ITS, IVMF, Registrar, etc.) can each become Issuers. The name of the Issuer is carried with the digital badge metadata, and digital badges, as well as their earning pathways, are grouped within the Organization by Issuer.
- **Digital Badging Council** – A leadership team appointed for the purpose of definition and management of digital badges within each Issuer Unit. The Digital Badging Council is appointed by the Dean or other top-level Director of the Issuer Unit to have official oversight of that Unit's digital badging programs. There is no specific requirement for the quantity or makeup of members of this Council – that is at the discretion of the Dean/Director.
- **Staff POC** – A senior member of the Unit's Digital Badging Council who is appointed by the Dean or Director of the Issuer to serve as the Issuer's Point of Contact and the official representative of the Issuer's Digital Badging Council. The Staff POC has the authority to convey official requests and other information between the Digital Badging Council and the Administrator on the design, development, implementation, awarding and management of all digital badges involving that Unit.

- **University Digital Badging Council** – A group of all Staff POCs from all Issuers who will meet periodically to discuss various concepts, make recommendations and receive administrative reports concerning digital badging at Syracuse University.

The Role of the Office of Microcredentials as Administrator:

The Office of Microcredentials, a unit of the College of Professional Studies, performs the role of the University's internal clearing house for digital badges in much the same way as it has served in the past to issue physical certificates and CEUs for non-credit achievements. The Office of Microcredentials coordinates a standardized process to establish and award digital badges for the University as a whole.

The Office of Microcredentials, reporting to the Dean of the College of Professional Studies, provides the following services for the University as the formal Administrator of the digital badging process:

- Administers the digital badging software platform (Accredible) used to define and store awarded digital badges and to manage the pathways for achieving them.
- In collaboration with the Deans of the schools and colleges, and the Directors of other administrative units, establishment of the role of "Issuer" for each appropriate Unit.
- In collaboration with the Deans of the schools and colleges, and the Directors of other administrative units, establishment of each Issuer's Digital Badging Council and the specific role of the Staff POC for that Issuer.
- Collaboration with the Digital Badging Councils, and the University Digital Badging Council, in maintaining this set of standards for digital badging.
- Application of SU Brand Guidelines to standardize the graphic design of digital badges to be issued.
- Provision of a form for an Issuer to officially apply for the establishment of a digital microcredential, which will include the criteria and evidence assessed in order for the digital microcredential to be earned and awarded.
- Analysis of the criteria/evidence submitted for the establishment of digital microcredentials by the Issuer, and after discussion, final determination of the nature and appearance of the digital badge to be provided according to digital badge standards.
- Receipt of a list of students, staff, faculty or public participants from each Issuer who have demonstrated the appropriate achievement as stated in the approved digital microcredential metadata, and either have been, or are to be awarded a given digital badge.
- As appropriate, acting as liaison with the designated digital badge clearing house(s) so that the digital badge recipients can be recorded with those clearing houses.
- Definition of the steps, systems and instructions necessary for awardees to easily obtain and share their digital microcredential.
- Keeping records of all digital badges that have been authorized, and providing ways for non-credit classes and microcredentials to be appropriately listed in the recipients' official SU non-credit records.
- Periodically collaborating with the Issuer Units to assess the digital badges that have been established by the Units, and to determine updates, replacement or discontinuation of any particular digital badge that had been approved in the past, as well as policies and procedures for digital badge expiration.
- If/as appropriate, ensuring that alumni records are updated with information about the issuance of digital badges so that alumni can take advantage of any award or discount programs linked to repeated participation in microcredential activities offered by the Units or the University.

- Serving as the point of contact to resolve issues that might occur with the awarding of digital microcredentials, and collaborating with the Digital Badging Councils to ensure that these issues are appropriately resolved.
- Communication to the University as a whole through various newsletters, websites and announcements.

The Role of the Individual Schools, Colleges and Departments at SU as Issuers:

The individual schools, colleges and departments (Units) are the official starting points for the process to issue digital badges for achievements relevant to each given Unit. This role will include:

- The Dean/Director will appoint the Digital Badging Council and Staff POC to serve as the point of contact (POC) from that Issuer Unit to complete the application to the Administrator for the establishment of each digital badge, and to respond to questions about that application.
- The appointed Staff POC will act as the Issuer's representative to submit to the Administrator all official digital badge definition applications and requests to award a given digital badge to individuals who have achieved the established criteria necessary to receive them.
- The Issuer's Digital Badging Council will periodically assess the digital badges that have been established/awarded, and will collaborate with the Administrator to determine updates, replacement, continuation, discontinuation or revocation of any particular digital badge that had been approved in the past.
- Once established in Issuer Units, the combined group of all Staff POCs across all University Issuer Units will constitute the University Digital Badging Council (UDBC), the means through which regular communications about digital badging will be distributed to all Units by the Administrator. An important component of the communication will be information sharing about all SU digital badges created including those in development and approved for issuing.

Metadata Required for Digital Badging and/or Digital Certificates

In the development of digital badges and certificates, it is necessary to specify the complete metadata that is shown when the digital icon is clicked. These fields are:

Digital badge Name - (Short title)
Digital badge Image - (College of Professional Studies will create this for all University Units)
Description - Summarize what this Digital badge represents in a few sentences.
Earning Criteria

- What's the path to success? Describe what a recipient must do to earn this digital badge.
- Can include duration, course breakdown, learning objectives, assessment scores, etc.
- We suggest also linking back to college/department website page, so people know where to go in order to sign up for the course/program/etc.

Skills/Knowledge

- Skills credential holders needed to demonstrate or have learned in the process of earning this credential.

Earning Criteria

- What did the recipient need to do in order to earn the credential?

Expiration

- Choose if this digital badge should automatically expire after a certain period of time, or if it should remain permanently valid. (Note: a digital badge can be revoked by the issuer unit, and this will mean that no further validation will be possible for that badge. Revoking a digital badge will not "delete" it from any previously shared location, but it will no longer show as valid when clicked by a viewer attempting to get more information.)

Application for the Establishment of a Digital Badge

The Office of Microcredentials will assist Issuer Units with the specification of these elements as digital badges are proposed and designed, and will work with the Issuer's Digital Badging Council to assess what is provided to ensure that the digital microcredential will be fully established within these guidelines and will be officially enabled on the Accredible clearing house platform.

We have a form to make it easier to request the development of digital badges and certificates. Please email us at microcredential@syr.edu to obtain the most recent form to request the creation of digital badges/digital certificates.

Digital Badges Representing Credit-Bearing Achievements

While digital badges gained popularity as marks of achievements of various kinds on the not-for-credit side, there are many ways in which digital badges are awarded for credit-bearing achievements as well. One particular method of establishing a digital badge is for a particular school or college to analyze its credit-bearing degrees or programs and separate out some specific credit-bearing courses or sequences that could be professionally meaningful to participants who have completed that particular grouping. This practice is known as "un-bundling" and allows the completion of certain sequences of credit-bearing courses to be represented by the earning of a digital badge. It is necessary for that sequence to have some professional relevance for the individual – in other words, the achievement should be able to stand on its own as a modular professional achievement outside of the normal degrees/certificates to which the courses might otherwise belong. See the earlier section on Digital Badge Relevance for more information.

Completion of a credit-bearing professional certificate, license or even a degree at any level can also be represented by a digital badge or digital certificate if so authorized by the School/College through its Digital Badging Council. Such professional designations such as licensure, teaching certificate, etc., do indicate recognized professional achievements by the recipient, and the issuance of a digital badge or digital certificate to mark these achievements is certainly more valid for the individual to share and display than sharing a photo or scan of their official license or certificate, which contains no inherent validation. More universities are likely to issue such digital credentials as the future unfolds.

Credit-bearing digital badges at Syracuse University have a different graphic standard to designate them as having been awarded to mark credit-bearing achievements (see next section: *Digital Badge Types and Graphic Configuration Standards* in this document). With regard to the definition of metadata for these credit-bearing badges, the individual credit-bearing components of these microcredentials must always be previously-approved courses, programs or degrees authorized by the University, and, if appropriate, by the State of New York. ***The application to establish a digital badge which designates the achievement of a credit-bearing microcredential cannot move forward if the component courses or programs within it are not***

yet approved by the School/College and any appropriate higher-level body, such as the University Senate, University Board of Trustees and/or the New York State Education Department.

It should also be specified how credit-bearing microcredentials can be stacked back into their related credit-bearing degree programs as appropriate. These microcredentials carry with them a declared value of college credit, and the digital badge metadata, or an accompanying digital badge pathway, should document how those credits can contribute toward the earning of any related credit-bearing programs. Therefore, if a School/College "unbundles" some courses from its programs and reconfigures them into a microcredential marked by a digital badge with credit value, it should also document how that microcredential's credit value could be stacked back into the related credit-bearing program(s) of study once it is earned. See sections entitled, "Pathways for Digital Badge Recipients" and "Pathways for Stacking Non-credit Microcredentials into Credit-bearing Microcredentials" later in this document for more information.

Digital Badge Types and Graphic Configuration Standards

Branding policy for the University prioritizes the Syracuse University brand higher than any one of its schools, colleges or units. This digital badge standard acknowledges this policy. In addition, this digital badge standard agrees with SU brand policy that it is important to be consistent when establishing new iconic representations for the University in the form of digital badges seen on various platforms. We acknowledge that the primary goal for such icons is for the individual to display them to identify with the achievement as each contributes to ***the individual's brand***, as it is also augmented by the brand of the department/school/college and the University's brand overall.

It is important that digital badges representing validated achievement of certain professional criteria carry some reference to the individual schools and colleges at Syracuse University that establish those criteria. In conjunction with the College of Professional Studies, and in transparency with other Issuing Units in the University, each of the Units determines the specific microcredentials that would be most meaningful within their own particular professional domains. When the awarded digital badge is shared by recipients within that domain, the known expertise and reputation of the individual Unit contributes a part of the credibility of the microcredential.

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In accordance with SU Brand Guidelines, SU digital badges can incorporate the use of the official Unit logo configurations that appear in SU websites, letterhead and other marketing materials. An example is shown above left for the wordmark of the College of Professional Studies – in the case of each University Unit, the official wordmark of that Unit will be used. In the case where the digital badge represents a joint achievement award from two University units, or achievements at only the central University level, only the block "S" and University name will be used in the digital badge's top panel.

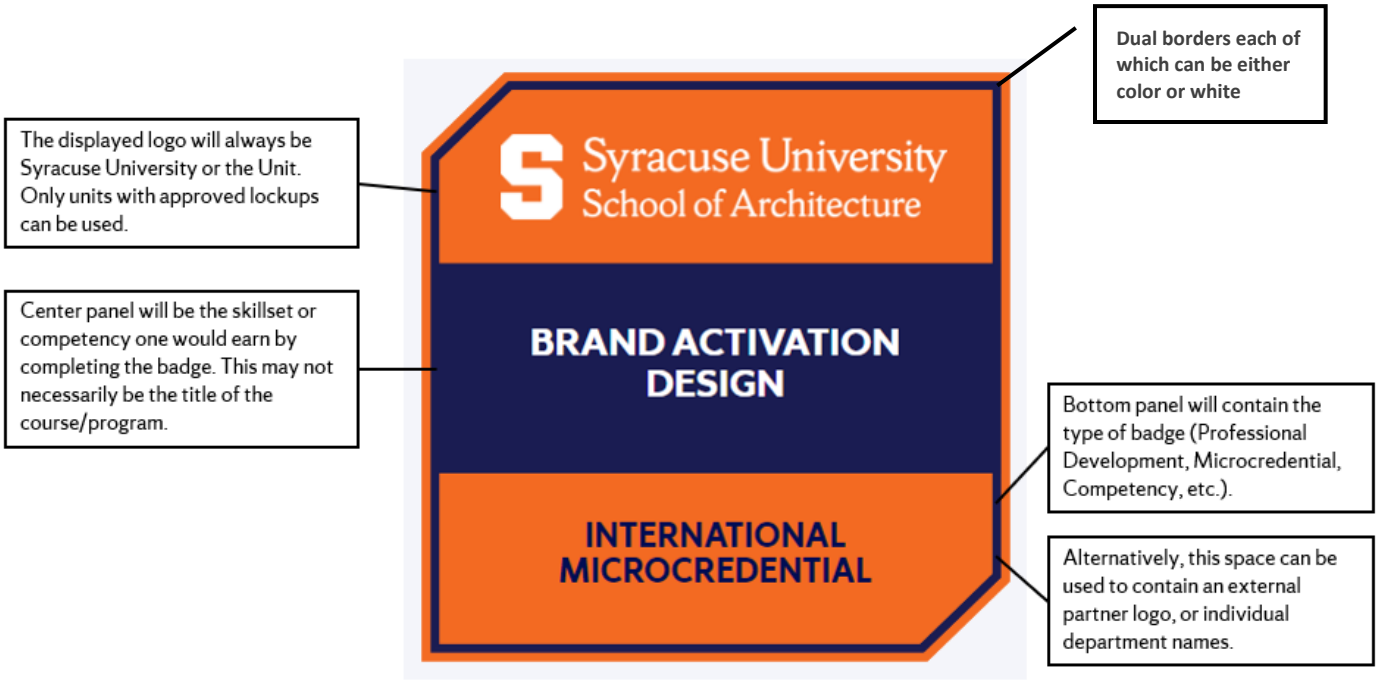
In summary, digital badge icons help to reinforce the ***brand of the event or achievement within a particular department, school or college***, and together, these icons contribute to the ***brand of the individual***. Recognizing that these achievements all incorporate reference to the ***brand of the University***, it is important

therefore to maintain a digital badge design strategy that can incorporates both the University ***and*** the School, College or administrative department on the icon as appropriate. Through the use of the graphic design standards described in this document, the College of Professional Studies will ensure a versatile, yet unified, look and feel for digital badges awarded to University faculty, staff and students for a wide variety of achievements.

Standards for Graphic Configuration of SU Digital Badges

The following image is shown to illustrate the component parts of the SU digital badge configuration. Colors shown adhere to SU Brand Guidelines for primary colors and combinations. *Note: College of Professional Studies logo is shown for illustrative purposes only*.

Figure 4 - Component parts of the SU Digital Badge



NOTE: When clicked, the digital badge always enlarges and displays along with its metadata. Digital badges are normally displayed with a larger, readable descriptive title alongside them on these sites. The logo for the University and the name of the digital badge will still be recognizable, even in small formats such as the following example of a typical size rendering on LinkedIn prior to being clicked by the viewer:

Figure 5 - A typical size rendering of the SU Digital Badge on sharing platforms

Using the color combinations and components such as borders and panels, a significant array of possible digital badge configurations can result, and yet all will remain compliant with SU Brand Guidelines.

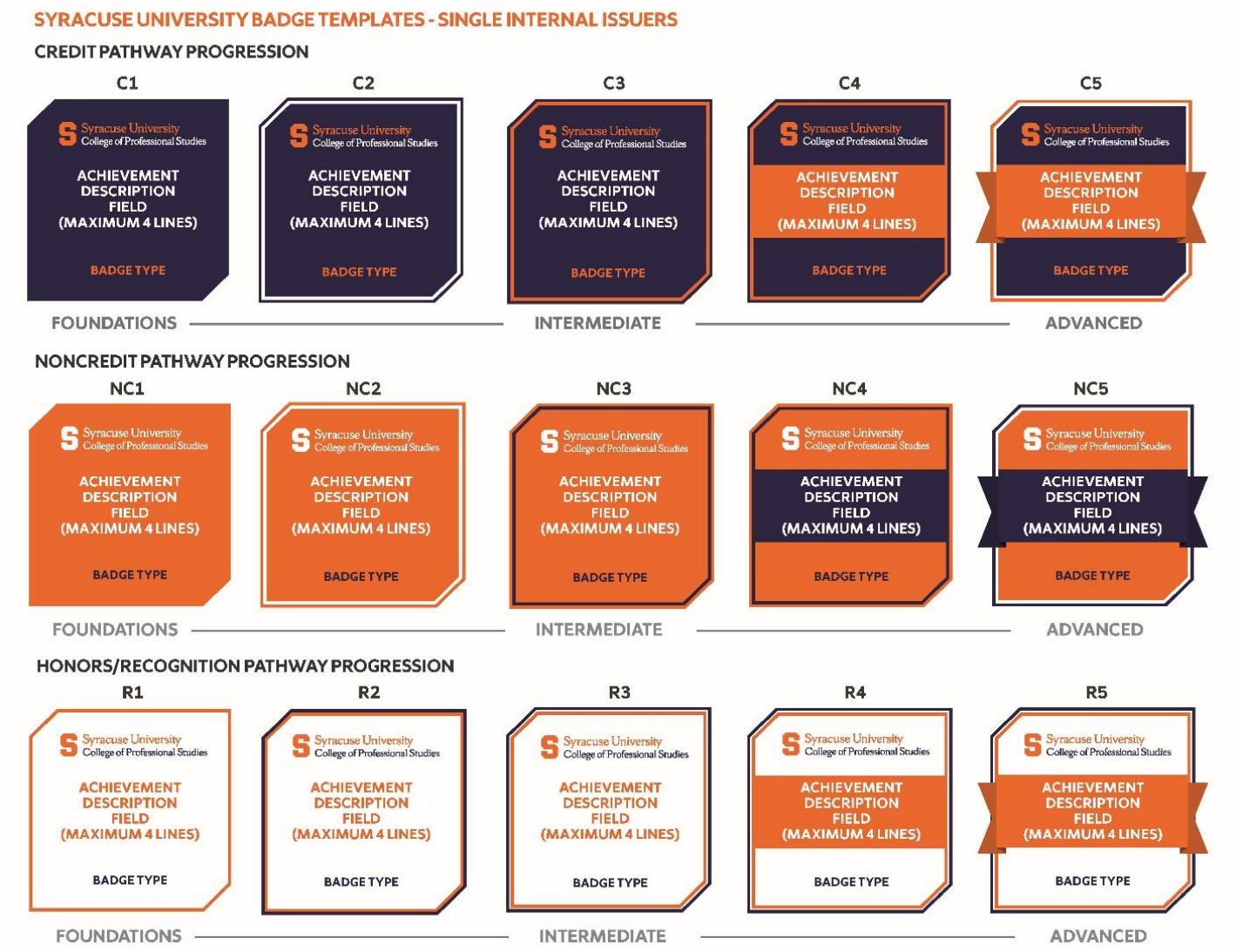


Figure 6 - SU badge icons representing five levels and three domains of achievement.

Figure 6 shows how the digital badge system at Syracuse University is organized into three domains of possible achievement: Top – credit-bearing achievements (credit-bearing digital badge awards are limited only to those earning credit-bearing licenses, certificates and certificates of advanced study authorized by the University and various credentialing agencies, including the State of New York). Middle – professional, non-credit achievements. Bottom – digital badges that acknowledge participation in activities, special organizations, honors, recognition of awards, etc.

The table also shows five levels of possible achievement from foundational to advanced. See the section entitled, "Foundation to Advanced Digital Badge Levels" later in this document.

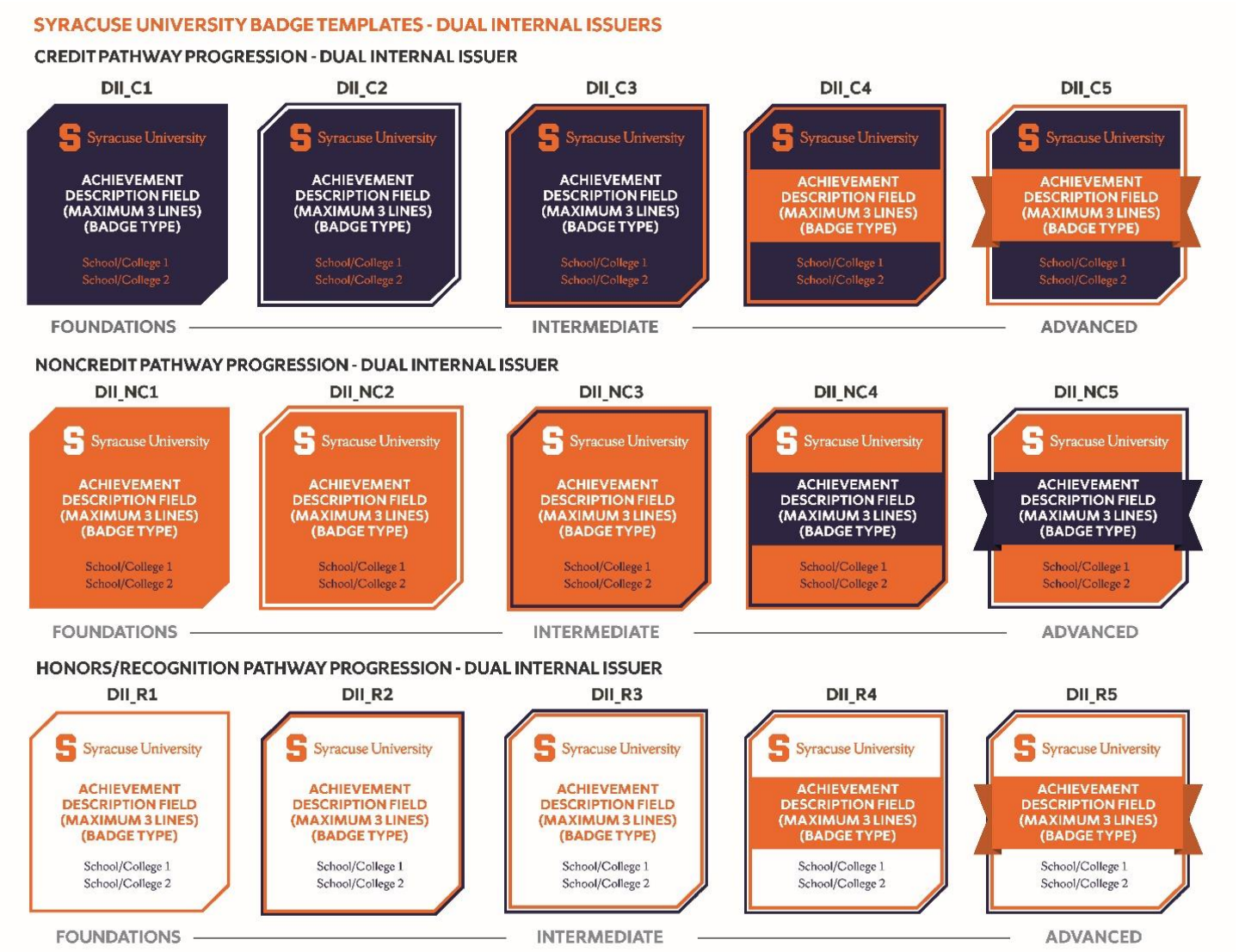


Figure 7 - SU badge icons where dual issuer units might collaborate to award a badge.

Figure 7 shows samples of how two schools may collaborate on a digital badge awarded jointly along each of the possible three domains. In this case, the singular wordmark of the University occupies the top panel of the digital badge, and the titles of the participating schools occupy the bottom panel. (Note: College of Professional Studies logo is shown for illustrative purposes only)

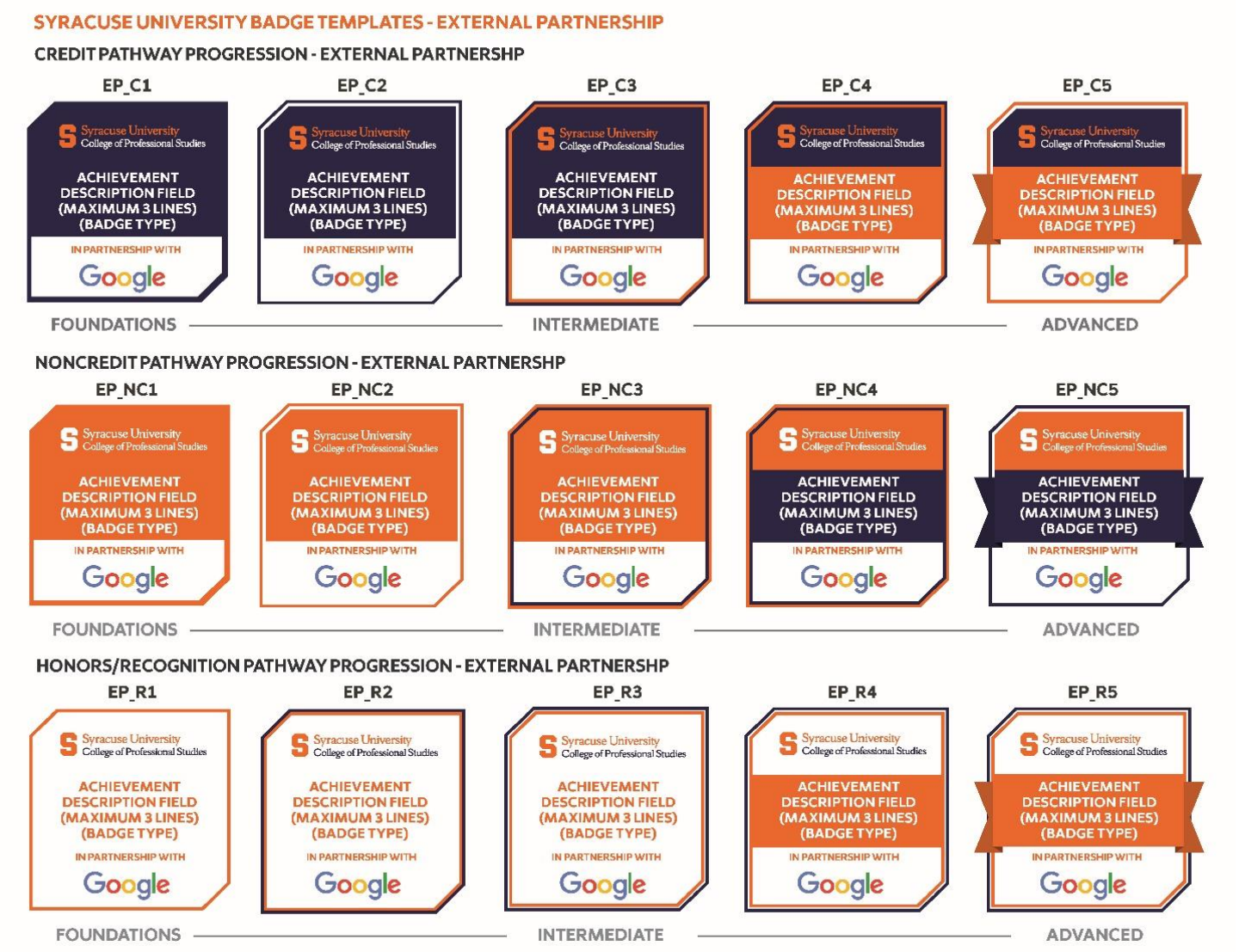


Figure 8 - SU Digital badge Images when issued as a part of a formal collaboration.

In Figure 8, samples are shown of how a digital badge might look when an SU program is joined in an official collaboration agreement with a particular organization. These would be reserved for those situations where formal agreements require such a co-branding, or situations in which the other party adds significant credibility, recognition or dimension to the achievement earned through the University. (Note: College of Professional Studies logo is shown for illustrative purposes only)

Determining the Appropriate Digital badge Graphic

The College of Professional Studies will work with the units to design and construct the appropriate graphic for all digital badge awards. An explanatory lexicon on the College of Professional Studies website, and in Answers, will explain how SU digital badges look and the various levels that are possible to earn. Issuer units are encouraged to describe what digital badges may be earned in their particular unit on their own landing pages. The College of Professional Studies will maintain complete records of all digital badge graphics and

metadata for all digital badges that are created, and will serve as the overall reporting Unit for data regarding digital badges that have been established and awarded across the University.

In Figure 9, we can see how digital certificates can be created on the same platform as our digital badges, and these can be issued to recipients as needs dictate. Digital certificates by default will use the design on the left with the SU laurel leaf. Higher level courses or programs can be considered for the alternative design on the right upon discussion of rationale with the sponsoring unit. More information about digital certificates is provided on the Digital Badge/Digital Certificate Request form.

Figure 9 - Examples of Digital Certificates at Syracuse University

Foundation to Advanced Digital badge Levels

Each Issuer Unit must consider the relative achievement level of each digital badge they design along a continuum that is most relevant for the competencies that are represented by each level. Some Universities have attempted to formally categorize the meaning of "foundation" or "advanced" in order to arrive at a fixed measure for the description of their microcredential levels across the entire university. We oppose such a fixed categorization because individual levels of earned professional skills and competencies cannot generally be compared across diverse professional domains. A medal given to a recipient might come from winning a Nobel Prize, from winning a final place of first to third in an Olympic competition, or from an honorable achievement being recognized by a senior military leader. Universities contain many such situations that differ across competency domains. For example, a top-level competency for general undergraduate career readiness in a particular school or college can not necessarily be compared to the digital badge awarded to a licensed speech therapist after obtaining their license. Each might be considered "advanced" along the sequence of steps toward earning the individual digital badges. In the end, the point of a sequence of digital badges is twofold: Provide the recipient a designation that appropriately labels their achievement along a possible sequence of such awards, and disclose to potential recipients the other possible options for achievements in that same category.

Therefore, it is advised that the Issuer's Digital Badging Council consider whether any one microcredential is part of a larger system or sequence of microcredentials within that issuing unit, and, if so, what relative level of microcredential achievement each digital badge represents. If a particular digital badge represents the highest level of achievement in a specific type of competency or skill, then it is appropriate to represent it with an "advanced" level digital badge. Similarly, the initial steps toward earning that digital badge would then be likely considered "foundational", followed by those considered "intermediate". Remember that each digital badge awarded should be a relevant measure of competency or skill to a viewer, so even foundational digital

badges should represent an achievement that has objective value. These guidelines provide for five such levels of relative achievement at Syracuse University which, after conversation with several issuer units, should be sufficient for most domains of competency. It would likely be best to consider a microcredential's ability to stack into a more complex microcredential as a way to determine its level. It should also be noted that competencies that are relatively close in complexity could be represented by the same digital badge level graphic, especially if there are more than five possible levels of complexity in a given top-level competency.

In figure 10, we can see how Microsoft has established a set sequence of digital badge graphics depicting microcredentials at three levels of competency and a fourth level of deep specialization. The color of the top panel, the quantity of stars in the bottom panel, and the label in the banner are all used to designate a sequence. Many organizations have adopted a similar type of level representation.

Figure 10 - Example of a sequence of badges for microcredential levels offered by Microsoft

That being said, ***in the case where multiple Issuer Units collaborate on a single microcredential or microcredential sequence, then all Issuer Digital Badging Councils collaborating on that microcredential or sequence must agree on the level that its achievement should represent.*** The Administrator will assist in this process and may ask for others to provide input.

Pathways for Digital Badge Recipients

A Pathway is a sequence of steps that a participant can take to achieve increasingly complex microcredentials within a particular domain, or to become fully qualified for a specific professional opportunity. This involves achieving each in a set of required steps and/or options, often represented as individual microcredentials that can "stack" into the final achievement. Not all digital badges represent a step along a pathway. Some are standalone. However, Issuer Units are encouraged to consider the potential pathways that could exist for their microcredentials evidenced by digital badges. The Administrator will work with the Issuer Unit's Staff POC to encode each possible pathway into the Accredible platform at the time digital badges are created, and that will enable the platform to track the participant's progress along the pathway as they earn microcredentials. The Staff POC will then be able to produce reports concerning progress of participants along the various pathways. Digital badge recipients can also be automatically notified through customizable emails of potential next steps in any pathway for which they are earning digital badges.

At the very least, the Issuer Unit's website page(s) should show how microcredentials they offer along a certain pathway might lead to a final achievement. External studies have shown that awareness of pathways can be motivating to participants and are likely to help them to stay engaged in the process. The current state of the art of career counseling involves creating awareness for participants of the best pathway to take from where the participant is now to where they need to be to become qualified in a desired field. Therefore,

understanding which of the various possible microcredentials are the most important along a given pathway to a potential career can be highly beneficial to the future employee.

Pathways for Stacking Non-credit Microcredentials into Credit-bearing Microcredentials

As stated earlier in this document, an important consideration for awarding a digital badge is to ensure that the criteria for earning it have been achieved by the recipient as assessed by the Issuer Unit. This is particularly important when considering how a non-credit microcredential might eventually stack into a credit-bearing achievement. In such a case, those authorized to manage the credit-bearing microcredential must agree that the non-credit microcredential can appropriately stack into (substitute) for some portion of it. Comparisons must be made on the basis of participant effort to complete assignments, length of contact time with the instructor and/or other participants, learning outcome assessments, depth of subject matter, examinations passed, etc. There are existing methods that have been approved by the University for testing out of a course, granting experiential learning credits, granting independent study credits, matching assessed learning outcomes for transfer credit, or evaluation of credit for prior learning (CPL) through a formal Prior Learning Assessment (PLA). Issuer Units that intend to stack non-credit microcredentials represented by a digital badge into a credit-bearing course, minor, certificate or degree program must ensure that acceptable evidence for the equivalency of the substituted elements has been provided. The College of Professional studies can assist with such evaluations, but the ultimate authority for the decision remains with those who have authority over the final credit-bearing microcredential.

The User Experience with Digital Badging at Syracuse University

The Office of Microcredentials (the Administrator), will maintain on its website a lexicon of digital badging at SU to inform visitors about the nature and scope of digital badges offered and links to information about how to obtain one. Departments, schools and colleges (Issuer Units) will also describe on their website pages how various digital badges that they have established can be earned.

It is the responsibility of the individual Issuer Unit to review and verify that a given digital badge candidate has met all stated requirements for a microcredential represented by a digital badge.

Depending upon the quantity of digital badges that are awarded by a given Unit, the Staff POC may either request the Administrator to award the appropriate digital badge to the candidate through the Accredible platform, or the Staff POC may be given the necessary authority on the Accredible platform to specify the award directly.

Once awarded, a standard email is sent to the candidate about their award. The email will include the necessary procedures for the candidate to claim and share the official digital badge icon directly with various sites, including social platforms, LinkedIn profiles, resumes, email signatures, etc.

Digital badge recipients can optionally maintain records of digital badges earned in their own private account on Accredible where they can manage and maintain any digital badges they have earned, including those earned through other open digital badge clearing houses. This feature is entirely optional, and an account is not required in order to receive a digital badge, to download a copy of it, or to share it on various platforms.

We are working on ways for the recipient to also have the digital badge listed on their SU non-credit transcript, depending upon the type of digital badge they have earned and the ability of the various SU records systems to accommodate this interface.

When displayed by the recipient, the digital badge icon will link to a restricted page on the digital badge clearing house platform containing authorized and relevant information about the criteria that was met to qualify for the digital badge. The page is embedded with secured data, so viewers (i.e. employers, etc.) are able to verify in real time digital badge authenticity from the perspectives of both issuer and recipient.

The Office of Microcredentials will maintain official reporting of the nature and quantity of digital badges issued by all Units across the University, and will respond to digital badge and other microcredential inquiries through a single support email: microcredential@syr.edu which is monitored by multiple individuals.

Appendix A: Key Sources Consulted in the Development of this Document

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Credly: https://info.credly.com/

Colleges and Institutes Canada. (2021). *The Status of Microcredentials in Canadian Colleges and Institutes: Environmental Scan Report.* https://www.collegesinstitutes.ca/policyfocus/micro-credentials/

Deloitte, Inc., (2014). *Reimagining Higher Education: How colleges, universities, businesses, and governments can prepare for a new age of lifelong learning.* https://www2.deloitte.com/us/en/insights/industry/public-sector/reimagining-higher-education.html

IMS Global Learning Consortium, (2021). *Open Badges v2.0 IMS Final Release: Revision 21 May 2021.* (https://www.imsglobal.org/sites/default/files/Badges/OBv2p0Final/index.html)

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Strada Education, (2021). *Examining the Value of Nondegree Credentials.* https://cci.stradaeducation.org/pv-release-july-28-2021

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UPCEA, (2020). *Hallmarks of Excellence in Credential Innovation.* https://upcea.edu/credentialhallmarks

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Wolf, A., Carbonaro, S., & Wolf, R. (2022). Empowering metacognitive learning in a competency-based curriculum in health professions through comprehensive learner record. Intersection: A Journal at the Intersection of Assessment and Learning, 3(2).

Western Governors University (WGU) (2022). Workforce Intelligence and Credential Integrity: Unified Credential Framework.

And numerous other web and white paper resources.