



WILLIAM E. KIRWAN CENTER *for* ACADEMIC INNOVATION

Badging Essential Skills for Transitions (B.E.S.T.)¹

Ensuring that college students have the best preparation for the world of work

Initiative Summary, rev. 10 1 18

"The transitions that students make from education to employment can be fraught with uncertainty, poor communication, and inefficiencies. Students have difficulty articulating their knowledge, skills, and abilities in their resumes and online profiles, and their evidence of learning from academic activities often does not "translate" into employment processes. Employers often do not understand what is included in credentials; they then make assumptions about what certain credentials mean, and what graduates should know and be able to do. Improved communication about the competencies that are included in credentials can help to address these problems for students, academic institutions, and employers."

- American Council on Education, Communicating the Value of Competencies (2016)

Context

During this time of disruptive change in higher education, public colleges and universities are being challenged to justify the value of their degrees and credentials. As part of a broad academic transformation platform, the William E. Kirwan Center for Academic Innovation is leading the Badging Essential Skills for Transitions (B.E.S.T.) initiative to enhance the career-readiness of students across the University System of Maryland.

Through B.E.S.T., the Kirwan Center is addressing three significant challenges that impede students' successful preparation for a career and subsequent transition into the workplace: 1) employer concerns that college graduates lack career-ready skills needed for workplace success; 2) disconnects across the curricular, co-curricular, and work experiences of our students; and 3) career centers with limited ability to engage students one-on-one in the career development process. B.E.S.T. is a scalable approach to career preparation that connects curricular and co-curricular opportunities already available to students, aligns them more intentionally to career-ready skills, and more clearly communicates graduates' achievements in these skill areas to employers through digital badging.

The need for such an approach is clear. Surveys consistently reveal employers' concern that college graduates lack career-ready skills such as collaboration, communication, and problem solving. For example, in a 2013 Gallup-Lumina Foundation poll of 623 business leaders, only 11% of those polled strongly agreed that higher education institutions were graduating students with the skills and competencies their businesses needed, while 17% strongly *disagreed* with this statement.² Likewise, the National Association of Colleges and Employers (NACE) *Job Outlook 2018* identified sizeable gaps between employers' rating of skills as "essential" for new hires and their rating of recent graduates' proficiency in those skills.³

¹ This work is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

² Gallup and Lumina Foundation, 2014, Feb. 25. The 2013 Lumina study of the American public's opinion on higher education and U.S. business leaders poll on higher education: What America needs to know about higher education redesign, p. 25. Retrieved from <https://www.luminafoundation.org/files/resources/2013-gallup-lumina-foundation-report.pdf>.

³ In this survey of just over 200 employers, 100% of the respondents rated Professionalism/Work Ethic as essential, for example, yet only 42.5% indicated

Finally, in a survey of 400 employers commissioned by the Association of American Colleges & Universities (AAC&U) in 2015, 80% affirmed the importance of graduates' ability to apply learning to real-life situations and 73% believed that requiring an applied learning project prior to graduation would improve the quality of graduates' preparation for work. However, only 14% of employers felt that graduates had the skills needed to complete a significant applied learning project before graduation.⁴

The good news is that employers are also suggesting a path forward for colleges and universities in relation to these challenges. In the AAC&U commissioned poll, 80% of employers said it would be "very useful" or "fairly useful" for them to be able to access an electronic portfolio of student's work that summarizes and demonstrates students' attainment of key skills and knowledge areas.⁵ Through B.E.S.T., we are seeking to bring the value of portfolio-based demonstrations of learning to employers while increasing the efficiency of synthesizing those achievements for employers through digital badging. By engaging experts on and off campus to assess students' career-ready skills, set proficiency levels at appropriately rigorous levels, and provide validation when students have reached those levels, we hope that USM-endorsed digital badges will become "short-hand" that employers can use to confidently recruit recent graduates from participating USM institutions.

The B.E.S.T. Approach

Since Summer 2015, B.E.S.T. has convened a work group from USM institutions⁶ to design, develop, and explore the feasibility of digital badging of career-ready skills (see Appendix A). B.E.S.T. draws on the NACE career-ready skills framework⁷ and focuses on Collaboration, Communication, Critical Thinking, Globalism, Interculturalism, Leadership, Problem Solving, and Professionalism (see Appendix B).

Badges "make visible and validate learning in both formal and informal settings, and hold the potential to help transform where and how learning is valued" ([MacArthur Foundation, n.d.](#)). And, because they are digital, badges include access to publicly viewable artifacts that not only validate learning, but also provide evidence of that learning, thus allowing badge consumers more insight into exactly what the badge earner did to achieve that badge. Additionally, being digital and openly accessible means these badges can be shared through digital portfolios and social and professional networks such as Facebook and LinkedIn. As a complement to traditional credentials, badges have the potential to:

1. motivate students to pursue opportunities that will help them become "career-ready";
2. provide the framework to help institutions build clear, robust "earning pathways" so that students practice skills across different settings and in appropriately challenging ways over time;

that new hires were proficient in this skill. Similarly, 96% rated critical thinking/problem solving as essential, yet only 42% indicated that new hires were proficient. See National Association of Colleges and Employers, 2017, Nov. Job outlook 2018. Bethlehem, PA: NACE, p. 33. A rating of "essential" combined two categories ("essential" and "very essential") and a rating of "proficient" also combined two categories ("very proficient" and "extremely proficient").

⁴ Hart Research Associates, 2015, Jan. Falling short? College learning and career success: Selected findings from online surveys of employers and college students conducted on behalf of the Association of American Colleges & Universities. Washington, DC: Hart Research Associates, p. 6. Retrieved from <https://www.aacu.org/sites/default/files/files/LEAP/2015EmployerStudentsurvey.pdf>.

⁵ Hart Research Associates, p. 13.

⁶ While all USM institutions are eligible to participate, to date the most active institutions have been Bowie State University; Coppin State University; Frostburg State University; Salisbury University; Towson University; University of Maryland, Baltimore County; the Universities at Shady Grove; University of Baltimore; and University of Maryland University College.

⁷ See www.nacweb.org/career-readiness/competencies/career-readiness-defined.

3. create an intentional process for students to translate their experiences into the higher-order skills employers seek; and
4. differentiate our graduates in a competitive marketplace.

Design Process and Timeline

Using the Analyze, Design, Develop, Implement, and Evaluate (ADDIE) instructional design model to inform the process, the work group laid the foundation for the initiative between 2015 and 2017. The initiative is now heading into pilot phase 2. Work completed/to be completed is shown below. Actions taken during each step produce outcomes that feed into the subsequent step.

SU 2015 Kickoff	FA 2015 Analyze	SP 2016 Design	SU 2016 Develop	FA 2016-FA 2017 Implement/Evaluate	SP 2018-SP 2020 Refine, Implement, Evaluate
• ACTIONS - Reconfirm purpose, set goals, establish expectations; develop value proposition/theory of action • OUTCOMES - Agreed-upon guardrails; prioritized badge criteria	• ACTIONS - Conduct lit and research review; explore badging tools and innovations; assess needs & gaps; determine objectives for badges; select skill for pilot badge; organize interviews/focus groups of employers, students, staff, other stakeholders for feedback on selected skill; collect institutional data • OUTCOMES - Strategy shifts toward creating initial value for badge earners and their institutions, and away from early badge endorsement from employers	• ACTIONS - Finalize badging system; develop implementation strategy; develop communications plan; choose platform for delivery • OUTCOMES - USM digital badging system prototype; articulation of roles and responsibilities within digital badging system	• ACTIONS - Refine implementation and communications plan; evaluate and choose badge claiming platform; determine validation mechanism; determine pilot group of earners at each campus • OUTCOMES - Credly chosen for badging platform; graphic design for digital badges	• ACTIONS - Develop digital badges on claim platform; badges offered/earned in early pilot environment; evaluate process; develop plan to iterate/improve/ expand pilot • OUTCOMES - Badges earned by pilot groups of students; Badges claimable on Credly; pilot data collected and analyzed	• ACTIONS - Re-brand initiative to better focus on purpose; identify technology platform to organize and administer badging programs - Launch new conceptual model that outlines three levels of badge-earning experiences for students. Within partner institutions, create more substantive badge earning pathways; engage additional students in badge earning process - Incorporate new set of partner institutions into pilot phase 2; launch employer engagement effort • OUTCOMES - New initiative name and logo; selected institutions develop and test badging programs on Portfolio; rubrics developed and cross-walked to set agreed-upon proficiency levels for USM badges; more/additional badges earned by students; badges claimable on Credly; pilot data collected and analyzed

Pilot Phase Two

Phase Two of the B.E.S.T. pilot will focus on the following areas:

1. **Scaling the initiative** – the work group aims to increase access for *all students* by capitalizing on available technologies to support collection and curation of evidence, student self-reflection, rigorous assessment, and consistency of quality across programs/institutions.
2. **Engaging employers** – the work group aims to develop and test ways of working more closely with regional employers.
3. **Ensuring quality** – the work group aims to take modest pilots already underway to the next level by building out high quality badge earning pathways, where students practice skills in different settings

over time, receive feedback, and improve and become more versatile as they go. As part of this work, the Kirwan Center launched a new conceptual model that outlines three levels of badge-earning experiences for students (see Appendix C and D). Phase Two work will entail engaging faculty, staff, and students to work together to develop and map these pathways; introducing integrative learning opportunities for students; evaluating the yield we want to see in students' work; and developing ongoing quality assurance processes for badges.

To help build institutional capacity for scaling and sustaining this work, the Kirwan Center has brokered a partnership between USM and Portfolium to pilot the use of [BadgeLink](#), the company's new digital badging and learning pathways platform, along with its ePortfolio and assessment capabilities.

The Kirwan Center believes that the B.E.S.T. initiative will benefit institutions, students, and employers by providing a mechanism to increase intentionality and transparency across curricular and co-curricular offerings. Digital badges will complement traditional credentials by giving students a way to communicate to employers what they know and are able to do. In turn, badges will help employers make better hires by improving fit and match between students and jobs.

About the William E. Kirwan Center for Academic Innovation

Established in 2013, the Kirwan Center explores—through rigorous quantitative and qualitative research—the interplay between approaches proven to improve student success and the feasibility of implementing those approaches in context. Developed at a system level, the Kirwan Center capitalizes on the USM's position as a microcosm of public higher education and brings real value to the work and the national discussion around academic transformation. The Kirwan Center's research-to-practice perspective provides not only evidence-based models for improving student success, but also proven strategies for how these approaches might be scaled and sustained in a variety of contexts both within Maryland and across higher education nationally.

Appendix A. B.E.S.T. DIGITAL BADGING SYSTEM



USM Institutional Badge Earning Pathways

Institutions “curate” badge earning pathways created out of curricular offerings and/or co-curricular activities. Institutions may also build in an option for students to propose their own badge earning pathways

Evidence-Based Dimensions and Criteria

Assessment criteria will be predetermined and include rubrics to assess evidence that a badge earner met the criterion

Career-Ready Digital Badges



USM “Meta-Badge”

A badge that signifies the earner has demonstrated proficiency in all of the career-ready skills within the B.E.S.T. initiative.

Competencies based on skills identified by employers as critical for career success (*aligned to NACE Career Ready Skills Framework*)

Appendix B. B.E.S.T. BADGE DIMENSIONS

Name	Description	Dimensions
The Collaborator	The COLLABORATOR BADGE validates that the earner has demonstrated the skills necessary to be a successful and contributing member of a professional team.	The Collaborator advances the work of a team by effectively: • Articulating one's own role on the team and the roles of others. • Integrating team members' diverse viewpoints. • Motivating and supporting others on the team. • Building upon or synthesizing the contributions of others. • Offering ideas, suggestions, alternative solutions, and feedback. • Accounting for one's own assigned role and responsibilities on the team. • Negotiating, managing, and resolving conflicts when they arise
The Communicator	The COMMUNICATOR BADGE validates that the earner has demonstrated ability to articulate thoughts and ideas clearly and effectively in written and/or oral forms.	The Communicator expresses thoughts and ideas by effectively: • Using syntax, grammar, and/or vocabulary appropriate to the context and modality. • Ensuring messages are organized, clear, and consistent with any supporting material. • Tailoring the message and delivery method to the topic, audience, purpose, and context. • Reflecting on one's own messages and adjusting as appropriate. • Critically analyzing others' messages. • Engaging diverse and competing perspectives and the ways they influence communication.
The Critical Thinker	The CRITICAL THINKER BADGE validates that the earner has demonstrated the ability to analyze and evaluate thinking and commit to constant improvement.	The Critical Thinker excels in the art of analyzing and evaluating thinking with a view to improving it by effectively: • Raising vital questions and problems, formulating them clearly and precisely. • Gathering and assessing relevant information, using abstract ideas to interpret it effectively. • Coming to well-reasoned conclusions and solutions, testing them against relevant criteria and standards. • Thinking open-mindedly within alternative systems of thought. • Recognizing and assessing, as need be, one's own assumptions, implications, and practical consequences. • Communicating effectively with others in figuring out solutions to complex problems.

Name	Description	Dimensions
The Globalist	The GLOBALIST BADGE validates that the earner understands international issues, learns from and works with people from diverse linguistic and cultural backgrounds, and possesses skills to function productively in an interdependent world community. The individual demonstrates critical analysis of and engagement with global systems, including natural, physical, social, cultural, economic, and political systems.	The Globalist demonstrates global awareness by effectively: • Recognizing differences across and within world cultures and the diverse viewpoints that emerge from these differences. • Identifying developments and trends associated with historical or contemporary global issues. • Developing a sense of personal and civic responsibility with respect to global issues. • Applying communication skills and strategies, including the ability to use another language, to interact effectively with people from other cultures. • Analyzing the power structures, complexities and interdependencies of global systems. • Evaluating solutions to global challenges using interdisciplinary perspectives.
The Interculturalist	The INTERCULTURALIST BADGE validates that the earner values, respects, and learns from diverse cultures, races, ages, genders, sexual orientations, and religions. The individual demonstrates openness, inclusiveness, sensitivity, and the ability to interact respectfully with all people and understand individuals' differences.	The Interculturalist navigates cultural boundaries by effectively: • Identifying one's cultural norms and values. • Articulating how one's experience shapes cultural norms and values and how culture shapes personal experience. • Analyzing how cultural norms and values affect one's interactions with others. • Recognizing the commonalities and differences that exist among people and cultures and how these factors influence one's relationships with others. • Understanding the influence of history, geography, religion, gender, race, ethnicity, and other factors on one's identity and the identities of others. • Questioning explicit and implicit forms of power, privilege, inequality, and inequity. • Engaging with people and ideas from other cultures with courage, sensitivity, openness, and curiosity.

Name	Description	Dimensions
The Leader	The LEADER BADGE validates that the earner has demonstrated the ability to leverage the strengths of others to achieve common goals and use interpersonal skills to coach and develop others. The individual can assess and manage self and others; use empathetic skills to guide and motivate; and organize, prioritize, and delegate work.	The Leader leverages the strengths of others to achieve common goals by effectively: • Assessing individual and collective strengths, weaknesses, and capacities to achieve the desired goal. • Engaging diverse or competing perspectives. • Motivating others. • Articulating a vision and strategy. • Organizing, prioritizing, and delegating work, roles, and responsibilities. • Reflecting on how one's leadership affects process and outcomes and adjusting as appropriate. • Reviewing outcomes and assessing implications for future plans.
The Problem Solver	The PROBLEM SOLVER BADGE validates that the earner has demonstrated the skills necessary to resolve complex problems/challenges through exercising sound reasoning to analyze issues, make decisions, and overcome challenges. The individual can obtain, interpret, and use knowledge, facts, and data in this process, and may demonstrate originality and inventiveness.	The Problem Solver tackles challenges alone or in teams by effectively: • Articulating the problem. • Identifying the desired end result. • Brainstorming creative options for achieving the desired end result. • Analyzing and selecting the option that best achieves the desired end result. • Developing a plan of action that will achieve the desired end result. • Enacting the plan of action and adapting as needed. • Evaluating the outcomes in relationship to the desired goals.
The Professional	The PROFESSIONAL BADGE validates that the earner has demonstrated personal accountability, effective work habits, integrity, personal accountability and commitment.	The Professional strives for excellence by effectively: • Taking responsibility for one's actions and outcomes. • Examining the implications of one's own behavior and decisions. • Acknowledging mistakes and learning from them. • Following through on commitments. • Persevering in the face of challenges and changes. • Acting with the interest of the larger community in mind. • Evaluating one's own performance over time and adjusting.

Appendix C. The B.E.S.T. Conceptual Model: Supporting Students' Journey through the Essential Skills Development Landscape

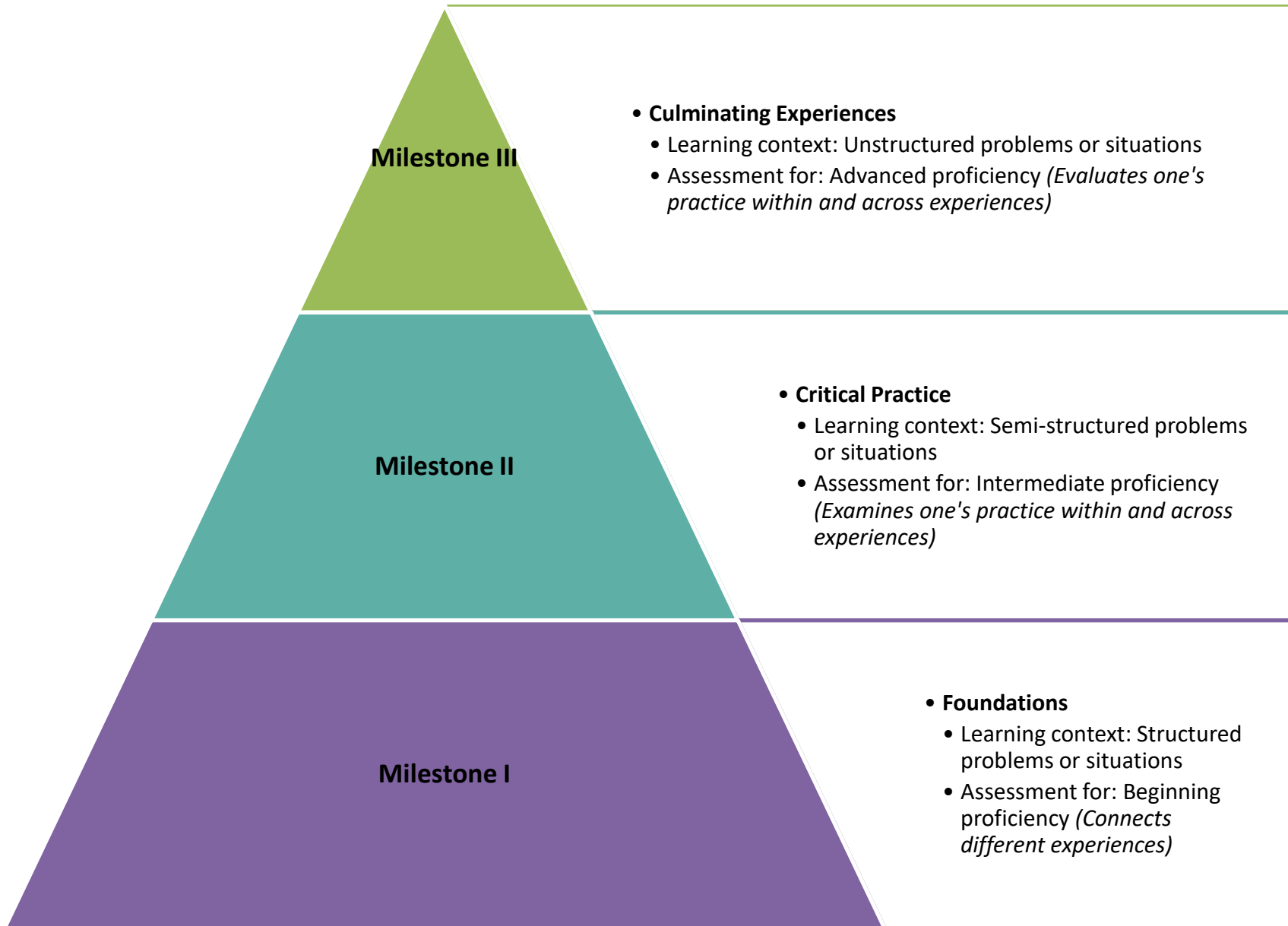
Hypothesis: Students at our institutions are learning and developing essential “career-ready” skills all the time, both inside and outside the classroom. We need to help them 1) see where the opportunities are 2) navigate their way through those experiences, and 3) demonstrate and articulate their development of those skills, supported by evidence.

Goals for Institutions:

1. Make visible/explicit the career-ready skills development landscape for each badge at an institution...like an overlay on a map or chart.
2. Design the parameters for achievement of three “milestones” in the badge-earning process, each of which supports career-ready skills development over time by scaffolding students’ efforts to apply skills and make meaning through increasingly unstructured experiences.
3. Develop three milestone assessments that, in addition to requiring students to present artifacts from the activities they have engaged in, asks them to reflect on their growth, articulate the skills they have developed and areas for improvement, and support their claims with evidence.

Design Principles

The opportunities we will “highlight”:	The support learners will be provided:	The way learners will be assessed:
• Authentic contexts aligned to dimensions of badge. • Active learning experiences that create opportunities for foundational skill-building, critical practice, and culminating experiences. • A variety of opportunities from simple/well-defined to complex/ill-defined. • Result in sets of artifacts (at least one per activity) that are submitted as evidence.	• Insights into how to trace a path through acquisition of the dimensions required for badge. • Scaffolding that encourages students to take a path that builds their efficacy to tackle increasingly complex, unscripted problems or situations. • Opportunities to see others’ journey (modeling). • Coaching (through the platform, from advisors, etc.).	• Assessment will require reflection and articulation with evidence (in the form of artifacts from experiences). • Artifacts from experiences can be assessed either individually (as part of the culmination of a particular experience) or holistically (as part of the milestone).



	Milestone I: Foundations	Milestone II: Critical Practice	Milestone III: Culminating Experiences
Learning Context:	Structured Problems or Situations	Semi-Structured Problems or Situations	Unstructured Problems or Situations
Focus:	- Comprehension of foundational definitions/frameworks. - Development of foundational/component skill dimensions.	Application of knowledge and component skill dimensions.	Integration and application of knowledge and skill dimensions. Skill dimensions come together in the use of the skill in situations where more of the dimensions are activated.
	Adjustments based on formative feedback from experts.	Adjustments based on formative feedback from experts, peer assessment, and self-assessment.	Adjustments based on seeking out formative feedback from experts and peers, and self.*
	Discovering connections across experiences/settings, drawing from artifacts.	Examination of one's practice across experiences/settings, using evidence drawn from artifacts.	Evaluation of one's practice across experiences/settings, supporting their claims with evidence drawn from artifacts.
	Reflection on growth/development to date and implications for the future.	Reflection on growth/development to date and implications for the future.	Reflection on growth/development to date and implications for the future.
Scaffolding:	Institutional teams curate curricular and cocurricular activities that provide students with <i>foundational knowledge and practice in a particular career-ready skill</i>.	Institutional teams curate curricular and cocurricular activities that provide students with <i>opportunities to apply their foundational knowledge and skills to semi-structured problems or situations</i>.	Institutional teams curate curricular and cocurricular activities that provide students with <i>opportunities to apply their developing skill dimensions to unstructured problems or situations</i>.
Requirements:	- Students complete a minimum number of activities that contribute to <i>early skill development</i> across different settings. - Submission of institution-approved artifacts plus reflection on students' growth/development to date and how they might continue to refine their skills going forward.	- Students complete a minimum number of activities that contribute to <i>practice and improvement</i> across different settings. - Submission of institution-approved artifacts plus reflection on students' growth/development to date and how they might continue to refine their skills going forward.	- Students complete a minimum number of activities that contribute to <i>self-directed practice and improvement</i> across different settings - Submission of institution-approved artifacts plus reflection on students' growth/development to date and how they might continue to refine their skills going forward.
Assessment:	Experts assess the artifacts and reflection pieces using a rubric to determine if students reach a <i>beginning proficiency level</i> across all dimensions of the skill. If not, students continue to engage in activities that help to shore up particular skill dimensions.	Experts assess the artifacts and reflection pieces using a rubric to determine if students reach an <i>intermediate proficiency level</i> across all dimensions of the skill. If not, students continue to engage in activities that help to shore up particular skill dimensions.	Experts assess the artifacts and reflection pieces using a rubric to determine if students reach an <i>advanced proficiency level</i> across all dimensions of the skill. If not, students continue to engage in activities that help to shore up their overall skill.

*More self-directed — students seek out feedback or initiate self-assessment, rather than receiving feedback or doing self-assessment at a time set by the activity, as in Milestone II.

Appendix D. B.E.S.T. QUALITY ASSURANCE CRITERIA FOR BADGE EARNING PATHWAYS

Participating institutions will:

- Identify and link a set of activities into a badge earning pathway. The badge earning pathway should:
 - Incorporate all the USM Badge dimensions comprising a career ready skill.
 - Explicitly promote the transfer of skill across different activities, to help prepare students to transfer their skills into the workplace upon graduation.
 - Link existing curricular, co-curricular, and/or community-based experiences as appropriate (pathways linking curricular and co-curricular experiences will be highly encouraged).
 - Allow students to demonstrate a progression of skills over time (vertical scaffolding).
- Curate/refine activities/assignments to align with badge dimensions, so that students can demonstrate acquisition of each of the dimensions.
 - Each major activity/assignment should result in students producing at least one distinct artifact reflecting a demonstration of skills that can be assessed.
 - As part of the culminating experience in a pathway, students should reflect on how their experiences contributed to the badged skill and how they might continue to refine their skills going forward. Institutions may also ask students to reflect on their progress along the badge earning pathway.
- Develop/refine a rubric reflecting the badge dimensions for use in assessing student artifacts.
 - Institutional teams should establish an agreed-upon level of proficiency that students must reach to earn a badge.
 - All badge dimensions should have the same level of proficiency attached to them (for example, if a score of “3” is the agreed-upon level of proficiency, then students should achieve a “3” in all the badge dimensions to earn a badge).
 - Rubrics should meet the following criteria:
 - 4-point scale --> emerging, developing, proficient, advanced
 - Performance-based with a developmental continuum
 - Indicators are qualitative not quantitative (not frequency-based)
- Assess students in at least two ways.
 - Formative assessment along the badge earning pathway that indicates areas of relative strength and weakness for each student. This could involve student self- assessment, peer-assessment, or expert assessment.
 - Summative assessment at the conclusion of the badge earning pathway that is conducted by experts, as determined by the institution.
- Communicate clearly to students about the purpose of the badge, the pathway(s) they may follow to earn the badge, how they will be assessed, and what qualifies them to earn a badge.
- Develop marketing materials to attract students. Marketing materials should acknowledge USM as follows:
“This digital badging program is part of the University System of Maryland Badging Essential Skills for Transitions (B.E.S.T.) initiative, organized by the Kirwan Center for Academic Innovation.”
- Issue badges to all students who have met the agreed-upon proficiency levels in the summative assessment and provide guidance to students who have not met agreed-upon proficiency levels about ways to improve and re-apply for badge issuance.
- Use student perception data and other collected data to make improvements and to understand impact and feasibility.