How Certification Bodies Can Support Colleges' Efforts to Integrate Certifications into Academic Programs





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Formed in 2014, Workcred is an affiliate of the American National Standards Institute (ANSI). Its mission is to strengthen workforce quality by improving the credentialing system, ensuring its ongoing relevance, and preparing employers, workers, educators, and governments to use it effectively. Workcred's vision is a labor market that relies on the relevance, quality, and value of workforce credentials for opportunities, growth, and development.

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www.ecmcfoundation.org

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The views expressed herein are those of the authors and do not necessarily represent those of ECMC Foundation, its officers, or employees.

Grant partners:

Community College of Aurora 16000 E. CentreTech Parkway Aurora, CO 80011



https://ccaurora.edu

The Community College of Aurora (CCA) is a two-year public, open access institution in Aurora, Colorado and is one of 13 community colleges in the Colorado Community College System. The school of choice for 12,111 students representing over 60 countries, CCA's service area includes nearly 690,000 residents in Arapahoe, Adams, and Denver counties, and its student population reflects the broad diversity of this area. The college offers 77 degrees and certificate programs for students seeking to enhance their current skill set, pursue employment, or transfer to a four-year college or university upon graduation.

Delta College 1961 Delta Road University Center, MI 48710



https://www.delta.edu

Delta College opened in 1961 and now enrolls nearly 9,000 students annually. The mid-Michigan college lies midway between the cities of Saginaw, Bay City, and Midland and offers students nearly 150 transfer and career associate degree and certificate programs. Delta College significantly impacts the local economy by providing a trained and ready workforce. Today, the college continues to lead the way in education for vital fields like healthcare, technical trades, and computer science.

Higher Learning Commission 230 S. LaSalle Street, Suite 7-500 Chicago, Illinois 60604-1411



www.hlcommission.org

HLC is an independent agency, founded in 1895, that accredits degree-granting colleges and universities in the United States. HLC is an institutional accreditor, accrediting the institution as a whole. HLC's mission is to advance the common good through quality assurance of higher education as the leader in equitable, transformative, and trusted accreditation in the service of students and member institutions.

Kirkwood Community College 6301 Kirkwood Boulevard, SW Cedar Rapids, Iowa 52404



https://www.kirkwood.edu

With more than 140 majors and programs, Kirkwood Community College boasts 16,000 annual college-credit students, while maintaining one of the lowest tuitions in the state. All degree-seeking students are eligible for federal financial aid and the college offers more than \$3 million in scholarships each year to students from all walks of life. Kirkwood is a convenient, innovative and visionary educational leader that strives to remain affordable and accessible.

Moraine Valley Community College 9000 College Parkway Palos Hills, IL 60465



https://mvcc.edu

Moraine Valley Community College District 524 is a two-year institution of higher education founded in 1967. Located in Palos Hills, the college serves 26 communities in the southwest suburbs of Chicago and offers more than 140 degree and certificate programs accredited by the Higher Learning Commission. Students interested in transferring to four-year colleges or universities can earn associate degrees in six different disciplines. The college also offers classes and programming at its Education Center at Blue Island and Southwest Education Center in Tinley Park.

The League for Innovation in the Community College 2040 S. Alma School Road, Suite 1-500 Chandler, Arizona 85286



www.league.org

The League for Innovation in the Community College (League for Innovation) is an international nonprofit organization with a mission dedicated to cultivating innovation in the community college environment by forging strategic partnerships and empowering individuals to drive educational transformation. Founded in 1968 by B. Lamar Johnson and a dozen U.S. community and technical college presidents, the League for Innovation has proudly served community college institutions for over 50 years.

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About Certification + Degree Pathways

The practice of embedding industry credentials like certifications into degrees (C+D pathways) is common at community colleges.¹ Embedding refers to a college's alignment of its degree curriculum with an industry credential, although the approach a college may take varies as it seeks to better serve its learners and leverage its existing resources. A 2017 study among 149 U.S. colleges and four-year institutions by Lumina Foundation found that the most commonly cited benefit of C+D pathways was that it enabled students to earn valuable industry and academic credentials at the same time.² The study also showed that C+D pathways helped colleges and universities align their curricula with prevailing industry standards.

Certifications are distinct from other credentials because they are awarded after an individual demonstrates acquisition of a set of skills through a standardized assessment (e.g., oral, written, or performance-based). Additionally, certifications must be renewed after a designated period of time and can be revoked for incompetence or unethical behavior. Individuals must meet qualifications such as training and experience that are required prerequisites to take the certification examination. Certifications are awarded and tracked by certification bodies—typically nonprofit organizations, professional associations, industry/trade organizations, or businesses. According to Credential Engine, more than 7,000 industry-recognized certifications are offered across numerous industry sectors including healthcare, education, finance, IT, cybersecurity, manufacturing, retail, and hospitality.³



¹ Michael Prebil and Mary Alice McCarthy, *Building Better Degrees Using Industry Certifications Lessons from the Field* (New America, Education Policy, and Center on Education & Skills, September 17, 2018), https://www.newamerica.org/education-policy/reports/building-better-degrees-using-industry-certifications.

² Holly Zanville, Kelly Porter, and Evelyn Ganzglass, Report on Phase I Study: Embedding Industry and Professional Certifications within Higher Education (Lumina Foundation, January 2017), https://www.luminafoundation.org/files/resources/report-on-phase-i-study-embedding-industry-professional-certifications-within-higher-education-january-2017.pdf.

³ Counting U.S. Postsecondary and Secondary Credentials (Credential Engine, 2022), https://credentialengine.org/ wp-content/uploads/2023/01/Final-CountingCredentials_2022.pdf.

About the Project

This project brought together a unique group of partners to explore effective ways to develop and launch new C+D pathways. Workcred, the Higher Learning Commission, and the League for Innovation in the Community College were joined in this endeavor by four community colleges—Community College of Aurora, Delta College, Kirkwood Community College, and Moraine Valley Community College.

Eight pathways, two at each institution, were developed as part of this project (see Figure 1).

Figure 1: Credential Pathways for Each Institution

Pathway 1: Behavioral Health Plus Microcredential + Qualified Behavioral Health Assistant Microcredential + Behavioral Health Assistant II Microcredential + Patient Navigator Microcredential + Addiction Recovery Assistant Microcredential + Associate of Applied Science (AAS) Degree in Mental Health Community College and Wellness or Addiction Recovery + Bachelor of Applied of Aurora Science (BAS) Degree in Mental Health and Social Work or Addiction Recovery Pathway 2: Bridge Programming + Phlebotomy Certificate + Certified Nursing Aide4 Pathway 1: Google IT Support Certificate + CompTIA A+ Certification + IT Support AAS Degree Delta College Pathway 2: Google IT Support Certificate + CompTIA Security + Certification + Cybersecurity AAS Degree Pathway 1: VMware Certified Technical Associate-Data Center Virtualization Certification + CompTIA A+ Certification + Cisco Certified Network Associate Certification + Network Kirkwood and System Administration AAS Degree Community College Pathway 2: CompTIA A+ Certification + AWS Certified Cloud Practitioner Certification + Computer Support Specialist AAS Degree **Pathway 1:** Microsoft Certified: Azure Fundamentals Certification + Microsoft Certified Azure Administrator Associate Certification + Microsoft Certified Azure Security Moraine Valley Engineer Associate Certification + Computer and Local Area Networks AAS Degree Community College **Pathway 2:** Medical Coding Specialist Certificate + a variety of Medical Coding or Health Information Technology Certifications + Health Information Technology AAS Degree⁵

⁴ Author's note: This pathway is currently paused due to instructor availability.

⁵ Author's note: Although this pathway was established prior to this project, it was included to highlight the need to obtain aggregate and/or student-level certification exam data results.

These recommendations are a part of a series of resources developed to highlight all or some of the C+D pathways from each of the colleges that participated in this project, as well as other challenges and insights that were uncovered along the way. Further details can be found in the following related publications:

- » Creating Credentialing Pathways in Behavioral Health: A Case Study about Community College of Aurora
- » Building Credentialing Pathways Using Credit for Prior Learning: A Case Study about Delta College
- » Designing Credentialing Pathways in IT: A Case Study about Kirkwood Community College
- » Medical Coding and Health Information Technology Pathways: A Case Study about Moraine Valley Community College
- » Playbook for Certification + Degree Pathways
- » Promising Practices: Certification Plus Degree Pathways

This document provides recommendations for how certification bodies can support colleges to more effectively embed certifications into their academic programs or successfully prepare learners to take certification exams after graduation from their academic program.



Value Proposition

With so many credentials available in the marketplace, faculty require additional information about the value a certification has to both learners and employers. Faculty need to be able to help learners articulate the competencies that they have as a result of passing the certification exam. Learners also need to understand how to integrate those competencies into their career exploration and career search activities (e.g., elevator pitches, interviews, and resumes) to most effectively demonstrate the skills that they possess. In addition, faculty want to be able to convey the value of the certification to local and regional employers, some of whom

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may not be familiar with the certification or how the skills someone can demonstrate by earning the certification could fulfill the employer's workforce needs.

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Career Information and Roadmap to Other Certifications

Both faculty and learners would benefit by better understanding how certifications can lead to additional education and/or credentials, employment opportunities, and career advancement. CompTIA is an example of a certification body that shows this information well. A section of CompTIA's website provides career exploration information by job role. Learners can select a job role and learn about the job responsibilities, relevant certifications, information about how to identify the appropriate IT training and certifications based on one's current skill level, example career paths, and data about job listings, median annual salary, and projected job growth.⁶ CompTIA also developed a graphic that shows the stackable certifications for pathways in infrastructure, cybersecurity, and data analytics along a continuum of experience from pre-professionals to experts.⁷

^{6 &}quot;Explore Tech Careers," CompTIA, accessed July 17, 2025, https://www.comptia.org/en-us/explore-careers/job-roles/?page=1&category=all.

^{7 &}quot;The CompTIA Career Pathways," CompTIA, accessed July 17, 2025, https://partners.comptia.org/docs/default-source/resources/updated-comptia-career-pathway-flyer.

AHIMA, a medical coding and health information technology certification body, also provides comprehensive information about careers in medical coding on its website. The website includes information about the role of medical coders in the healthcare system, career benefits, the knowledge that medical coders must learn, common job titles, education and certification requirements, and training opportunities.⁸ In addition, AHIMA developed an interactive career map by job role and career resources for students, faculty, employers, and job seekers.⁹

While both CompTIA and AHIMA have comprehensive information on their websites, this is not true of all certification bodies. This type of easily accessible information provides critical details to help faculty determine which and how certifications can be aligned with or embedded into their academic programs.

Standardized Test Taking Strategies and Practice Exams

There is a skill to taking standardized exams. Yet, some learners may not have taken a standardized assessment for a long time, have never taken a standardized exam, or do not have access to test preparation materials or courses. As a result, learners would benefit from information about test taking strategies. Some testing vendors and certification bodies share such strategies. As examples, Pearson VUE's website includes a section on test taking tips, and the

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American Medical Technologists developed a video about test prep and exam tips.¹⁰ This type of information needs to be more widely available across certification bodies.

In addition, practice exams should be made available to faculty and learners. These exams are essential for learners to familiarize themselves with the format and types of questions they will likely encounter during the exam. In addition, learners can identify areas of weakness, so that they can strengthen their skills. In July 2025, Microsoft developed new, free exam preparation resources to help prospective test takers determine whether

^{8 &}quot;Explore Medical Coding Careers," AHIMA, accessed July 17, 2025, https://www.ahima.org/education-events/medical-coding-hub.

^{9 &}quot;Career Map," AHIMA, accessed July 17, 2025, https://my.ahima.org/career-mapping/career-map.

^{10 &}quot;Take Your Exam with Confidence," Pearson VUE, accessed July 17, 2025, https://www.pearsonvue.com/us/en/test-takers/resources.html; and "AMT Certification and Test Prep Exam Tips," YouTube, accessed July 17, 2025, https://www.youtube.com/watch?v=CxYA8cY1qpE.

they are ready to take the certification exam.¹¹ More certification bodies should provide free access or reduced academic pricing to test prep materials that are used as part of academic programs, thus ensuring all students have access to these important resources.

Data

Policymakers are putting greater emphasis on outcomes data for all types of credentials, including certifications. In 2023, Texas passed House Bill 8 (HB8), which transforms how Texas funds its community college districts by replacing a static funding model based on the number of courses and credit hours offered with a dynamic, performance-based model that is tied to specific outcomes. Instead of competing against one another for state dollars, community colleges can earn additional funding by educating more students

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and awarding credentials of value, which include certifications that align with Texas's workforce needs. This means that certification bodies need to be more transparent with the data about how individuals perform on their certification exams.

In addition to policymakers, faculty would benefit from individual-level data or aggregate data from the certification body about whether the learners passed the exam, as well as information about the knowledge domain areas where the individuals were not successful. Information about where learners struggled on the exam would enable faculty to make curriculum changes and improve alignment of competencies, thereby increasing student success. Additionally, there is a desire to have outcomes data, including information on wages and employment, for the individuals who passed the exam. The only way for college faculty to obtain this information is to ask learners, and that is an inefficient process. If certification bodies were able to provide this data directly to faculty, it would help them improve their curriculum, assess the effectiveness of the certification and its impact on the learner's career prospects, and provide insights as to how to improve alignment of the certification with their academic programs.

^{11 &}quot;Practice Exams for Microsoft Certifications," Microsoft, accessed July 17, 2025, https://learn.microsoft.com/en-us/credentials/certifications/practice-assessments-for-microsoft-certifications.

Point of Contact for Academic Partnerships and Resources

Often, it is difficult for faculty to determine whom they should contact at a certification body. Having a dedicated point of contact for academic partners would facilitate community and collaboration, making it easier to address any issues or questions that arise and to stay updated on any changes or new developments. Faculty also expressed interest in obtaining technical assistance, access to resources, and onboarding materials or consultation to help them embed certifications into their degree programs.

Two IT certification bodies, ISACA and EC-Council, have well-developed academic partnership programs that provide guidance on integrating their certifications into academic courses and degree programs. ISACA offers learners access to resources and career support, discounts on exam preparation and testing, access to hands-on learning with real world scenarios, and networking through local ISACA chapters. EC-Council provides faculty with access to curriculum development, research, cyber competitions, video lectures, and case studies. While ISACA and EC-Council are two examples of formal academic partnership programs, there is a need for more certification bodies to develop similar efforts.

Public Recognition

College faculty are interested in having public recognition programs that shows their courses and/or academic programs are aligned with industry certifications. While some certification bodies have recognition programs, it is not always easy for faculty to find or utilize. Certification bodies might want to consider developing criteria that colleges could meet, and developing a type of public recognition that could be displayed both by the college and the certification body.

Academic Pricing Structures

The cost of exam preparation materials and certification exams is often a barrier to learners. If these costs are embedded into an academic program, then they can be covered by financial aid, if the students are receiving financial aid. However, if learners do not receive financial aid, they are responsible for paying the costs themselves. Also, some colleges may be reluctant to include the cost of certification exams, especially if they are not legally required for employment, since they want students to be able to decide whether they want to take the exam.

Some certifications offer academic pricing or bundled discounts for higher education institutions. However, to ensure learners have greater access to certification exams that are integrated with academic programs, more certification bodies should offer discounts or academic pricing for exam vouchers, practice tests, study guides, and other exam preparation materials.

Conclusion

There is more emphasis on how different types of credentials can be integrated to help learners meet their career goals. Aligning academic degrees with certifications allows learners to get the broad-based education provided by an academic program with the occupationally-specific skills that are assessed through a certification exam. But to make the integration easier, certification bodies could provide faculty and learners with more information about the value

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of earning the certification, greater access to practice exams and standardized test taking strategies, data about how learners perform on the exam, designated points of contact for academic institutions, a recognition program to show that the academic program is aligned with the certification exam competencies, and academic pricing structures to ensure all learners have access to exam vouchers and exam preparation materials.

Certification bodies could also provide more information about further education and career opportunities for those who earn the certification. Collaborating in this way ultimately benefits the certification bodies with more people taking the exam and earning the certification, and the workforce as a whole with more people being able to demonstrate that they have skills employer's value.

