Medical Coding and Health Information Technology Pathways

A Case Study about Moraine Valley Community College

workcred
an affiliate of ANSI

Moraine Valley Community College

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About the authors:

Workcred, Inc.
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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.

Moraine Valley Community College
9000 College Pkwy.
Palos Hills, IL 60465

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.

Grant funded by:

ECMC Foundation
444 S. Flower Street, Suite 2550
Los Angeles, CA 90071

www.ecmcfoundation.org

ECMC Foundation is a national foundation whose North Star goal is to eliminate gaps in postsecondary completion by 2040. The Foundation uses a spectrum of funding structures, including strategic grantmaking and program-related investments through Education Innovation Ventures, to invest in both nonprofit and for-profit ventures. In pursuit of system change, the Foundation's grantmaking and investing are concentrated on the three following strategic priorities: removing barriers to postsecondary completion; building the capacity of organizations, institutions and systems; and transforming the postsecondary ecosystem.

Grant partners:

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.

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**.

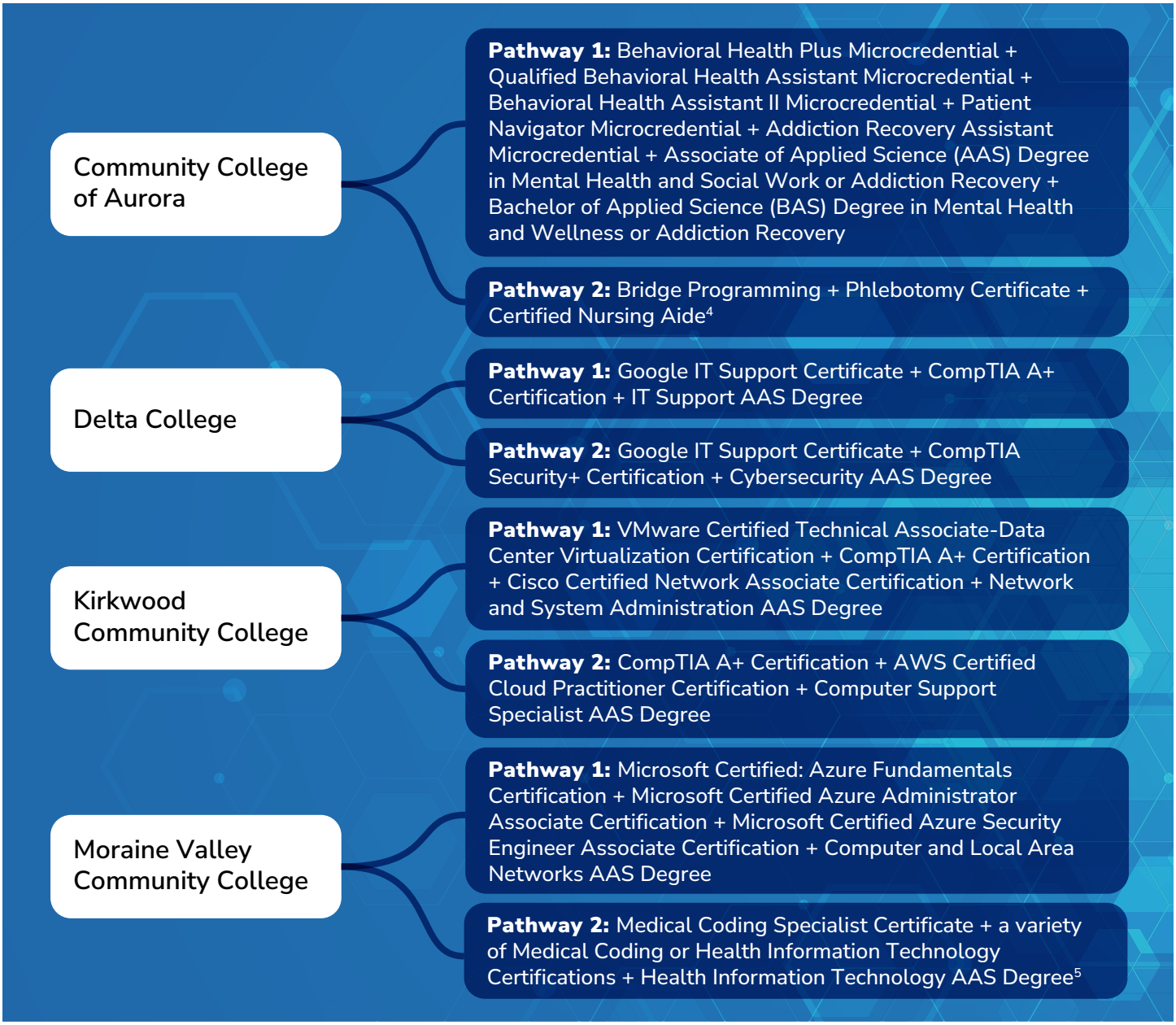
3 Counting U.S. Postsecondary and Secondary Credentials (Credential Engine, 2022), **https://credentialengine.org/wp-content/uploads/2023/01/Final-CountingCredentials_2022.pdf**.

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



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.

This case study is part of a series of four case studies developed to highlight all or some of the C+D pathways from each of the colleges that participated in this project. While each pathway was developed independently, there are common challenges and insights that were uncovered during this project. 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**
- **How Certification Bodies Can Support Colleges' Efforts to Integrate Certifications into Academic Programs**
- **Playbook for Certification + Degree Pathways**
- **Promising Practices: Certification Plus Degree Pathways**

The case study that follows focuses on the lessons learned from Moraine Valley Community College's medical coding pathway, which combines a certificate, a choice of several certifications, and an AAS degree in health information technology, allowing learners to take multiple pathways to enter a career in medical coding and health information technology.

Developing a Pathway in Medical Coding and Health Information Technology

According to the Bureau of Labor Statistics, the job outlook for health information technologists and medical registrars is expected to increase by 16 percent between 2023–2032, which is much faster than the average growth rate of 4 percent for all occupations.[8] MVCC's medical coding and health information technology (HIT) pathway responds to this labor market need.

The pathway begins with a medical coding specialist certificate from MVCC that prepares learners for careers as coders, insurance billers, and reimbursement specialists. Learners can complete the certificate program in five semesters. Through this 41-credit program that requires learners to take 12 courses (see Figure 3), learners gain foundational knowledge in health information management, anatomy and physiology, pharmacology, pathophysiology, insurance reimbursement, and computer applications skills. They then use this knowledge to learn how to classify medical diagnoses and procedures into the codes that are used for patient records, medical insurance reimbursement, data quality, and medical research.

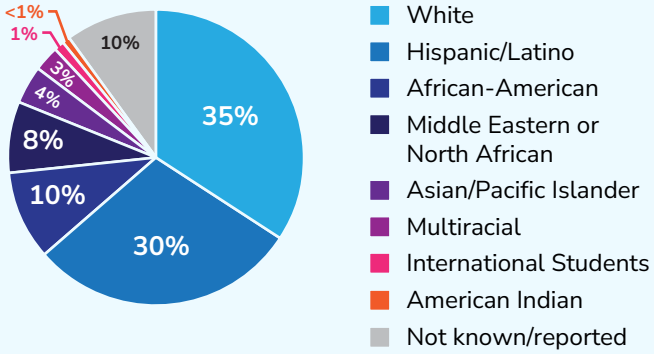
Figure 2: Moraine Community College Demographics[6]

College Demographics

Moraine Valley Community College

9000 College Pkwy.
Palos Hills, IL 60465

STUDENT DEMOGRAPHIC PROFILE[7]



11,296 Total student enrollment

36% Percent of students who are Pell eligible

34% Percent of low-income learners

22% Percent of first generation learners

17% Percent of adult (age 25+) learners

6 Author's note: this data was obtained from the MVCC Fall 2024 Census, compiled by the Office of Institutional Research, Planning, and Effectiveness.

7 Author's note: Though not yet recognized by U.S. Census collection (except in the ancestry question of the American Community Survey), the Middle-Eastern or North African (MENA) category was added by the State of Illinois to the Uniform Racial Classification Act in August 2023. MVCC started offering this option for students beginning in Fall 2022.

8 "Health Information Technologists and Medical Registrars," Occupational Outlook Handbook, U.S. Bureau of Labor Statistics, accessed July 10, 2025, **https://www.bls.gov/ooh/healthcare/health-information-technologists-and-medical-registrars.htm**.

Figure 3: Required Courses and Number of Credits per Course for the Medical Coding Specialist Certificate

Required Courses	Number of Credits
BIO 115: Anatomy and Physiology **or** BIO 180: Human Anatomy and Physiology I and BIO 181: Human Anatomy and Physiology II	5 **or** 4 and 4
CIS 115: Microsoft Office I	3
MRT 110: Medical Terminology	3
MRT 111: Health Information Management	3
MRT 113: Coding Professional Practice	4
MRT 119: Insurance Reimbursement Procedures	2
MRT 123: Electronic Health Records (EHR) and Practice Management	3
MRT 125: Pathophysiology and Pharmacology	3
MRT 131: Current Procedural Terminology and Healthcare Common Procedure Coding System (CPT/HCPCS) Level II	4
MRT 132: International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-CM)	4
MRT 133: International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS)	4
MRT 212: Medical Reimbursement Systems	3

As part of the capstone course (MRT 113), faculty counsel learners about which certification (see Figure 4) they should pursue based on their strengths, professional goals, and desired professional work setting (e.g., inpatient and out-patient medical centers, physician's offices). Learners are introduced to four coding certifications, three from AHIMA and one from AAPC, which were selected to provide variety and flexibility for a student's life situation. Time is also spent reviewing the certification blueprints.

"The coding certificate to HIT degree pathway was designed to allow students to enter the workforce after completing their certificates, while continuing their education toward an associate degree. Every course required for the certificates applies directly to the AAS degree, ensuring a seamless transition. This approach not only supports immediate employment but also opens doors for long-term career growth."

– LoShay Willis, Ed.D., MBA, RRT, dean, career programs, MVCC

Figure 4: Coding Certifications that Learners Can Take After Completing MVCC's Medical Coding Specialist Certificate

Certified Coding Associate (CCA®)

Issuing Organization: AHIMA

Purpose: Entry-level coding certification for individuals new to the healthcare industry

Exam Content Domains of Knowledge:

- Clinical classification systems
- Reimbursement methodologies
- Health records and data content
- Compliance
- Information technologies
- Confidentiality and privacy

Cost of Certification Exam:

- $199 member
- $299 non-member

Certified Coding Specialist (CCS®)

Issuing Organization: AHIMA

Purpose: Coding inpatient and outpatient records

Exam Content Domains of Knowledge:

- Coding knowledge and skills
- Coding documentation
- Provider queries
- Regulatory compliance
- Information technologies
- Medical scenarios: inpatient, outpatient, emergency department

Cost of Certification Exam:

- $299 member
- $399 non-member

Certified Coding Specialist - Physician-based(CCS-P®)

Issuing Organization: AHIMA

Purpose: Coding that is specifically used for medical records in physician's offices, group practices, clinics, and medical centers

Exam Content Domains of Knowledge:

- Diagnosis coding
- Procedure coding
- Research
- Compliance
- Revenue cycle
- Medical scenarios: evaluation and management, surgery, and medicine

Cost of Certification Exam:

- $299 member
- $399 non-member

Certified Professional Coder (CPC®)

Issuing Organization: American Association of Professional Coders (AAPC)

Purpose: Coding for services performed by physicians and non-physician providers (e.g., nurse practitioners and physician assistants)

Exam Content Domains of Knowledge:

- Medical coding
- Medical terminology
- Regulations and compliance
- Reimbursement methodologies

Cost of Certification Exam:

- $399

Thus far, most learners have taken the CCS-P exam after completing the medical coding specialist certificate. In addition, the capstone program provides learners a jumpstart on their job search, with faculty offering assistance with resume and cover letter writing and helping them think about their next steps after completing the certificate.

Furthermore, MVCC's certificate program is recognized by AHIMA's Professional Certificate Approval Program (PCAP), which signifies that it meets quality standards in programming, instruction, and curriculum for non-degree granting academic coding certificate programs.[9]

All the medical coding specialist certificate courses count toward the AAS degree in HIT, creating a seamless pathway for learners who want to continue their education and expand their career opportunities. The AAS degree in HIT is an interdisciplinary program that combines computer technology, medical science, diagnosis and procedure coding systems, and health care management, and is accredited by the Higher Learning Commission (HLC) and the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). To complete the AAS degree in HIT after earning the medical specialist certificate, learners must take 13 additional general education and career courses (see Figure 5).

Figure 5: Additional Required Courses to Complete the AAS in HIT

Required Courses	Number of Credits
COM 101: Composition I	3
COM 103: Speech Fundamentals	3
MTH 109: Math for Allied Health	2
PSY 201: Industrial/Organizational Psychology	3
MRT 114: Health Care Computer Applications	3
MRT 115: HIT Professional Practice I	4
MRT 140: Cancer Registry	2
MRT 141: Coding Computer Applications	2
MRT 211: Health Statistics and Data Analysis	3
MRT 213: Supervisory Techniques	3
MRT 215: HIT Professional Practice II	3
MRT 216: HIT Professional Practice III	5
MRT 218: Quality Management	2

9 "Professional Certificate Approval Program," AHIMA, accessed July 9, 2025, **https://ahima.org/business-solutions/overview/higher-education/pcap**.

Learners who complete the AAS degree in HIT also have the opportunity to take AHIMA's Registered Health Information Technician (RHIT®) certification exam, which provides learners opportunities to work in any organization that uses patient data or health records including hospitals, physician's practices, surgical centers, public health agencies, pharmaceutical companies, and insurance companies.

This pathway, which combines a certificate, a variety of certifications, and a degree, gives learners multiple pathways to pursue careers in medical coding and HIT. Combining credentials in this way ensures that learners graduating with a HIT degree are able to easily enter the labor market.

Partners and Implementers

A number of internal and external partners have contributed to the development and maintenance of this pathway.

MVCC Faculty, Staff, and Administrators

MVCC faculty and administrators across various departments were instrumental in developing and implementing the pathway. The HIT program coordinator led the project and worked directly with the students and faculty to implement the pathway to ensure that it met their needs. Critical to the pathway was that the HIT program coordinator had subject matter expertise and served as the liaison to HLC, the academic accreditor; CAHIIM, the program accreditor; and PCAP, the approving agency of AHIMA.

The HIT program coordinator also received support from the dean of career programs; a project manager who gathered data and prepared reports; and a resource development officer who managed the grant funding. In addition, all of the HIT faculty involved in the program are very engaged in the HIT profession, and bring that expertise to their teaching. The three full-time faculty in HIT continue to be active in the field by either working part-time or volunteering. In addition, most faculty hold a coding and/or HIT certification, which offers them additional insight into how certificate and degree curricula aligns with a certification's test blueprint and exam(s).

Learners

Students are also important partners in their education and the program viability. Learners and alumni provide information about their satisfaction with the program and their outcomes after graduation. The HIT program coordinator regularly asks learners and about their satisfaction with pathways and what should be added to the curriculum. The HIT program coordinator also surveys the graduates to gather information about their employer, employment status, and the alignment of HIT pathway with their work responsibilities. Results from the survey are shared with faculty and the advisory board to so that the curriculum can be adjusted as necessary.

Industry Partners

This pathway program also has a HIT/Medical Coding Specialist Advisory Committee that is comprised of industry partners and program alumni who provide guidance to ensure that the pathway remains high quality. These

committee members, many of whom are hiring managers in their facilities, meet annually to discuss changes in the industry which might impact the curriculum, and advise on anything else that might be important for students to learn. This committee meets annually to discuss changes in the industry that might impact the curriculum and provide advice to continually improve the program and ensure that the graduates are well-positioned to enter the HIT profession.

As part of the survey that is administered to alumni, the graduates identify their employers for MVCC to follow-up with to see if they met employers' expectations for the skills necessary of an entry-level employee. In addition, MVCC also gathers employer feedback about the pathway from employers that have accepted MVCC studies for a professional practice experience. Information from employers provides important guidance on the HIT program and any future changes that may be needed.

Student Supports

MVCC has developed several resources and/or best practices to help learners to succeed in and complete the pathway. These include:

Encouraging and supporting students to complete the AAS degree following completion of the certificate. Faculty advise learners who complete the medical coding certificate to continue their education and pursue the AAS degree because it offers greater long-term career mobility, more flexibility for career changes, and greater opportunity for promotions. While many individuals enjoy being a medical coding professional, others may desire more job opportunities or variety in their tasks. Graduates who hold the AAS degree have experience moving into careers that have a broader scope of duties and greater responsibility.

Counseling and tutoring learners enrolled in the program. Medical coding is difficult and learners are required to learn four coding systems as part of three academic courses, which are the most difficult courses in the program. To become proficient in coding, learners need to spend a lot of time practicing. Even with this instruction, learners need to work diligently to get good at coding and master the competencies to the level needed to pass national certification exams. Recognizing the rigor of medical coding, a coding tutor is available at no cost to assist learners while they are enrolled in the certificate and AAS degree programs. These tutors are careful to support learners in gaining skills about how to approach an issue, while not doing work for them.

Offering national HIT certification exams at MVCC. Taking a national certification exam can be a challenge for learners, even when they have completed the necessary preparation. In order to help make things easier on learners, the HIT program coordinator worked with MVCC's assessment and testing center and Pearson VUE to ensure that students could take the certification exams on campus. This involved determining what certification exams would be offered when and ensuring that the testing site on campus met the specifications required by Pearson VUE, which included opening the site to more than just MVCC students. Prior to having a place for students to take certification exams on campus, the nearest Pearson VUE testing center was about 45 minutes away from MVCC.

The on-site testing location helped to reduce the costs (e.g., time, transportation) for learners as well as provided them with a familiar testing environment. And, to help reduce some learner's fears of taking a certification exam, faculty reviewed the certification exam blueprint with students before they went to take the exam, which ensured they were familiar with the domains of knowledge that would be assessed on the exam.

Lessons Learned

MVCC faculty, staff, and administrators gained the following important insights as they have developed, maintained, and enrolled learners in this pathway.

Faculty Buy-in

Faculty involvement and buy-in is critical to effectively understand the value of and shape a pathway. One way to gain by-in is to have faculty take and maintain some of the HIT certifications. This not only helps the faculty understand what is assessed on the certification exam, but it also better enables learners to see the value in the certification if faculty have earned it.

Curriculum Alignment

For students to be most successful on certification exams, it is critical that the academic curriculum is aligned with the domains of knowledge and competencies that are assessed on the certification exams. Most certification bodies provide free access to the exam blueprints, which are a valuable resource to ensure that the academic program is aligned with the certification exam.

One of the major challenges that colleges face when aligning curriculum is that they do not receive detailed information from the certification body about what areas of the certification exams where learners struggled. If the certification bodies would provide this type of information, it would help colleges identify changes that need to be made to their curriculum and how they can better prepare their learners.

"One of our greatest challenges is the lack of access to coding exam result data from the certification bodies. Without this critical information, we are not truly able to accurately track student progress, evaluate program effectiveness, or provide the necessary support to ensure the long-term success of our graduates."

– Mari Petrik, MBA, RHIA, CCS, CCS-P, FAHIMA, program coordinator/ professor, health information technology programs, MVCC

Cost of Certification Exams

The cost of certification exams is often a barrier for students. AHIMA and AAPC certification exams for non-members range from $199 to $399, depending on which exam is needed. In order to allow learners to use financial aid to pay for this exam, MVCC has embedded the cost for the RHIT certification review book and exam voucher into the price of the textbook for the capstone course in the AAS degree. In addition, the faculty use a portion

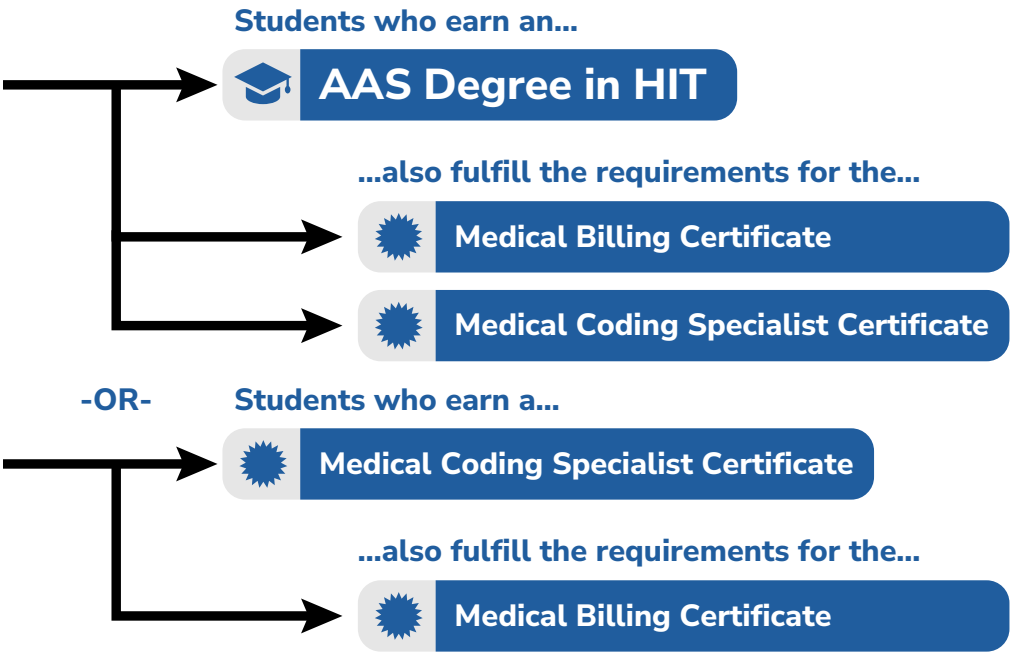
of a class to help students register for the certification exam, which increases their chances of taking it and increases the testing rate of its graduates. This is important because employers strongly prefer candidates with a medical coding certification.

Stackable Credentials

Ensuring that credentials can be stacked so that learners can seamlessly progress from one credential to another, and without having to repeat course content, is important to achieve educational and career goals. When learners complete the medical coding specialist certificate, all of the credits for the program count toward the AAS degree in HIT. This means that learners who earn the certificate can easily move into the degree program. This is also beneficial when learners have not decided whether they want to pursue a career in medical coding or HIT, since learners can start with the medical coding specialist certificate and then make their decision.

Learners at MVCC also automatically earn credentials as they complete higher level programs. For instance, students that earn the AAS degree in HIT will have already completed coursework for the medical billing certificate and the medical coding specialist certificate. And, learners who complete the medical coding specialist certificate as their terminal certificate will also have earned the medical billing certificate. This granting of credentials that were embedded within other credentials is done through an automatic process by the MVCC registrar.

Figure 6: Automatically Earned Credentials Within Other Credentials



Additionally, earning the medical billing certificate or the medical coding specialist certificate first allows learners to gain confidence to pursue higher level credentials, like the AAS in HIT, especially for learners who have been out of school for a long time and are juggling work and family responsibilities. By making these three credentials stackable, learners have more career opportunities and have more pathways to pursue careers in medical coding and HIT.

Sustainability Plans

The pathway from medical coding specialist certificate to an AAS degree in HIT is currently supported by MVCC, and does not require additional resources.

Program Outcomes

HIT faculty utilized feedback from the HIT advisory board, conversations with employers, and survey responses from learners and alumni to gather information about how the program prepares their graduates for the skills and tasks required by employers. In addition, employers provide information about whether or not the graduates are adequately prepared to meet job requirements and learners meet the expectations during the professional work experiences that are part of the academic program. The information from these surveys and conversations are shared with faculty, who use it to make curriculum changes and improve the HIT program to meet the needs of both students and employers.

"Stackable credentials provide learners with a flexible, strategic pathway to build career-relevant knowledge and skills while earning industry-recognized certifications along the way. These pathways support lifelong learning, strengthen workforce readiness, and offer clear, attainable steps toward both academic achievement and career advancement."

– LoShay Willis, Ed.D., MBA, RRT, dean, career programs, MVCC

Conclusion

The goal of this project was to create pathways that are responsive to student, industry, and community needs and blend academic programs with third-party industry credentials. The medical coding pathway fills a critical labor market need by offering stackable credentials that allow learners the best ways to pursue their educational and career goals. This pathway demonstrates the ability to provide flexibility in the way learners can pursue careers in medical coding and health information technology.

Key Resources

Listed below are key resources and information about the programs at Moraine Valley Community College and some of the certifications that were included in this case study.

Moraine Valley Community College

Health Information Technology Programs: **https://www.morainevalley.edu/academics/academic-programs/health-sciences/health-information-technology-program**

Certifications

AAPC CPC Certification: **https://www.aapc.com/certifications/cpc**

AHIMA Certifications: **https://www.ahima.org/certification-careers/certifications-overview**

- CCA exam content outline: **https://www.ahima.org/certification-careers/certification-exams/cca**
- CCS exam content outline: **https://www.ahima.org/certification-careers/certification-exams/ccs**
- CCS-P exam content outline: **https://www.ahima.org/certification-careers/certification-exams/ccs-p**
- RHIT exam content outline: **https://www.ahima.org/certification-careers/certification-exams/rhit**