WASHINGTON STATE UNIVERSITY

THE WILLIAM D. RUCKELSHAUS CENTER

UNIVERSITY OF WASHINGTON

Pathways to Higher Education
Credentials and Funding for Apprenticeships
Year Three Integrated Summary Report

Prepared for the Washington State Legislature
by the **William D. Ruckelshaus Center** with input from
Education Northwest

WASHINGTON STATE UNIVERSITY

EVANS SCHOOL
OF PUBLIC POLICY & GOVERNANCE
UNIVERSITY *of* WASHINGTON

DECEMBER 2025

WILLIAM D. RUCKELSHAUS CENTER
PO Box 75043
Seattle, WA 98125

FY 2026 Ruckelshaus Center Team:
Tye Ferrell, Senior Facilitator and Project Lead
Phyllis Shulman, Senior Facilitator and Assistant Professor, Washington State University
Kevin Harris, Senior Facilitator
Gaby Diamond, Project Specialist
Melissa Girbach, Project Specialist

Table of Contents

Appendices:

Acronyms and Glossary

Acronyms

AAS – Associate of Applied Science

AAS-T – Associate of Applied Science - Transfer

BAS – Bachelor of Applied Science

CBE – Competency-based education

CTC – Community and technical college

RSI – Related supplemental instruction

SBCTC – State Board for Community and Technical College

WSAC – Washington Student Achievement Council

Glossary

Competency-based learning: A method of academic instruction and evaluation based upon students demonstrating their mastery of a subject. (Western Governor's University, n.d.)

Credit articulation: A method of granting credit based on knowledge and skills earned outside of the receiving institution of higher education.

(Student) Full-time equivalent (FTE): A calculation showing how many students would be attending if all were enrolled full time.

Journeyman/Journeyperson: A skilled worker who has successfully completed an official apprenticeship qualification in a building trade or craft. (Law Insider, n.d.)

Journey out: The subsequent period of work experience required at the journeyman level, after the completion of an apprenticeship, to qualify to sit for your master's level examination.

Related supplemental instruction: An organized and systematic form of instruction designed to provide the apprentice with knowledge of the theoretical and technical subjects related to the apprentice's occupation. (Washington State Legislature, n.d.)

Introduction

The William D. Ruckelshaus Center's (the Center) respectfully submits this Year 3 progress report on the tasks outlined in Senate Bill (SB) 5764 (2022). The legislation calls for a five-year process, beginning in 2022 and ending in 2027. The tasks in Year 3 are being addressed by a committee of interested parties convened by the Center, named the Apprenticeship and Higher Education Coordinating Committee (AHECC). A list of AHECC participants and their alternates can be found in *Appendix A*.

SB 5764 directs the Washington Student Achievement Council (WSAC) to contract with the William D. Ruckelshaus Center to:

- Carry out research, evaluation, consultation with interested parties (a collaborative process), and reporting to develop opportunities for apprentices to receive credit toward higher education degrees, as well as to:
- Make recommendations to the legislature on a sustainable funding model for apprenticeship classroom learning, called related supplement instruction (RSI), at community and technical colleges.

The Center uses collaborative processes to enable parties to develop trust and seek agreed on outcomes with the potential to provide greater benefit to participants than if each party sought its own individual aims at the potential expense of others. There are several key steps to this process, including:

- Getting the appropriate people to the table,
- Developing a set of shared agreements that create a space where participants feel comfortable to openly share opinions, interests, and values,
- Ensuring everyone has access to the same set of facts and information, and
- Developing a set of shared interests that can be the basis for collaborative decision-making (see *Appendix C*).

Collaborative processes take time, particularly where there is a perceived lack of trust, power imbalances, and unresolved grievances among participants. It takes time to understand the interests of other parties, develop a shared set of facts, and build the trust needed to develop collaborative and/or consensus-based solutions.

The AHECC began meeting in Year 2 of this project. This report covers the third year of the project and the second year of the Committee's work. An overview of the AHECC's meeting agendas and accomplishments can be found in *Appendix B*.

This report also includes four reports the Center contracted Education Northwest, a nonprofit applied research organization, to carry out. Under the direction of the Center, Education Northwest produced a brief on competency-based education and case studies of apprenticeship programs and community and technical college partnerships in three states: Colorado, Indiana, and Wisconsin. The reports are in appendices D, E, F, and G, respectively.

Previous years' reports can be found on the Center's website at:
https://ruckelshauscenter.wsu.edu/current-projects/apprenticeship-and-higher-education/

Preliminary Findings on SB 5764 Tasks[1]

The AHECC's second year of work was characterized by intense exploration, information sharing, and discussion on virtually the entire range of topics under SB 5764. The Committee and its members made significant progress in addressing many of the issues raised by SB 5764. Actions or recommendations made by the Committee or its members as part of this process are highlighted below in ALL CAPS UNDERLINE.

Last year, the Committee heard the results of a survey commissioned by the Center on the demand for degrees among state registered apprentices, as well as apprenticeship completers. More than 70 percent of apprentices, and to a slightly lesser extent apprenticeship completers, expressed interest in degree attainment, while only about 15 percent of apprenticeship completers end up pursuing a degree. (This is covered in more detail on page 10.) More research is needed to understand why more apprentices don't pursue degrees, in spite of what seems to be significant interest.

To provide additional degree pathways for apprentices and simplify the process for them, the Committee RECOMMENDED that the State Board for Community and Technical Colleges (SBCTC), through local community and technical colleges (CTCs), will work with interested apprenticeship programs to create new associate degree pathways for apprentices in those programs, with the intention of minimizing the number of additional courses required to complete the degree and identify potential paths to a bachelor's degree. These new pathways will be in addition to existing degree pathways for apprentices, including the Multi-Occupational Trades Degree.

Creation of new degree pathways can be complex and time consuming for all parties. Each of the 20 CTCs that partner with apprenticeship programs have their own degree pathways and requirements and systems for credit articulation. In addition, there are 206 apprenticeship programs covering more than 230 occupations in the state, according to L&I. Each apprenticeship program that is interested in creating a degree pathway for its apprentices needs to partner intensively with a CTC over an extended period to create and maintain the degree pathway.

This year, Committee members made important progress in identifying and acting on operational barriers that could hinder identification of existing degree pathways and the creation of new ones. They took the following actions:

ACTION: In response to a request from the Committee, SBCTC created a new landing page on its website displaying each CTC that is partnering with apprenticeship programs and their apprenticeship degree pathways. As part of this effort, each CTC will also work to update its website and add additional detail or clarity as needed for interested apprentices and apprenticeship programs.

ACTION: SBCTC also agreed, in response to interest from the Committee, to identify which of their CTCs' Bachelors of Applied Science degrees apprentices with AAS or related degrees may transfer into.

STATEMENT: The Committee also agreed that all adult learners, including apprentices, should have access to wraparound services to support their learning.

[1] Each header in this section is a specific task from SB 5764, largely verbatim.

Paths to credentials for apprentices

The AHECC explored paths to credentials extensively over the past two years. Last year, the Machinists Institute and Renton Technical College finalized a program to award an Applied Associate in Science (AAS) degree to Machinist Institute apprentices who journey out (complete their apprenticeship). This was accomplished through the identification of all required general education outcomes in either the RSI and/or on-the-job training. The accreditation process was supported by the Center for Adult and Experiential Learning and took two years to finish, with outside grant funding.

The learning of the Committee over the past year has included:

- Institutions of higher education are bound by accreditation requirements, and CTCs and apprenticeship programs need to work together to develop new degree pathways for apprentices within those requirements.
- Creating detailed course descriptions is a major lift for many apprenticeship programs. While programs may include general education components, they are not clearly identified in apprenticeship program course descriptions.
- Developing an apprenticeship course curriculum can take three to five years.
- Each CTC has its own process to award credits to apprenticeship program participants and may make different decisions about what it awards credit for. Because of this, there is no one place where requirements are listed for apprenticeship programs considering whether to pursue degree pathways for their apprentices.

To begin to address the issue identified above, SBCTC announced a new web landing page for registered apprenticeships, with links to each CTC with an apprenticeship program relationship. As part of this update, each of the 20 CTCs that partner with apprenticeship programs will update its apprenticeship information to provide clarity on potential degree pathways for apprentices.

Requirements and benefits of expanding the multi-occupational trades degree

RECOMMENDATION: The AHECC unanimously agreed to recommend *that SBCTC, through the CTCs, pursue an Associate of Applied Science (AAS) degree for state-registered apprenticeship completers with the intention of minimizing the number of additional courses required to complete the degree and identify potential paths to a bachelor's degree.*

The AAS degree is the most common form of the Multi-Occupational Trades (MOT) degree. (See inset on page 8 for an explanation of MOT, AAS, and AAS-T degrees.)

The Committee discussed this recommendation extensively and came to the following understanding:

- Interested apprenticeship programs can work with an interested CTC to pursue an AAS or an AAS-T degree for their apprentices.

Washington's Apprenticeship Multi-Occupational Trades Degree

Multi-Occupational Trades (MOT) Degree: Allows journeyed, state-registered apprentices completing up to a certain number of hours of on-the-job training and related supplemental instruction to obtain an associate degree. The degree can be earned either by completing a certain number of extra general education credits or through competency-based credit award.

Types of MOT degrees include:

- Associate of Applied Science (AAS): A two-year degree for students who want to start a career immediately after graduation. May transfer to some applied baccalaureate degree programs at community and technical colleges (CTCs) and Central Washington University and other bachelor degree programs offered by Washington public universities.
- Associate of Applied Science-Transfer (AAS-T): A two-year, job-training degree to prepare students for immediate employment. Designed to be transferable to a specific four-year university, with which the CTC has an agreement and may transfer to additional bachelor degree programs offered by Washington public universities.

MOT degrees, as well as Associate of Technical Arts (ATA) and Associate of Applied Technology (AAT) degrees, may transfer to universities having an agreement with the CTC issuing the MOT degree, Bachelor of Applied Science degree programs offered by community and technical colleges, Central Washington University, and some bachelor degree programs offered by Washington public universities.

Source: AHECC meetings, SBCTC, and Council of Presidents.

Other credentials that will support transfer to baccalaureate degrees or other advanced credentials for apprentices

As noted above, AAS degrees may transfer to certain four-year Bachelor of Applied Science (BAS) degrees at CTCs as well as Central Washington University, and SBCTC is working with CTCs offering BAS degrees to determine which BAS degrees may accept AAS degrees as transfer degrees. In addition, AAS degrees may transfer to some public four-year baccalaureate programs in Washington state.

Options for instructional modality for apprentices

During the pandemic, instructional modality at CTCs became more flexible, with increased opportunities for online courses.

Opportunities and limitations for incorporating general education course requirements into degree pathways for apprentices

The AHECC discussed at length opportunities to incorporate general education course requirements into apprentices' existing on-the-job training and related supplemental instruction, as well as identify where general education course requirements may already be satisfied in apprentices' programs. One of the barriers Committee members identified to doing this is that the curricula for many apprenticeship programs is proprietary, and apprenticeship programs may not want to share it with CTCs for evaluation. Another issue is apprenticeship program curricula often does not include learning outcomes, which can make it difficult to evaluate for credit.

Credit articulation within the college system, prior learning assessments, and competency-based models

The AHECC focused its exploration of credit articulation in the community and technical college and baccalaureate systems in Year 2 on competency-based education (CBE) models.

James Lemerond, President of Bellingham Technical College, and Paul Carlsen, President, Lakeshore College, Cleveland, Wisconsin, provided the Committee with insights into how CBE works, its benefits, and how some institutions of higher education, including Bellingham Technical College, have transitioned or are transitioning parts of their curricula to competency-based learning.

The Committee learned the following:

- CBE allows learners to advance at their own pace as they master specific skills or knowledge.

Some learners may advance more quickly and others more slowly. This requires a clear and transparent process for aligning competencies with courses, learning outcomes, and assessments. Reliable assessments are required to effectively evaluate learning and mastery.

- Because CBE measures learners' progress by their demonstrated mastery of specific skills and knowledge, rather than time spent in a classroom, it has the potential to bridge the learning that happens in apprenticeship and higher education. However, to do so effectively requires adoption of CBE within the relevant institutions of higher education and apprenticeship programs.
- Transitioning from time-based learning to CBE is not easy for either apprenticeship programs or CTCs; it requires a substantial investment of time, resources, and collaboration between the apprenticeship program and partner college.

Promising national practices in delivery and award of educational credentials to apprentices

Governance structures and operational models for delivery of apprenticeship degree pathways, including operational considerations and costs associated with operational models

With direction from the AHECC, the Center conducted case studies of three states: Colorado, Indiana, and Wisconsin, all of which have a roughly comparable labor force (See appendices F, G, and E). In Washington and Colorado, apprentices' RSI is primarily provided by apprenticeship programs. In Wisconsin, 80 percent of apprentices' RSI is provided by the technical college system, while in Indiana it is 50 percent.

CTCs in Colorado, Wisconsin, and Washington state each manage their own programs, budgets, and contracts, and their faculty approve credit. Indiana's technical college system, Ivy Tech, is standardized, and its degree pathways and regulations are uniform across all of the state's CTCs. In addition, Indiana has a history of close collaboration between its CTC system and apprenticeship programs. Perhaps because of these factors, about 50 percent of state-registered apprentices in Indiana earn associate degrees while they are completing their apprenticeships.

The AHECC will continue to research other state models as it seeks opportunities to better support apprentices and degree pathways for apprentices.

See below for a comparison chart of the four states.

Comparison of state programs:

State	State statistics	Related instruction	Curriculum development	Degree pathways
Washington	4 million civilian labor force 16,000 apprentices 260,000 CTC students	Most related instruction (76%) provided by apprenticeship programs	Apprenticeship programs primarily deliver instruction, which SBCTC reviews	Some colleges have programs that allow apprentices to earn associate degrees; few apprentices earn degrees
Wisconsin	3.1 million civilian labor force 17,000 apprentices 270,000 technical college students	Technical college system provides about 80% of apprentices' related instruction	Technical colleges & apprenticeship programs co-develop	Apprentices can apply prior learning credit toward an associate degree; few apprentices earn degrees
Indiana	3.5 million civilian labor force 25, 000 apprentices 200,000 community college students	A uniform technical college system provides about 50% of apprentices' related instruction	Ivy Tech and Joint Apprenticeship & Training Committees co-develop	Around half of apprentices earn an associate degree, incorporating one to two general education courses
Colorado	3.3 million civilian labor force 8,000 apprentices 124,000 community college students	Most related instruction provided by apprenticeship programs	Sponsors primarily develop and deliver instruction	Some colleges have programs where apprentices earn college credit

Apprentices' demand for degrees

The AHECC heard a presentation from one of its members, the Washington Roundtable Partnership for Learning, on labor market trends and anticipated needs through 2032, based on assumptions made prior to 2025. The Roundtable's October 2024 study, *Skilling up for Our Future*, estimated that more than 1.5 million jobs will be created in Washington between 2023 and 2032, 75 percent of which will require a post-secondary credential, including bachelor's and associate degrees, apprenticeship, and other credentials. In addition, postsecondary enrollment is 12.5 percent below pre-pandemic levels. As a result, the Roundtable projects a shortfall of nearly 600,000 credentialed workers, including a deficit of more than 300,000 workers with bachelor's and advanced degrees, 67,000 with associate degrees, and 228,000 with certifications, apprenticeships, and other training credentials. An oversupply of more than a quarter million uncredentialed workers with a high school diploma or less is expected to result. The need for both apprentices and degree holders is anticipated to grow. Journeyed state-registered apprentices with degrees should be well equipped for the future job market.

Demand for degrees by those in a state-registered apprenticeship program
Interviewees for the Year 1 situation assessment conducted by the Center (https://ruckelshauscenter.wsu.edu/projects/current-projects/), universally believed there was little to no demand for degrees among apprentices.

In FY 2024, the Center directed its contractor, Education Northwest, to conduct a survey of state-registered apprentices and former apprentices about their interest in obtaining degrees as well as perceived barriers to obtaining credits and degrees. Education Northwest surveyed 651 current state-registered apprentices and 151 individuals who had completed a state-registered apprenticeship in Washington State.

The results indicate that the majority of current apprentices in the state are interested in both two-year (71%) and four-year degrees (65%). This was true for both building and construction trades apprentices, who represent 84 percent[2] of apprentices today, as well as apprentices in other professions and trades. The survey also found that Black, Native American, and Latino apprentices are more likely to be interested in a degree than white apprentices.

This apparent interest in degrees has not translated into apprentices' pursuit of degrees. In its 2023 (Year 1) Apprenticeship and Higher Education research report, the Center and Education Northwest found that, since 2000, only about 15 percent of apprentices enrolled in a Washington CTC after completing their apprenticeship and, of those, about 13 percent completed a certificate or associate degree. Only around 1 percent of apprentices later enrolled in a Washington four-year public university. More research is needed to understand the gap between apprentices' interest in degrees and their pursuit of them, as well as why different demographic groups are more or less interested in obtaining a degree.

For those who have completed a state-registered apprenticeship program
The interest in degrees among state-registered apprenticeship completers was almost as high as for current apprentices. The survey found that the majority of state-registered apprenticeship completers are interested in both two-year (73%) and four-year degrees (69 %).

The full findings are detailed in the Demand for Degrees report in Appendix D of the Center's Year 2 report.

The current funding model for apprentices in the CTC system

(including state funds for apprenticeship, and national funding structures for apprenticeship programs)

Washington College Grant for Apprenticeship (WG-A)
The Washington College Grant for Apprenticeship (WG-A) is part of the state's Washington College Grant (WCG). This year, WSAC discontinued its contract for the awarding and disbursement of WG-A funds to state-registered apprentices from the nonprofit Apprenticeship and Nontraditional Employment for Women (ANEW), in response to reductions in the state's biennial budget.

In FY 2025, WSAC and ANEW granted more than $9.4 million to just over 2,600 apprentices. The majority of apprentices who received funding were in the building trades. WSAC was also able to grant $862,000 to 1,700 Bridge Grant recipients. For fiscal year 2026, demand for WG-A is expected to increase as access to the program continues to expand. The AHECC will continue to evaluate and discuss this and may make final recommendations next year.

[2] Washington State Apprenticeship and Training Council, Quarterly Report, April 2023.

Institutional costs of developing, administering, delivering, hosting, instructing, and contracting RSI

At its September 2025 meeting, the AHECC began to share information about the RSI funding model at both CTCs and apprenticeship programs. SBCTC shared a presentation on the College Allocation Model and its existing FTE contract rate with the AHECC. In addition, the Machinist Institute shared information about its contract with Renton Technical College. This kind of information sharing is helping all parties to see how the institutional costs of developing, administering, delivering, hosting, and instructing RSI are borne. The Center is encouraging all parties to share information and ask questions, in order to create a baseline understanding of how RSI is funded among all parties at the table. This in turn will support the Committee in making more informed recommendations and ascertaining what kinds of partnerships might be feasible.

Barriers to access the Washington College Grant for Apprenticeship (WG-A) program and all other student services and support programs and resources

Washington College Grant for Apprenticeship (WG-A)

The AHECC identified several barriers for apprentices in accessing the WG-A, including:

- Eligibility barriers, such as requirements for a high school diploma or equivalent, income requirements, and a baccalaureate degree or higher, and
- The application process.

This year, SBCTC, in coordination with WSAC, created an electronic application pilot for apprentices to access the WG-A at CTCs. The remaining CTCs that partner with apprenticeship programs will begin awarding WG-A in winter quarter. However, the electronic application is available for use by all apprentices.

When the WG-A was created, apprentices had difficulty accessing it because apprenticeship programs, many of which are small and lightly staffed, were not able to manage the financial aid process for their apprentices. This was largely addressed when WSAC contracted with ANEW (and subsequently took on management of the WG-A itself this past year).

One possible solution to eligibility barriers discussed by the AHECC last year was to expand WG-A eligibility to all apprentices who have been accepted into a state–registered apprenticeship program. The AHECC considered but did not formally request funding last year to research the impact of such a change.

In last year's biennial budget process, the legislature decided to reduce the total amount of WG-A funding per apprentice from 100 percent of full-time tuition per apprentice at a state CTC ($4,923 in FY 2025) to 50 percent of full-time tuition in FY 2027. Wraparound support funds for apprentices provided to L&I were also eliminated. Many AHECC members expressed concern about the impact that these reductions are likely to have on the ability of apprentices with lower incomes, or working in seasonal industries like construction, to complete their apprenticeships.

All other student services and support programs and resources

The AHECC agreed that all adult learners, including apprentices, should have access to wraparound services to support their learning. The Committee identified several barriers for apprentices to access student services and support programs and resources at CTCs, including:

- Lack of awareness—the Demand for Degrees survey found that 50 percent of apprentices who responded did not know they are registered at a college, and consequently what services, support, and resources they may be entitled to;

- A general lack of knowledge about resources and how to access them;
- Office hours, since most apprentices work during the day; and
- Travel time to access programs for some apprentices, particularly in rural areas.

There have been several responses to the barriers identified above, including:

- As part of the WG-A adoption process, all apprentices who are registered at a CTC now fill out an online admission application at their partner college. This ensures they are aware they are a college student and provides them access to WG-A funding.
- Most college apprenticeship coordinators have resource handbooks or web pages apprentices can access. SBCTC's creation of a new landing page for registered apprenticeships, mentioned earlier in this report, as well the ongoing work to update the information on the websites of CTCs that partner with apprenticeship programs is a major step forward in providing desired information to apprentices and apprenticeship program coordinators about possible degree pathways for apprentices.
- Committee members agreed that increasing apprentices' access to navigators in the CTC system is a key element in addressing the lack of awareness and knowledge about services and resources. Navigators in apprenticeship programs, most often apprenticeship program coordinators, can also support apprentices in understanding the services and resources potentially available to them through the CTC system.
- SBCTC said that since the pandemic, colleges offer a range of hours and modalities for students to contact their offices.

In addition, the AHECC looked at how increased access to navigators, as well as improved coordination between apprenticeship programs and CTCs, can support apprentices in understanding the credits they are earning at CTCs, the degree pathways available to them, and the services and supports available to them at their CTC.

Closing

The Center thanks the AHECC members for their continued participation. Washington's apprenticeship and higher education systems began separately, and over time have evolved very differently. This history has contributed to misunderstandings and a need to build trust among participants. These dynamics typically create barriers to collaborative work. However, through their regular meetings, sharing of information and level setting, and intensive discussions, the AHECC has begun to make progress. The Committee has laid the foundation for future progress, even in the face of an increasingly difficult financial picture for both apprenticeship and higher education.

The Center submits this high-level report to provide a brief synopsis of its work in Year 3 on a broad, complex, evolving, and contentious set of topics. Please contact the Project Manager, Tye Ferrell (tye.ferrell@wsu.edu), if you have questions or would like more information. Stay tuned for future reports as the work progresses.

Appendix A: AHEC Committee and AHE Workgroup Rosters

Apprenticeship and Higher Education Coordinating Committee Members as of 9-18-2025

Andrea	Anderson	Senior Director of Program Development and Education	Apprenti
Marie	Bruin	Director, Workforce Education	WA State Board for Community & Technical Colleges
Karen	Dove	Executive Director	ANEW
Erin	Frasier	Assistant Executive Secretary	WA State Building & Construction Trades Council
Julie	Garver	Director of Policy and Academic Affairs	Council of Presidents
Joyce	Hammer	Deputy Executive Director for Education	WA State Board for Community & Technical Colleges
Kimberly	Hetrick	Director, Career Connect Washington	WA Student Achievement Council
Lyle	Irimata	Assistant Director, Needs Based Programs	WA Student Achievement Council
Brian	Jeffries	Policy Director	WA Roundtable - Partnership for Learning
Rachel	McAloon	Registered Apprenticeship Program Manager	WA State Department of Labor and Industries
Shana	Peschek	Executive Director	Machinists Institute (representing the Washington State Labor Council)
Kairie	Pierce	Innovation Workforce Secor Lead	WA State Department of Commerce
Christina	Riley	Liaison	WA State Apprenticeship and Training Council Apprenticeship Tribal Sub-Committee and Christina Riley Consulting
Halene	Sigmund	President	Construction Industry Training Council
Donald	Smith	Long-Term Care Workforce Policy Manager	WA Workforce Training and Education Coordinating Board
Sheila	Steiner	Senior Director, Policy and Community Engagement	Independent Colleges of Washington
Lynn	Strickland	Executive Director	AJAC
Becky	Wallace	Assistant Superintendent, Secondary Education and Pathway Preparation	WA Office of Superintendent of Public Instruction

Apprenticeship and Higher Education Workgroup Members, as of 9-18-2025

Andrea	Anderson	Senior Director of Program Development and Education	Apprenti
Erin	Frasier	Assistant Executive Secretary	WA State Building & Construction Trades Council
Julie	Garver	Director of Policy and Academic Affairs	Council of Presidents
Genevieve	Howard	Workforce Policy Associate	WA State Board for Community & Technical Colleges
Brandon	Jordan	Apprenticeship Training Director	Northwest Laborers Apprenticeship Committee
Brooke	Keiner	Dean, School of Continuing Studies and Graduate Admissions	Whitworth University
Laura	Kingston	Executive Dean of Workforce Education	South Seattle College
Sue	Magyar	Director of Interdisciplinary Studies	Eastern Washington University
Kenna	May	Apprenticeship Manager	Apprenticeship & Journey Level Training Center, Spokane Community College
Cori	Morris	Professional Development Navigator, Office of Human Resources	WA Department of Veteran Affairs
Shana	Peschek	Executive Director	Machinists Institute
Lynn	Strickland	Executive Director	AJAC
Heather	Winfrey	Assistant Training Coordinator	Seattle Area Pipe Trades Apprenticeship

Appendix B: AHECC Year 2 Meeting Overview

Apprenticeship & Higher Education Coordinating Committee Year Three (FY 2025) Meeting Overview

December 2024 Agenda

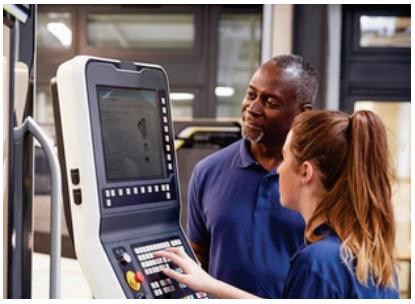
- Heard a presentation from SBCTC on the work of colleges to identify and award as many college credits as possible and appropriate
- Discussed barriers to apprenticeship and the demand for degrees among apprentices
- Discussed barriers to accessing the WG-A and other student supports, services, and resources
- Discussed information gaps and needs

January 2025 Agenda

- Provided guidance on best practices in other states and countries
- Discussed ways to improve the award of education credentials to apprentices

February 2025 Agenda

- Heard a presentation from the Department of Labor and Industries on CTC partnerships with apprenticeship programs
- Heard a presentation on competency-based education
- Heard a presentation on the Apprenticeship-Centered Employment System
- Discussed next steps and needs to pursue associate degrees for state-registered apprenticeship completers



Accomplishment

- Agreed to focus the discussion on associate degrees for state-registered apprenticeship completers without the need for additional coursework to meet general education requirements

Accomplishment

- Agreed that Wisconsin, Indiana, and Colorado would be the focus states for case studies to inform discussion and decision making

April 2025 Agenda

- Heard a presentation on projected job growth and enrollment trends
- Further discussed the goal of pursuing associate degrees for state-registered apprenticeship completers

June 2025 Agenda

- Shared information on the impacts of federal and state budget cuts
- Heard a presentation on case studies in Wisconsin, Indiana, and Colorado
- Committee members volunteered to draft proposals for future consideration
- Committee members volunteered to present information about funding RSI at CTCs

June Accomplishments

- SBCTC announced a new landing page for registered apprenticeships with links to participating colleges; Colleges will update their information to provide clarity on degree pathways
- Agreed that SBCTCs should pursue an AAS degree for state-registered apprenticeship completers with the intention to minimize the number of additional courses required to complete the degree and identify potential paths to a bachelor's degree

Apprenticeship & Higher Education Coordinating Committee Year Three (FY 2025) Meeting Overview (Continued)

August 2025 Agenda

- Eastern Washington University announced a new pathway for MOT / AAS degree holders to earn a four-year applied technology degree
- Continued to share information about the impacts of budget cuts
- Discussed several ideas and proposals from Committee members
- Began to lay the groundwork for discussion of RSI funding

September 2025 Agenda

- Heard a presentation on the Construct a Career Initiative, which has seen success placing apprenticeship navigators around the state
- Heard a presentation on the SEIU Healthcare 1199 NW Multi-Employer Training Fund, which develops apprenticeship programming in the healthcare space
- Heard a presentation on the Community and Technical College Allocation Model for apprenticeship FTE funding
- Discussed an example of a RSI contract

Appendix C: AHECC Shared Interests

Apprenticeship and Higher Education Coordinating Committee
Shared Interests – Agreed July 11, 2024

We have a shared interest in the following:

1. Expanding career pathways for apprentices is important. State-registered apprenticeship, associate degrees, and baccalaureate degrees all have value as career pathways.
2. An apprenticeship system that builds on the successes of existing apprenticeships and supports the workforce needs of the future.
3. More accessible pathways into registered apprenticeship and higher education for all Washington residents, particularly women, people of color, those in rural areas, and others who have historically been excluded.
4. Increased collaboration and partnership among apprenticeship programs, state agencies, higher education, K-12 education, and businesses.
5. A sustainable and transparent funding model for the delivery of related supplemental instruction.

APPRENTICESHIP AND HIGHER EDUCATION

Competency-Based Education

June 2025

Competency-based education (CBE) measures learners' progress by their demonstrated mastery of specific skills and knowledge, rather than time spent in a classroom. In contrast, time-based education measures progress by the number of instructional hours completed. As education and workforce leaders in Washington State and elsewhere consider ways to integrate higher education and apprenticeship pathways and make both more responsive to learner needs, CBE offers one promising approach. Education Northwest developed this brief to provide an overview of CBE to inform the work of the Apprenticeship and Higher Education Coordinating Committee convened by the William D. Ruckelshaus Center as directed by Washington Senate Bill 5764, as passed in 2022.

CBE focuses on skill mastery instead of time

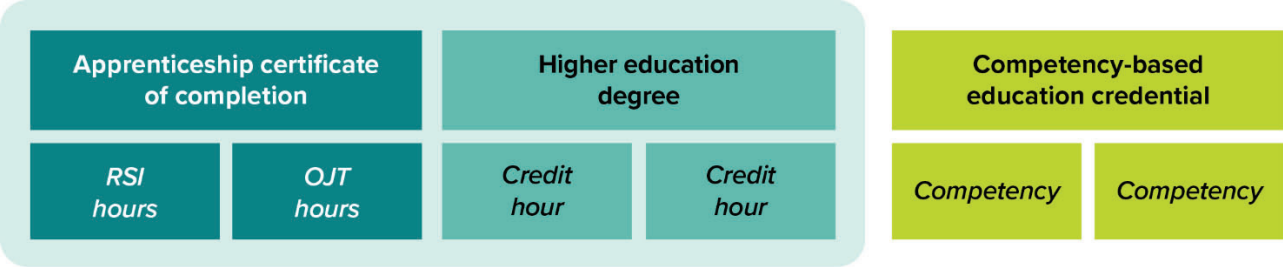
The Carnegie Unit, established in the early 1900s, laid the foundation for a standardized, time-based approach to organizing secondary and postsecondary education in the United States (Silva et al., 2015). In higher education, this model evolved into the credit hour system, where one credit corresponds to approximately one hour of classroom instruction per week over a 15-week semester. A standard three-credit college course meets for about three hours per week, and full-time students typically enroll in 15 credits per semester to progress toward the 120-credit requirement for a four-year degree (U.S. Department of Education, 2011). This shared credit hour framework has allowed institutions to scale efficiently while maintaining consistency in instructional time.

Similarly, registered apprenticeships in the United States have historically relied on time-based measures. A typical apprenticeship requires 2,000 hours of on-the-job training (OJT) and 144 hours of related supplemental instruction (RSI) per year for program completion (U.S. Department of Labor, 2015). These hours are known as contact hours, which refers to time spent directly learning or working, in contrast to credit hours that include both direct instruction and indirect study. Apprenticeship programs may have a time-based, competency-based, or hybrid structure, giving sponsors flexibility in determining the pace and progression of training. This model has helped ensure apprentices receive a baseline level of practical and theoretical training over a defined period while allowing for some customization by the sponsor.

In both higher education and apprenticeship, time has been the primary metric for structuring academic progression and credentialing. However, critics argue that the time-based model has not kept pace with technological advances, shifting workforce demands, and evolving student needs. As a result, reform efforts in both sectors increasingly call for more flexible and personalized models that prioritize mastery over seat time. These approaches aim for a more transparent assessment of what learners know and can do as well as more adaptable learning pathways (Silva et al., 2015).

CBE reflects this shift by moving away from measuring learning through time-based metrics like credit or contact hours and instead focusing on whether students can demonstrate specific competencies in real-world settings. It is designed to be flexible and center the learner, allowing individuals to progress at their own pace and show mastery in a variety of ways. Figure 1 illustrates the differences between time-based and competency-based models.

Figure 1. Higher education and apprenticeship credentials are based on hours, while competency-based models are based on competencies



Note: RSI is "related supplemental instruction", and OJT is "on-the-job training"
Source: Education Northwest

CBE measures learning through competencies

CBE personalizes learning by allowing individuals to demonstrate what they have learned at their own pace and in ways that make sense for them. Rather than moving through courses based on time spent in a classroom, learners progress once they master specific skills or knowledge.

Several key elements make CBE work (Johnstone & Soares, 2014):

- Well-defined and valid competencies aligned with both industry and academic standards
- Flexible pacing and support to allow learners to progress at their own speeds
- Accessible learning resources available at any time
- A clear and transparent process for aligning competencies with courses, learning outcomes, and assessments
- Secure and reliable assessments to ensure valid evaluation of learning

As interest grows in creating more flexible, student-centered pathways, CBE models are gaining traction in both higher education and apprenticeship. In partnership with the U.S. Department of Labor, the Urban Institute developed 43 competency-based occupational frameworks for registered apprenticeship programs across industries such as advanced manufacturing, financial services, education, health care, and information technology (Urban Institute, n.d.). One example is the Elementary Teacher Competency-Based Occupational Framework, which defines job functions, core competencies, and performance level achieved for a registered apprenticeship program (figure 2).

Figure 2. Elementary teacher competency-based registered apprenticeship occupational framework

Job Function 2. Supports and encourages overall student growth and development		
Hours *(time-based hybrid program only):*		
Competencies	**Core or optional**	**Performance level achieved (0–4)** *(competency-based and hybrid programs only)*
A. Observes and assesses how students are doing holistically (e.g., their social and emotional development, participation in the classroom, interactions with others, and physical health)	Core	
B. Helps learners build confidence, stamina, and a growth mindset (e.g., by encouraging them in their efforts, reframing challenges as opportunities, and supporting them as they persevere with chalenging tasks)	Core	
C. Encourages curiousity within learners, including by demonstrating the value of learning and encouraging them to ask questions	Core	

Source: Adapted from Urban Institute.

CBE relies on diverse, real-world assessments to evaluate competencies

To effectively assess competencies, CBE programs use a variety of approaches, allowing learners multiple opportunities to showcase their knowledge and apply it in different contexts. There are two primary types of assessments in CBE (Competency-Based Education Network, 2021):

- Formative assessments provide ongoing feedback, helping learners track their progress and adjust their learning strategies as needed. These assessments may include discussions, quizzes, observations, and reflections.
- Summative assessments evaluate overall mastery of competencies through various methods, including exams, projects, presentations, and portfolios.

Another method of competency evaluation is prior learning assessment, also known as recognition of prior learning. Prior learning assessment is typically conducted by staff members in higher education institutions or by apprenticeship training providers. This process involves determining the extent to which an individual's prior learning and experience aligns with specific course learning outcomes. Methods to assess prior learning include (Uranis & Davis, 2020):

- Standardized examinations such as Advanced Placement (AP), College Level Examination Program (CLEP), International Baccalaureate (IB), Excelsior exams (UExcel), DANTES Subject Standardized Tests (DSST), and others
- Faculty-developed challenge exams, which allow students to test out of specific courses by demonstrating competency
- Portfolio-based and individualized assessments, where students document and provide evidence of prior learning
- Evaluation of noncollege programs by organizations such as the National College Credit Recommendation Service (NCCRS) and the American Council on Education (ACE), which assess training programs offered by employers or the military

Prior learning assessments allow students to receive credit for skills and knowledge gained from life experiences, such as work, military service, or prior education (Washington Student Achievement Council, n.d.). This process helps learners save time and money, supports credential completion, and boosts their confidence as learners (Council for Adult and Experiential Learning, n.d.).

CBE provides flexible learning pathways but presents implementation challenges

CBE is gaining traction as a promising approach due to its benefits for diverse learners and its strong alignment with workforce development. Its flexible structure allows students to advance at a pace that fits their schedules, making education more accessible, particularly for adults from low-income backgrounds who balance work, family, and other responsibilities (Choitz & Prince, 2008). Additionally, CBE's focus on skill development ensures that learners are prepared for specific occupations, making it more directly aligned with workforce needs. Rather than using seat time as proof of learning, CBE focuses on clearly defined competencies that align with industry standards, helping learners demonstrate their skills to employers (Mowreader, 2024).

Education Northwest spoke with James Lemerond, President of Bellingham Technical College, about his experience implementing CBE, first in Wisconsin and now in Washington State. Lemerond played a key role in expanding CBE across Wisconsin: Today, nearly half of the state's technical colleges offer CBE programs. In our conversation, he highlighted several benefits of CBE:

- CBE removes the time barrier, focusing instead on the acquisition of knowledge, skills, and abilities so that students can move through a course at their own speed, either accelerating or taking additional time as needed
- CBE programs focus on mastery of skills and knowledge, so students can prepare and retake a summative exam multiple times, if needed, to pass
- CBE programs often include extended lab hours or weekend availability, benefiting working students
- By offering flexible schedules that do not always require faculty supervision, institutions can reduce instructional costs

However, Lemerond and others have identified several challenges with implementing CBE. A major obstacle is the shift away from traditional systems based on credit hours and seat time (Gruppen et al., 2016; Hodgson & Huntington, 2024). The credit hour has long served as the foundation of U.S. secondary and postsecondary education, shaping course registration, tuition structures, and financial aid policies. Similarly, the contact hour has historically been central to apprenticeship training.

Transitioning from time-based measures to competency-based ones requires substantial investments of time, resources, and collaboration—particularly in defining competencies, designing valid assessments, and ensuring continuous program improvement (Peek et al., 2020). Establishing CBE may also involve negotiating with accreditors and state and federal higher education authorities to meet expectations that remain grounded in time-based criteria (see, e.g., U.S. Department of Education, 2025).

CBE can translate learning across apprenticeships and higher education

An emerging trend in education and workforce development is developing pathways to higher education credentials for apprentices (Washington State Legislature, 2022). However, a major challenge arises when awarding college credit for RSI and OJT. College credit is based on the credit hour, which typically reflects one hour of structured instruction per week over a semester. In contrast, apprenticeship programs use contact hours: the total time spent directly on training in RSI and OJT. Because these systems measure time differently—and because apprenticeships emphasize OJT while higher education requires more instructional time—there is no straightforward 1:1 translation between the two.

CBE has the potential to bridge this gap by focusing on what learners know and can do, rather than how much time they spend in training. By replacing time as the primary measure of learning with demonstrated competencies, CBE shifts the emphasis from how learning occurs to what is learned. Mapping competencies between apprenticeship programs and higher education courses can illuminate areas of overlap and establish more flexible pathways to credentials. By moving from time-based systems to a shared focus on competencies, institutions can develop a common framework for recognizing learning across different educational and training environments.

One example of CBE facilitating college credit for apprentices is a partnership between the Council for Adult and Experiential Learning, the Machinists Institute, and Renton Technical College. Together, they developed a competency-based model that connects Washington State registered apprenticeships with an Associate of Applied Science degree in multi-occupation trades (Council for Adult and Experiential Learning, 2024). This was accomplished by identifying and aligning competencies across apprenticeship training and college coursework, enabling apprentices to receive credit toward a degree based on demonstrated skills and knowledge.

These and other emerging examples highlight the potential of CBE to support a more student-centered approach to instruction across apprenticeship and higher education. By integrating skill-based learning into classroom and workplace settings, CBE can foster more flexible and responsive pathways that help learners achieve their career and educational goals.

References

Choitz, V., & Prince, H. (2008). *Flexible learning options for adult students.* FutureWorks and Jobs for the Future.https://www.dol.gov/sites/dolgov/files/ETA/publications/ETAOP%202008-09%20-%20Flexible%20Learning%20Options%20for%20Adult%20Students.pdf

Competency-Based Education Network (2021). *Hallmark practices in CBE assessment.* https://www.cbenetwork.org/wp-content/uploads/2022/03/CBE-2021-Hallmark-Practices-WEB.pdf

Council for Adult and Experiential Learning. (n.d.). *What is credit for prior learning?* https://www.cael.org/lp/cpl-pla

Council for Adult and Experiential Learning. (2024). *CAEL, the Machinists Institute, and Renton Technical College integrate complete degree program within groundbreaking registered apprenticeship program.* https://www.cael.org/resources/newsroom/cael-the-machinists-institute-and-renton-technical-college-integrate-complete-degree-program-within-groundbreaking-registered-apprenticeship-program

Gruppen, L., Burkhardt, J., Fitzgerald, J., Funnel, M., Haftel, H., Lypson, M., Mullan, P., Santen, S., Sheets, J., Stalburg, C., & Vazquez, J. (2016). Competency-based education: Programme design and challenges to implementation. *Medical Education, 50*(5), 532–539. https://deepblue.lib.umich.edu/bitstream/handle/2027.42/119072/medu12977.pdf?sequence=2

Hodgson, S., & Huntington, L., (2024). *2024 report to the legislature: Competency-based education* (ORS 350.125). Oregon Higher Education Coordinating Committee. https://www.oregon.gov/highered/strategy-research/Documents/Reports/ORS-350.125-2024-Competency-Based-Education-Report.pdf

Johnstone, S. M., & Soares, L. (2014). Principles for developing competency-based education programs. *Change: The Magazine of Higher Learning*, *46*(2), 12–19. https://www.tandfonline.com/doi/full/10.1080/00091383.2014.896705

Mowreader, A. (2024). Better alignment needed between education and workforce. Inside Higher Ed. https://www.insidehighered.com/news/student-success/life-after-college/2024/11/26/majority-new-talent-need-extra-training

Peek, K., Amor, H., Miller, E., & Silva, M. (2020). *Competency-based education made easy: A step-by-step handbook for developing and implementing competency-based education programs in institutions of higher education.* South Texas College. https://academicaffairs.southtexascollege.edu/pdf/CBE/CBE-Made-Easy.pdf

Silva, E., White, T., & Toch, T. (2015). *The Carnegie Unit: A century-old standard in a changing education landscape.* Carnegie Foundation for the Advancement of Teaching. https://www.luminafoundation.org/files/resources/carnegie-unit-report.pdf

U.S. Department of Education. (2011). Guidance to institutions and accrediting agencies regarding a credit hour as defined in the final regulations. https://fsapartners.ed.gov/sites/default/files/attachments/dpcletters/GEN1106.pdf

U.S. Department of Education. (2025). Direct assessment (competency-based) programs. https://www.ed.gov/laws-and-policy/higher-education-laws-and-policy/higher-education-policy/direct-assessment-competency-based-programs

U.S. Department of Labor. (2015). Guidelines for competency-based, hybrid and time-based apprenticeship training approaches. https://www.apprenticeship.gov/sites/default/files/bulletins/Cir2016-01.pdf

Urban Institute. (n.d.). National apprenticeship resource hub. https://apprenticeships.urban.org/explore-industries

Washington State Legislature. (2022). SB 5764 concerning apprenticeships and higher education. https://app.leg.wa.gov/billsummary?BillNumber=5764&Initiative=false&Year=2021

Washington Student Achievement Council. (n.d.). Academic credit for prior learning. https://wsac.wa.gov/assessments-prior-learning

Uranis, J., & Davis, V. (2020. *PLA landscape analysis brief.* Western Interstate Commission for Higher Education. https://www.wiche.edu/key-initiatives/recognition-of-learning/pla-workforce-dev/

APPRENTICESHIP AND HIGHER EDUCATION

Case Study: Colorado

June 2025

Education Northwest researched national practices in awarding educational credentials to apprentices, focusing on how selected states award college credit and degrees.[1] This case study explores apprenticeship and higher education in Colorado. Through online research and interviews with representatives of Colorado's workforce and higher education systems, we identified promising practices that could offer valuable insights for Washington. Colorado's collaboration across partners, use of data to measure impact, and intentional pathway design emerged as key lessons.

Colorado's apprenticeship and higher education operate largely independently with partnerships driven by employers

In 2023, Colorado became a State Apprenticeship Agency (SAA), shifting oversight of registered apprenticeships from the U.S. Department of Labor to the state level. The SAA, known as Apprenticeship Colorado, is housed within the Office of the Future of Work, which was established in 2019 and later codified in statute. This office promotes apprenticeships as part of a broader strategy to build a future-ready workforce, conduct research, align efforts across agencies, and advise the legislature. Colorado's decision to take on state oversight was driven by a desire to better align apprenticeship expansion with education, workforce, and talent development goals.

The state also convenes a State Apprenticeship Council (SAC), which includes committees focused on building trades and new and emerging industries. The SAC includes equal representation from public partners (such as workforce and education) and industry leaders, and serves as a key mechanism for aligning apprenticeship strategy with economic and workforce needs. The SAC

[1] This work was conducted in support of Washington State Senate Bill 5764, with guidance from the William D. Ruckelshaus Center.

provides professional and technical expertise and advises the SAA on registered apprenticeship standards, rules, and performance.

All registered apprenticeships in Colorado are built on formal Apprenticeship Standards, developed by program sponsors, and registered with the State Apprenticeship Agency or U.S. Department of Labor. These standards outline key components of the program, including training structure, policies, and compliance. As of 2025, Colorado has about 8,000 active apprentices (approximately 0.3% of Colorado's 3.1 million employed individuals).

Colorado's higher education system is decentralized, with substantial institutional autonomy and local control. The Colorado Department of Higher Education serves as a convening and support body, while the Colorado Commission on Higher Education provides policy guidance. Institutions ultimately make their own decisions unless directed by state legislation.

The higher education system also includes the Colorado Community College System, which consists of 13 colleges across more than 35 locations, collectively serving over 124,000 students. The State Board for Community Colleges and Occupational Education governs the system.

Colorado's apprenticeship and higher education systems tend to work alongside each other rather than in a closely connected way. Employers are the primary factor in determining if and how partnerships with postsecondary institutions occur. The SAA provides technical assistance to support local higher education partnerships. This includes structured communication like monthly expansion calls, newsletters, and one-on-one support to identify appropriate roles for higher education—whether as sponsors, related instruction providers or intermediaries. The state's approach emphasizes local demand and sustainability. Some institutions are drawn to apprenticeship through a strategic leader's vision or external incentives such as federal or state grants.

Sponsors determine related instruction providers

Program sponsors in Colorado determine how related instruction is delivered. Instruction may be provided directly by the sponsor, by a college or private training provider, or through a hybrid model. By regulation, apprentices receive at least 144 hours of instruction per year.

Colleges work with apprentices to support them throughout their program. For example, Arapahoe Community College employs an apprenticeship navigator who helps students access resources and stay on track. Apprentices may be enrolled in classes alongside traditional students in for-credit courses or enrolled in non-credit courses. Colleges charge tuition to apprentices, though many employers provide tuition assistance.

Apprenticeship Colorado provides funding to both employers and apprentices to support program costs, including:

- Apprentices can access their local workforce center for WIOA funds to help cover costs for related instruction, as well as accessing Pell grants
- Employers and sponsors can earn a state funded New and Emerging Industry Apprentice Tax Credit, which provides up to $12,600 per apprentice per income tax year
- Employers and sponsors can apply for competitive state-funded grant opportunities, such as State Scale-Up Grants and Build-Up Grants, which help cover related instruction expenses

While colleges and workforce centers can braid funding, the most robust and sustainable models are those in which employers cover the majority of tuition or program costs. Multi-employer programs may face variation in how much each employer is able to fund. Colorado encourages alignment between colleges and workforce centers to combine public funding streams and reduce financial burden on apprentices.

Pathways to credentials are dependent on the institution and employer

Colorado's apprenticeship system increasingly supports college credit and credential attainment, although practices vary by program. Many apprentices earn some college credit, industry-recognized credentials, or both. In some programs, credentials are embedded in required coursework. In others, credit may be awarded but not applied toward a formal credential unless the apprentice opts to continue.

For example, Arapahoe Community College offers apprenticeship programs with credit-bearing coursework. Its Automotive Technician Apprenticeship is a 1.5–2-year program that integrates both general education and technical coursework, allowing students to earn an Associate of Applied Science degree while completing their apprenticeship.

Additionally, Emily Griffith Technical College partnered with Metropolitan State University of Denver to provide a bachelor's degree pathway for apprentices. Registered apprentices completing programs at Emily Griffith can transfer college credit toward a bachelor's degree program at MSU Denver.

The Colorado Healthcare Experiential Pathways to Success program used a $12 million grant from the U.S. Department of Labor to create 5,000 adult healthcare apprenticeships and pre-apprenticeships between 2019 and 2024. The Colorado Community College System partnered with industry leaders and institutions to develop, launch, and scale these healthcare apprenticeships

through the Colorado Collegiate Apprenticeship Program. This initiative focused on building pathways that connect apprentices, higher education, and industry, integrating college credit and degrees. Apprenticeships were created in occupations such as medical assisting and pharmacy technician. While the grant period ended in 2024, the initial funding was instrumental in launching programs that are sustained through tuition revenue.

Whether apprentices earn credit or stack toward a degree often depends on employer decisions. Some employers may pay only for the training components they require rather than the complete set of courses needed for a degree, such as the 69 credits required for an associate degree. One challenge is that employers often do not have clear, comprehensive information about available credit-bearing options or how to design programs that stack into credentials. Colorado is addressing this by providing employers with clear, accessible lists of stackable courses and credential pathways.

The exception to this structure is the recently developed Teacher Degree Apprenticeship Program. In 2023, Colorado Senate Bill 23-087 was signed into law to create a pathway to first-time teacher licensure. This program is registered with the SAA and approved by the Colorado Department of Education. It combines on-the-job learning with components of a bachelor's degree, providing an alternative approach to teacher preparation through apprenticeship.

Colorado is currently conducting research to better understand how credit and credential attainment is occurring across apprenticeship programs. Program sponsors now report whether their programs include credit-bearing coursework or degree alignment in the state's apprenticeship directory.

Colorado is looking to expand work-based learning

Colorado is working to implement its Work-Based Learning Continuum, which includes apprenticeships as a key strategy to build a future-ready workforce. A recent workforce executive order from the governor aims to streamline collaboration across state agencies involved in workforce development. Stakeholders emphasized that shared goals and coordinated efforts across systems will make this work more effective and sustainable. While Colorado does not currently have a dedicated initiative focused on degree pathways for apprentices, state leaders view this as a potential outcome of strong cross-sector collaboration.

In advancing apprenticeship and higher education connections, Colorado has identified several key factors:

- **Collaboration among partners is essential.** Colorado's apprenticeship and higher education system involves many decentralized players, which can make coordination challenging. No single entity directs how pathways should be built, so alignment depends on strong, ongoing communication and collaboration among workforce agencies, education providers, employers, and community partners. Employer leadership plays a vital role in driving programs forward. Colorado is actively working to deepen these partnerships through state-level coordination efforts.
- **Using data to measure impact is a priority.** As Colorado expands apprenticeships and develops degree pathways in new and emerging industries, the state is focused on demonstrating a clear return on investment for colleges and employers. A key strategy is using a statewide longitudinal data system to track apprentice progress and outcomes. These data will support cross-sector buy-in and informed decision-making and tell the story of apprenticeship effectiveness.
- **Ensuing credit is stackable matters.** Colorado is focused on ensuring the stackability of credits and credentials for apprentices. Historically, apprentices may have earned college credit through their programs but did not have a clear way to apply those credits toward a credential or degree. To address this, the state is working to develop and share clear information, particularly with employers, about how apprenticeship programs can align with academic pathways. As new pathways are created, Colorado emphasizes the importance of designing them so that each step intentionally builds toward the next, making it easier for apprentices to continue their education and advance in their careers.
- **Providing student support is essential to apprentice success.** In Colorado, some colleges have dedicated apprenticeship navigators who guide apprentices throughout their educational journey. These navigators help apprentices plan their courses, connect to resources, and stay on track. While apprentices typically have a mentor on the job, stakeholders emphasized the importance of also having a point of support at the college, someone who understands the academic side of their experience and can help them navigate both classroom and career pathways.

Acknowledgments

Education Northwest would like to thank the following individuals for their time and contributions that made this case study possible:

- Denise Miller, Ed.D., Director of Apprenticeship Colorado
- Renee Welch, Director of Career Connected Learning and Workforce Development, Colorado Department of Higher Education

- Amanda Olmedo and Keysha Boggess, Workforce and Community Programs, Arapahoe Community College

Sources

Arapahoe Community College. (n.d.). Apprenticeships. https://www.arapahoe.edu/academics-programs/resources/academic-experiences/apprenticeships

Colorado Department of Education. (n.d.). Teacher Degree Apprenticeship Program. https://www.cde.state.co.us/educatortalent/teacher-apprenticeship

Colorado Department of Higher Education. (n.d.). About us. https://cdhe.colorado.gov/about-us

Colorado Department of Higher Education. (n.d.). https://cdhe.colorado.gov/colorado-collegiate-apprenticeship-program

Colorado Department of Labor and Employment
Apprenticeship Colorado. (n.d.). Apprenticeship Colorado. https://apprenticeship.colorado.gov/

Colorado Department of Labor and Employment
Apprenticeship Colorado. (n.d.). Apprenticeship legislation & policy. https://apprenticeship.colorado.gov/about/apprenticeship-legislation-policy

Colorado Workforce Development Council. (n.d.). Work-based learning. https://cwdc.colorado.gov/strategies/work-based-learning

APPRENTICESHIP AND HIGHER EDUCATION

Case Study: Indiana

June 2025

Education Northwest researched national practices in awarding educational credentials to apprentices, focusing on how selected states award college credit and degrees.[1] This case study explores apprenticeship and higher education in Indiana. Through online research and interviews with representatives of Indiana's workforce and higher education systems, we identified promising practices that could offer valuable insights for Washington State. Indiana's strong partnerships and communication among apprenticeship and higher education partners, a unified statewide community college system, and engaged champions and leaders emerged as key lessons.

Indiana's apprenticeship and higher education system have grown more connected over time

Indiana officially established the Indiana Office of Work-Based Learning and Apprenticeship (OWBLA) within the Department of Workforce Development (DWD) via executive order in 2018. OWBLA now operates as part of the Office of Workforce Solutions and Engagement, a broader employer-facing team that promotes registered apprenticeships, state "earn-and-learn" programs, and pre-apprenticeship pathways.

As an Office of Apprenticeship state, the U.S. Department of Labor oversees Indiana's registered apprenticeship system. The state currently serves around 25,000 active apprentices (approximately 0.7% of Indiana's 3.4 million employed individuals), tying for the country's highest per capita rate of registered apprenticeships. Most apprentices are concentrated in construction and advanced manufacturing, though participation in nontraditional sectors such as healthcare, IT, and education is growing rapidly.

[1] This work was conducted in support of Washington State Senate Bill 5764, with guidance from the William D. Ruckelshaus Center.

A distinctive feature of Indiana's higher education landscape is its single, statewide community college system, Ivy Tech Community College, which serves more than 200,000 students across 19 main campuses and 45 sites. Vincennes University, the state's first public higher education institution, is another key two-year institution, serving nearly 20,000 students.

The relationship between Ivy Tech and the state's registered apprenticeship system dates to the 1980s when the college began providing classroom space for apprentices. This collaboration was partly driven by a union-friendly Ivy Tech president who initiated conversations with local apprenticeship programs. Ivy Tech decided to pursue a degree pathway for apprentices and sent representatives to training centers across the trades. What began with four pilot programs has now expanded to partnerships with 61 training centers statewide.

Today, Ivy Tech campuses include building trades representatives on their local advisory boards and regularly participate in joint meetings. As apprenticeship programs update curricula, Ivy Tech aligns its course records accordingly. The current Ivy Tech president brings extensive experience in workforce development, which is expected to strengthen ties between the college and apprenticeship programs even further.

Within the DWD, the director of OWBLA is uniquely positioned to support across systems due to a background in postsecondary career and technical education. This cross-sector experience allows the state to better align apprenticeships with higher education priorities. For instance, DWD is working with the Indiana Commission for Higher Education to explore and formalize pathways apprentices can use to earn postsecondary credentials.

This kind of cross-institutional knowledge and collaboration has helped each system see the value of working together and has fostered ongoing joint efforts to expand opportunities for both apprenticeship participants and traditional college students.

Sponsors determine and fund related instruction

Related supplemental instruction in Indiana can be delivered by a range of providers, including community colleges and universities, union training centers, employer sponsors, or private training providers. Instructors must meet state requirements to teach career and technical education or be recognized as subject matter experts. Indiana follows federal apprenticeship regulations, which require at least 144 hours of instruction for every 2,000 hours of on-the-job learning. Instruction can be offered in traditional, hybrid, and competency-based formats.

Apprenticeship program sponsors are responsible for developing and delivering RTI. They determine their preferred provider(s), establish course content, and tailor curricula to meet workforce needs. In some cases, sponsors coordinate across multiple providers, for example, combining internal company training, a third-party equity training vendor, and instruction from a local college campus or center. Ivy Tech delivers approximately half of the related instruction across the state.

Apprentices in Indiana have their RTI fully funded through their sponsors that receive state funding. There are three main ways the state provides funding:

- **Pell Grants:** Federal funds used by apprentices to cover the cost of for-credit instruction
- **Workforce Ready Grants:** Employers can apply for state-funded grants to provide certificates (up to 15 credit hours) for incumbent worker training, ranging from $3,000 to $5,000 per individual up to $50,000 per employer
- **Penalties and Interest Grants:** Funded by fines collected from state unemployment insurance fraud cases, these grants provide $4 to 5 million annually to Ivy Tech and Vincennes University to support general education classes for apprentices

Indiana has developed a degree pathway for apprentices

Indiana has provided associate degrees to apprentices for over 30 years. Ivy Tech's Building Trades Apprenticeship Technology degree program allows apprentices to earn college credit for related instruction while completing on-the-job training. Unlike credit-for-prior-learning models that award credit at the end, Ivy Tech integrates credit-bearing instruction throughout the apprenticeship. Apprentices take courses continuously, receive grades, and earn official Ivy Tech transcripts as they progress. As enrolled students, apprentices access full college services, including advising and library resources.

Ivy Tech provides the general education coursework, while apprenticeship sponsors deliver technical instruction and on-the-job training. The technical instruction resembles a dual credit model, where apprentices earn college credit through instruction at their training centers. Apprentices generally take one to two general education courses per year as they work toward their degree. The program requires 60 credits total: 18 general education credits, 1 institutional requirement, and 41 professional/technical credits.

To better align the curriculum with apprenticeship needs, Ivy Tech and trade partners have collaboratively adapted and integrated coursework:

- General education courses are tailored to the apprenticeship context, for example, offering Technical Writing in the Workplace instead of a general writing course. In another example, Ivy Tech changed the name of the interpersonal communication class to Human Relations in the Workplace to align more with apprenticeship terminology.
- Trade-developed technical courses are formally adopted into Ivy Tech's course catalog, ensuring they count toward academic credit.

This collaboration allows Ivy Tech and apprenticeship sponsors to co-market programs that lead to both a U.S. Department of Labor apprenticeship certificate and an Ivy Tech degree. This dual recognition is especially appealing to apprentices and their families.

Approximately 40 to 50 percent of apprentices in Indiana earn an Applied Associate of Science degree in Apprenticeship Technology by the end of their apprenticeship. Over the past 30 years, Ivy Tech has awarded around 30,000 such degrees.

Additionally, Ivy Tech maintains articulation agreements with other institutions, enabling apprentices to transfer credits toward a bachelor's degree. While most apprentices enter the workforce upon graduation, a small percentage (5 to 8%) continue to earn four-year degrees. Apprentices have transferred to schools like Rowan University, Purdue Northwest, Indiana University, Western Governors University, and Indiana State to pursue degrees in construction management, leadership, or business, often with the goal of owning their own companies. Rowan accepts all 60 credits from Ivy Tech's associate degree, while Purdue Northwest and IU accept up to 50. Fewer students pursue engineering or architecture due to more limited transfer pathways.

Indiana is looking to expand degree pathways

There is high interest in Indiana to continue expanding degree pathways for apprentices. The DWD is in the process of developing the Indiana Degree Apprenticeship Program, which introduces a tiered apprenticeship model spanning from pre-apprenticeship to leadership roles:

- **Level 1: Pre-Apprenticeship** provides foundational exposure and preparation for entry into an apprenticeship.
- **Levels 2 and 3: Technician Apprenticeships** are programs where participants work full-time while taking two college courses at a time. Ivy Tech delivers instruction in two 16-week terms per academic year. This level results in an AAS degree for apprentices.
- **Level 4: Leadership Apprenticeship** is designed for experienced workers preparing for supervisory or management roles. Apprentices earn a bachelor's degree at this level.

DWD is developing a crosswalk that aligns Ivy Tech coursework with occupational competencies and apprenticeship levels. This includes reviewing Ivy Tech's certificate programs—particularly those eligible for workforce grant funding at the 15- and 30-credit hour levels—and identifying how they align with high school CTE coursework, industry certifications, and on-the-job training.

As part of this effort, Indiana used the Urban Institute's classification framework to map 30 apprenticeship pathways and cross-referenced them with all 900 occupations listed in the state's RAPIDS database. This analysis examined degree requirements for each occupation and identified program areas experiencing rapid growth. The state plans to expand this review to include Indiana University and centralize related information to help learners and employers identify aligned programs.

The Richard M. Fairbanks Foundation is supporting a privately funded effort to adapt Switzerland's dual vocational education model for Indiana high school students. The Foundation has sponsored trips for education and industry leaders to study the Swiss system and inform local implementation. More than 300 individuals are involved in developing a youth apprenticeship model in which students complete apprenticeships while in high school and graduate with a state-approved "employment plus" diploma seal, signaling college and career readiness. While not formally registered with the state, the initiative highlights the growing role of philanthropy and Swiss influence in shaping emerging youth apprenticeship models.

Indiana offers several lessons to learn

In developing pathways to credentials for apprentices, Indiana has benefited from several factors:

- **Strong communication and partnerships.** Over the past 30 years, Indiana's higher education and apprenticeship systems have built a strong working relationship grounded in mutual respect and shared goals. This collaboration has been sustained by leaders on both sides who are genuinely invested in partnering and have created structures to support ongoing coordination. For example, trade partners serve on Ivy Tech's advisory boards, and the college regularly revises its curriculum based on input from those partners. Because higher education and apprenticeship systems often use different terminology and operate under different norms, frequent and intentional communication is essential. From the beginning, it's important to involve the right players, including union leaders, educators, and employers, in decision-making to build shared buy-in and ownership.
- **A unified statewide community college system. I**ndiana's single, statewide community college system, Ivy Tech, offers a strong example of how centralized coordination can advance degree-connected apprenticeships. Because Ivy Tech operates under a single accreditation and serves the entire state, it can align curricula with apprenticeship and

workforce requirements, standardize credit-bearing instruction, and scale programs across diverse regions. Its long-standing partnership with trade programs has led to the development of the AAS in Apprenticeship Technology, which embeds general education into apprenticeship training and enables nearly half of graduates to earn a degree. For other states where the community college system is more decentralized, greater alignment across community colleges could help normalize and expand access to degree pathways for apprentices.

- **Engaged champions and leaders.** Indiana's degree pathway has been driven by leaders in both higher education and apprenticeship who brought deep experience across systems and used it to align priorities. Ivy Tech leadership proudly champions the integration of apprenticeship into degree pathways. Similarly, a DWD leader with experience in postsecondary career and technical education helps advance apprenticeships within the higher education space. These cross-sector champions play a critical role in aligning priorities, strengthening system ties, and embedding apprenticeships into the state's broader education and workforce strategies. Philanthropic partners, like the Richard M. Fairbanks Foundation, also provide key resources to fill gaps and support long-term innovation in this space. Indiana's experience shows that having dedicated leaders who believe in apprenticeship-degree pathways and who can bridge systems is vital to making them work.

Acknowledgments

Education Northwest would like to thank the following individuals for their time and contributions that made this case study possible:

- Jason Graves, Senior Director, Indiana Office of Work-Based Learning and Apprenticeship
- Teresa Hess, Assistant Vice President of Apprenticeships and Work-Based Learning, Ivy Tech Community College
- Chris Lowery, Commissioner, Indiana Commission for Higher Education
- Claire Fiddian-Green, Chief Executive Officer, the Richard M. Fairbanks Foundation

Sources

Indiana Department of Workforce Development. (n.d.). Office of work-based learning and apprenticeship. https://www.in.gov/dwd/owbla/

Indiana Department of Workforce Development. (n.d.). Registered apprenticeship process guide. https://www.in.gov/dwd/owbla/files/DWD_OWBLA_Registered_Apprenticeship_Process_Guide.pdf

Ivy Tech Community College. (n.d.). Apprenticeship technology - building trades. https://catalog.ivytech.edu/preview_entity.php?catoid=1&ent_oid=14&returnto=35

The Richard M. Fairbanks Foundation. (n.d.). Building the Indiana career apprenticeship pathway. https://www.rmff.org/our-work/ilabindiana/

Vincennes University. (n.d.). About VU. https://www.vinu.edu/about-vu/index.html

APPRENTICESHIP AND HIGHER EDUCATION

Case Study: Wisconsin

June 2025

Education Northwest researched national practices in awarding educational credentials to apprentices, focusing on how selected states award college credit and degrees.[1] This case study explores apprenticeship and higher education in Wisconsin. Through online research and interviews with representatives of Wisconsin's workforce and higher education systems, we identified promising practices that could offer valuable insights for Washington. Wisconsin's strong collaboration between the state's workforce agency and technical colleges, active engagement with employers, and statewide commitment to advancing apprenticeship emerged as key lessons.

Wisconsin's apprenticeship and technical college systems are long-time partners

Wisconsin has played a pioneering role in apprenticeship in the United States. The state's Apprenticeship Law (ss 106.01), enacted in 1911, was the first of its kind in the United States and became the model for the National Apprenticeship Act passed in 1937. Wisconsin also passed the Industrial Education Act in 1911, authorizing the creation of trade schools to provide related instruction to apprentices. These trade schools, which later evolved into the Wisconsin Technical College System (WTCS), represented the first statewide system of vocational, technical, and adult education in the United States. This dual model of hands-on learning and formal education shaped the state's approach to workforce development and influenced federal apprenticeship policy.

The state's Department of Workforce Development's Bureau of Apprenticeship Standards (DWD-BAS) registers and oversees all apprenticeships in Wisconsin. Oversight and advisory responsibilities are shared through a network of statewide and local committees. Similarly, the governance of WTCS is shared between a state agency and local boards.

[1] This work was conducted in support of Washington State Senate Bill 5764 (2022), with guidance from the William D. Ruckelshaus Center.

Wisconsin's registered apprenticeship system serves more than 17,000 apprentices (0.6% of the 3 million employed individuals), mostly in construction and manufacturing. The state also has a robust youth apprenticeship program—nearly 10,000 Wisconsin youth participated in an apprenticeship program during the 2023–24 school year.

The WTCS consists of 16 colleges serving more than 270,000 students annually and offers more than 500 programs, including associate degrees, diplomas, and certificates. Although the state does not operate "community colleges" in name, WTCS colleges function in that role, providing affordable postsecondary education and workforce training across Wisconsin.

DWD-BAS and WTCS work in close partnership. For example, WTCS staff members serve on apprenticeship advisory boards, and the Secretary of the DWD holds a seat on the WTCS board of directors. This cross-agency collaboration extends to curriculum development, which is shaped through joint efforts involving faculty members, industry partners, and state agency staff members. Together, WTCS and DWD-BAS ensure that apprenticeship training is rigorous, aligned with labor market needs, and accessible to a broad range of people across Wisconsin.

Wisconsin technical colleges deliver most apprenticeship-related supplemental instruction

WTCS colleges are the primary provider of related supplemental instruction (RSI) for registered apprenticeships in the state. Currently, there are 278 approved apprenticeship programs connected to the 16 technical colleges. Each college delivers RSI (which is called "paid related instruction" in Wisconsin) in one or more programs, with some colleges providing RSI for more than 20 apprenticeship programs.

Wisconsin registered apprenticeship programs typically require at least 2,000 hours of on-the-job training and a minimum of 144 hours per year for RSI for programs lasting two years or less, or at least 400 hours for longer programs. Wisconsin is unique in requiring that apprentices be paid not only for their on-the-job training but also their RSI classroom time. Most apprentices attend classes for a full day every other week.

DWD-BAS does not set tuition policies for RSI; instead, WTCS bills apprentices directly. Tuition for RSI remains relatively affordable: At the time of writing, a one-credit course (36 hours of instruction) costs approximately $170. Sponsors typically reimburse RSI tuition costs as part of their strategies to recruit and retain talent, but this is negotiated separately between sponsors and apprentices.

All apprentices enrolled in WTCS programs are considered full students and have access to the same campus services as their peers—ranging from academic support, such as tutoring, to mental health resources. Recognizing that apprentices may have unique schedules or study at remote campuses, colleges have worked to expand service availability and visibility for apprentices. This includes targeted outreach, enhanced remote access to resources, and dedicated staff members to support apprentices.

For example, at Lakeshore College, staff members visit apprenticeship classes to introduce themselves and ensure students are aware of available services and support. The college also designates staff members to handle the day-to-day logistics of apprenticeship enrollment and to serve as a point of contact for employers, providing updates on apprentice attendance and progress toward completion.

While technical colleges remain the primary source of related instruction, the state has seen growth in the use of independent training providers, particularly in rural areas where geographic access to colleges can be limited. In these cases, employers may partner with online platforms like Penn Foster, which offer coursework aligned to WTCS standards and approved by DWD-BAS.

Wisconsin's four-year universities have traditionally not played a major role in apprenticeship training. This is beginning to change. In 2025, the University of Wisconsin-Stout partnered with DWD-BAS to launch a Workforce Development Specialist Certificate program. Additionally, the University of Wisconsin-Whitewater is exploring the possibility of incorporating an apprenticeship model in its teacher preparation programs. These efforts signal growing interest in expanding apprenticeship pathways in Wisconsin higher education.

Employers can receive funding and support for apprenticeships through state, federal, and foundation grants and initiatives that cover related instruction and on-the-job training. Funding sources that have been used to support apprenticeships in Wisconsin include:

- **Apprenticeship Completion Award Program:** Launched in 2013, this state program reimburses apprentices or their sponsors up to $1,000 or 25 percent of tuition costs (whichever is lower). Eligibility requires the apprentice to either be in active status and good standing during their first year or to have completed the program and remain employed.
- **Wisconsin Youth Apprenticeship Grants**: These state grants provide up to $1,100 per youth apprentice for programs serving at least 25 students.
- **Wisconsin Fast Forward Grants:** These competitive state grants range from $5,000 to $400,000 and help employers cover the costs of occupational training for workers.
- **Ascendium Education Group**. This national foundation has supported the Wisconsin Technical College System for over a decade, funding $2,000 scholarships for apprentices to cover training-related expenses such as tools, equipment, clothing, and tuition.

Apprentices can earn college credit for their related supplemental instruction

In response to growing interest in formal academic recognition of apprenticeship training, the WTCS developed the Technical Studies – Journeyworker associate degree. Apprentices who successfully complete a program that includes at least 400 hours of RSI delivered through WTCS are eligible to receive up to 39 technical studies credits toward the 60-credit degree. To complete the remaining credits, apprentices must fulfill 21 general education requirements (typically five to seven courses), including coursework in math, English, social sciences, and other subjects. The Journeyworker associate degree is transferable to universities within the University of Wisconsin system for those pursuing a bachelor's degree. According to WTCS data, in 2024, 148 apprentices enrolled in the degree program and 41 graduated. Since 2019, 25 degrees have transferred, with almost half going to institutions in the University of Wisconsin system.

WTCS is also working to more closely link apprenticeship coursework to academic credit. Apprenticeship courses can be offered using either apprenticeship-specific course codes, which do not explicitly apply to college credentials, or academic course codes, which apply directly to college credentials such as technical diplomas or associates degrees. Many new apprenticeship programs, especially those in emerging fields, are developed using academic-coded courses. This approach enables apprentices to simultaneously complete their RSI and earn college credit toward a degree.

For example, WTCS recently launched its first apprenticeship-based associate degree program in nursing. Apprentices in this program take the same courses as traditional nursing students and earn credit toward an associate degree, leveraging on-the-job learning to demonstrate competencies.

At the high school level, Wisconsin technical colleges and school districts—working with regional youth apprenticeship consortia—are encouraged to develop local articulation agreements that allow youth apprentices to earn college credit for their related class work and on-the-job leaning. This pathway uses credit-bearing dual enrollment courses, allowing students to earn high school and college credit at the same time. Additionally, youth apprentices can request a credit evaluation for their documented classroom and work-based learning experiences under a credit-for-prior-learning policy when they enroll in a technical college.

Wisconsin is leveraging collaboration and commitment to develop pathways to credentials

One of the main goals in DWD-BAS's 2024–2027 strategic plan is for apprenticeship program completion to be recognized by Wisconsin's higher education system as a pathway to degrees and career advancement. Several strategies are proposed to achieve this:

- Working toward the acceptance of apprenticeship program completion in the higher education system as credit for prior learning or as an embedded degree.
- Increasing collaboration with Wisconsin's higher education system and DWD-BAS to incorporate credentials and degrees as part of an apprenticeship program.
    - Provide the opportunity to earn an associate or bachelor's degree while completing an apprenticeship program.
    - Provide opportunities for apprentices to earn college credit that can be applied toward an advanced credential, including a technical diploma, an associate degree, or a bachelor's degree.

For its part, WTCS prioritizes investment in apprenticeships as part of its Guided Pathways framework, which focuses on providing clear, structured pathways for students to achieve their academic and career goals. Apprenticeships continue to be a state priority and a WTCS institutional mission.

Of particular interest to WTCS is the use of credit for prior learning, which allows individuals to earn postsecondary credit through formal assessments of their past experiences and training. WTCS is currently exploring ways to offer this opportunity for individuals who complete RSI through non-WTCS providers. Additionally, WTCS is looking to expand youth apprenticeships, particularly in fields like early childhood education. Their goal is to bridge youth apprenticeships to registered apprenticeship pathways and career opportunities.

In developing pathways to credentials for apprentices, DWD-BAS and WTCS have benefited from several factors:

- **A structural partnership between DWD-BAS and WTCS**. From its beginnings, WTCS was designed to support apprenticeship-related training, which helped create a long-standing structural partnership between the two entities. DWD-BAS and WTCS are interconnected through mutual board membership, annual partnership meetings, and ongoing communication to address emerging issues. This formal collaboration ensures a system that remains effective and provides continuity through leadership and personnel changes.

- **Strong relationships with employers**. WTCS has built and maintained strong relationships with employers across the state. All 16 technical colleges work closely with local employers, who trust the colleges to deliver high-quality education and training. WTCS collaborates with employers to ensure apprentices receive the instruction and support they need to succeed and strengthen the workforce.
- **A shared vision and commitment to apprenticeship**. Wisconsin has offered registered apprenticeships since 1911, demonstrating a deep, sustained commitment to apprenticeship as a pathway to economic security for individuals and families and as a strategy for building a strong, highly skilled workforce. This commitment is widely shared across state leadership, including the governor, and among other stakeholders, in addition to WTCS and DWD-BAS.

Wisconsin's pioneering role in apprenticeship and its ongoing efforts to enhance and expand pathways to credentials for apprentices can offer lessons for other states. The close integration of the state workforce development agency and the technical college system, strong employer trust, and innovative approaches such as credit for prior learning and degree-aligned apprenticeships in emerging fields make Wisconsin well-positioned to advance opportunities for its apprentices.

Acknowledgements

Education Northwest would like to thank the following individuals for their time and contributions that made this case study possible:

- Jim Lemerond, Bellingham Technical College
- Lucas Dulmes, Lakeshore Technical College
- Benjamen Stahlecker, Wisconsin Department of Workforce Development
- Chrystal Seeley-Schreck, Wisconsin Technical College System
- Katy Pettersen, Wisconsin Technical College System

Sources

Ascendium Education Group. (2024). *Skills boost: Wisconsin Technical College System apprentices receive $1.6M in scholarships from Ascendium*. https://www.ascendiumeducation.org/newsroom/all-news-releases/skills-boost-wisconsin-technical-college-system-apprentices-receive-1-6m-in-scholarships-from-ascendium/

Lakeshore College. (n.d.). *Apprenticeship frequently asked questions*. https://gotoltc.edu/programs-and-courses/apprenticeship/faqs

Lerman, R., & Tyson, L. (2023). *Wisconsin's well-structured youth apprenticeship program*. Urban Institute. https://www.urban.org/research/publication/wisconsins-well-structured-youth-apprenticeship-program

Milwaukee Area Technical College. (n.d.). *Apprentices earning credit for prior learning and experience*. https://www.matc.edu/admissions-registration/cple/cple-apprenticeships.html

Schulz, J. (2024, January 10). *UW-Stout partners with DWD to offer 'train the trainer' apprenticeship program*. Wisconsin Public Radio. https://www.wpr.org/economy/uw-stout-partners-with-dwd-to-offer-train-the-trainer-apprenticeship-program

Schulz, J. (2024, December 5). *Wisconsin again sets record for number of registered apprentices*. Wisconsin Public Radio. https://www.wpr.org/news/wisconsin-sets-record-jobs-number-registered-apprentices

Washington State Legislature. (2022). *SB 5764 concerning apprenticeships and higher education*. https://app.leg.wa.gov/billsummary?BillNumber=5764&Initiative=false&Year=2021

Western Technical College. (n.d.). *Apprenticeship*. https://www.westerntc.edu/Apprenticeship

Wisconsin Department of Workforce Development. (2016). *Appendix F: Post secondary credits*. https://dwd.wi.gov/apprenticeship/ya/pdf/afnr/app_f.pdf

Wisconsin Department of Workforce Development. (2020). *Wisconsin Youth Apprenticeship manual*. https://dwd.wisconsin.gov/apprenticeship/ya/pdf/ya-rpp-manual-2020.pdf

Wisconsin Department of Workforce Development. (2021). *DWD learning agenda 2021–2025*. https://dwd.wisconsin.gov/wdis/pdf/210510-learning-agenda.pdf

Wisconsin Department of Workforce Development. (2022). *Wisconsin registered apprenticeship manual*. https://dwd.wisconsin.gov/apprenticeship/pdf/wisconsin-apprenticeship-manual-revised.pdf

Wisconsin Department of Workforce Development. (2025). *DWD highlights results for Year of the Worker in 2024 annual report*. https://dwd.wisconsin.gov/press/2025/250109-annual-report.htm

Wisconsin Department of Workforce Development. (n.d.). *Apprenticeship Completion Award Program*. https://dwd.wisconsin.gov/apprenticeship/acap.htm

Wisconsin Department of Workforce Development. (n.d.). *Apprenticeship in Wisconsin: Fulfilling the needs of industry*. https://dwd.wisconsin.gov/apprenticeship/pdf/apprenticeship-booklet.pdf

Wisconsin Department of Workforce Development. (n.d.). *Apprenticeship resources and data*. (https://dwd.wisconsin.gov/apprenticeship/facts-data.htm).

Wisconsin Department of Workforce Development. (n.d.). *WDIS data dashboards*. https://dwd.wisconsin.gov/wdis/dashboards.htm

Wisconsin Department of Workforce Development. (n.d.). *Wisconsin Fast Forward grants*. https://wisconsinfastforward.com/wff_standard.htm

Wisconsin Department of Workforce Development. (n.d.). *Youth Apprenticeship grant information*. https://dwd.wisconsin.gov/apprenticeship/ya/grants.htm

Wisconsin Department of Workforce Development, Bureau of Apprenticeship Standards. (2023). *Bureau of Apprenticeship Standards 2024–27 strategic plan*. https://www.dwd.wisconsin.gov/apprenticeship/pdf/BAS-2023YearInReview.pdf

Wisconsin Department of Workforce Development, Bureau of Apprenticeship Standards. (2023). *Wisconsin Registered Apprenticeship manual*. https://dwd.wi.gov/apprenticeship/pdf/deta-13246-p.pdf

Wisconsin Technical College System. (n.d.). *Apprenticeships*. https://www.wtcsystem.edu/programs/other-educational-opportunities/apprenticeships/

Wisconsin Technical College System. (n.d.). *Employment and salary data for 2022–23 apprentices*. https://wtcsystem.edu/assets/Uploads/Publications/Report/2022-23-WTCS-Apprenticeship-Completion.pdf

Wisconsin Technical College System. (n.d.). *History*. https://www.wtcsystem.edu/about/history/

Wisconsin Technical College System. (n.d.). *System Board*. https://www.wtcsystem.edu/about/wtcs-board/

Wisconsin Technical College System. (n.d.). *Technical Studies - Journeyworker Programs*. https://www.wtcsystem.edu/programs/find-your-program/technical-studies-journeyworker/