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From High School to Workforce: Dual Enrollment Case Studies



AT A GLANCE

In this brief, JFF highlights three case studies of innovative programs that illustrate how dual enrollment can be used as a strategy to meet workforce goals.

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About JFF

Jobs for the Future (JFF) transforms U.S. education and workforce systems to drive economic success for people, businesses, and communities. www.jff.org





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Introduction

Dual enrollment programs are important mechanisms for talent development and meeting workforce needs through partnerships and alignment between education and the workforce. By allowing high school students to earn college credit—particularly in career-aligned fields—these programs support smoother transitions into postsecondary education and employment. [Research consistently shows](#) that dual enrollment improves rates of high school graduation, college enrollment and completion, and college credit accumulation.¹

As [student participation in dual enrollment grows nationwide](#), states are adopting a wide range of dual enrollment models, often under different names, that reflect local priorities and partnerships.² At Jobs for the Future (JFF), we believe that some of the most promising

programs are those that intentionally and strategically connect and accelerate students to high-demand career pathways and promising credentials through collaboration between K-12 systems, higher education institutions, and employers. Promising credentials are those that are stackable and portable and prepare young people for jobs that can lead to careers in fields that offer well-paid jobs and opportunities for economic advancement.

This brief includes three case studies highlighting innovative programs that illustrate how dual enrollment can be used as a strategy to meet workforce goals. Two case studies feature program-level designs with strong career alignment, and one showcases a course-level innovation. While the structures vary, each example demonstrates how dual enrollment can serve as a powerful tool for preparing students for both college and careers.

01.

Cooperative Innovative High Schools in North Carolina



Early college high schools across the United States allow students to earn significant college credit with the possibility of completing an associate's degree by the time they graduate from high school. Students experience a thoughtfully designed curriculum and course sequence that maximizes opportunities for dual enrollment with postsecondary education partners. Students in early college high schools also receive extensive academic and social support to ease the transition to college coursework.

In the early 2000s, North Carolina established its version of the early college high school model which it calls Cooperative Innovative High Schools (CIHS). CIHSs are public high schools typically located on a community college or university campus that target students at risk of not graduating, first-generation college students, and students who would benefit from accelerated learning. CIHS programs make strong connections to regional labor markets and give students the opportunity to earn an associate's degree or postsecondary credits that transfer to in-state four-year degree programs. The CIHS model has expanded in recent years to include career-focused programs in health sciences, advanced manufacturing, welding, and other STEM fields. The CIHS model's wider scope enables employers and businesses to join these programs as strong partners, which helps students develop their professional networks and ultimately access in-demand jobs.

CIHSs have seen strong student outcomes compared to other programs across the state. For example, a [recent evaluation](#) found that CIHS students earned \$6,133 more in cumulative wages within seven years of starting high school than North Carolina students who did not participate in CIHS programs.³ These positive wage impacts were prevalent across multiple student groups in CIHS, including almost all racial/ethnic groups, females, and those from all economic backgrounds.

\$6,133

Research shows that CIHS students may earn \$6,133 more in early-career wages than peers who don't participate in CIHS programs.

Local Example: Hawthorne Academy of Health Sciences

[Hawthorne Academy of Health Sciences](#) in Charlotte is a CIHS program that prepares students for careers in health care through four specialized pathways: [Nursing](#), [Radiologic Technology](#), [Neurodiagnostic Technology](#), and [Healthcare Simulation](#).⁴ Each pathway offers students the opportunity to earn both a high school diploma and an associate's degree in partnership with Carolinas College of Health Sciences, so all pathways share a common set of general education requirements. This structure allows students to easily switch focus areas if their interests change and accelerate their path into the health care workforce.

A key strength of the program is its close collaboration with Atrium Health, one of the largest nonprofit health systems in the United States. One particularly unique element of this partnership is that Atrium Health owns Carolinas College of Health Sciences, meaning Hawthorne Academy's partners are already aligned in designing a thoughtful student experience. The partnership with Atrium Health not only ensures that the curriculum aligns with current industry needs but also provides students with [direct exposure to health care professionals](#).⁵ Atrium Health offers Hawthorne Academy students career panel discussions, "Day in the Life" job shadowing experiences, and a six-week paid summer internship on-site at Atrium Health during the summer following their junior year. Students gain real workplace experience through this internship in various Atrium Health departments, including radiology, nursing, and pharmacy.

Students prepare for these work-based learning opportunities with Atrium Health through hands-on learning experiences at Hawthorne Academy throughout the program. Students practice their skills in realistic, safe environments using advanced medical manikins, which helps to bridge the gap between classroom instruction and real-world application.





Enabling Policies

North Carolina's [Career and College Promise \(CCP\) program](#) allows eligible high school students to enroll in college courses while in high school.⁶ The CCP offers three pathways: College Transfer for students who want to continue their education after high school in an associate's or bachelor's degree program, Career & Technical Education for students who want to begin working toward a certification in a technical field or career area, and CIHS.

The [state law establishing the CIHS initiative](#) created a statewide Joint Advisory Committee (JAC) to oversee the program.⁷ The JAC unites leaders across North Carolina's education systems, including the North Carolina Department of Public Instruction (a K-12 agency), the North Carolina Community College System, the University of North Carolina System, and the North Carolina Independent Colleges and Universities organization.

In many states, P-16/20 councils are charged with fostering stronger collaboration and alignment across education systems but often struggle to make a lasting impact due to limited funding, staff capacity, and decision-making authority.⁸ The JAC is different because it is written into state law, which makes it more influential and sustainable. Members meet regularly throughout the academic year to provide oversight and guidance for the CIHS program. They collaborate to provide technical support, resource development, policy implementation, and data collection and analysis, with each member contributing unique expertise and resources to meet schools' needs.

02.

P-TECH High Schools in Texas



The Pathways in Technology Early College High School (P-TECH) model is a unique approach to early college education in which students follow an industry-aligned pathway for four to six years (duration depends on state and location), earning both a high school diploma and credits toward an associate's degree, with college and employer partners providing access to mentorship and advising services, paid work-based learning opportunities, and career exploration experiences. IBM played a central role in developing and launching the P-TECH model to expand tech talent pipelines and offer young people from communities that are underserved by systems and institutions an innovative education opportunity with a direct pathway to college attainment and career readiness. Since the first P-TECH program was established in Brooklyn, New York, in 2011, hundreds of P-TECH programs aligned with various industry sectors have been established across the United States and in several international locations. In 2017, Texas expanded its early college offerings to include the P-TECH model and provided guidance on how these programs should be structured.

Texas P-TECH programs are open-enrollment, offering students workforce pathways aligned with high-demand, high-wage fields throughout the state. Students in these programs pursue both a high school diploma and an associate's degree or a postsecondary certificate and engage in work-based learning at every grade level. P-TECH programs in Texas:

- ✓ Enable students to earn a high school diploma along with an associate's degree, a postsecondary certificate, or an industry certification at no cost within four years
- ✓ Allow students to gain work experience through an internship, apprenticeship, or other job training program
- ✓ Align to regional workforce needs, guiding students into high-demand, high-wage careers
- ✓ Partner with Texas Institutions of Higher Education (IHE) and regional businesses and industries, giving students access to postsecondary education and workforce training



Adamson P-TECH Student Stats

120

students earned
associate's degrees
from 2022 to 2024.

25

students have gone
on to work for
American Airlines.

Local Example: W.H. Adamson P-TECH

W.H. Adamson P-TECH is one of 26 P-TECH programs in the [Dallas Independent School District](#) (ISD).⁹ The program [accepts up to 125 students](#) per academic year who move through the program together as a cohort.¹⁰ Students begin dual credit coursework in grades 9 and 10 in a dedicated building on the Adamson campus designed specifically for P-TECH students. In their junior and senior years, students travel to the Dallas College El Centro Campus as full-time college students to complete their degrees; transportation is provided at no cost to students. P-TECH students at the El Centro campus can receive an Associate of Arts in one of two pathways: computer networking and computer programming. These programs prepare students to either transfer to a four-year college or university to pursue a bachelor's degree or enter the workforce directly with an in-demand credential. Graduates are prepared for a wide range of careers in the information technology sector, including roles in web development, computer programming, and software development. From 2022 to 2024, 120 Adamson P-TECH students earned associate's degrees, according to Dallas Independent School District (ISD).

Students also participate in work-based learning experiences throughout the program with Adamson P-TECH's two industry partners: American Airlines and IBM. These companies begin engaging with students in their first year of the P-TECH program through guest speaking appearances and job fairs. They also offer students support with mock interviews and resume workshops before extending opportunities for six-week paid internships. More than 60 students participate in internships per year, and they receive supervision and guidance from team leads and mentors. Students combine real-world experience with their associate's degree or certificate coursework, giving them a competitive edge in the workforce through both an in-demand credential and hands-on work experience. American Airlines has established a pipeline for students to transition from an internship to part-time or full-time roles; 25 Adamson P-TECH students have secured employment with American Airlines.



Enabling Policies

When [Texas Senate Bill 22](#) became law in 2017, it provided guidelines for structuring P-TECH programs and called for the establishment of a statewide P-TECH advisory council to guide their development.¹¹ The council's members were appointed by the governor and other senior state leaders, who ensured that there was representation from school districts, IHEs, and industry or business partners. These council members established [P-TECH Blueprint](#) criteria, including outcomes-based measures for P-TECH programs and criteria for official designation as a P-TECH program.¹²

In 2023, [Texas House Bill 8](#) became law and shifted funding for community colleges in Texas to an outcomes-based model, which ties funding more directly to successful student outcomes (using metrics like credentials of value awarded and course completion rates, for example).¹³ This legislation incentivizes community colleges to ensure that high school students successfully complete at least 15 hours of dual credit coursework that aligns with a postsecondary academic or workforce program, making it financially advantageous to offer P-TECH programs.

[Texas House Bill 3](#), passed in 2019, incentivizes school districts to offer P-TECH programs by providing an additional \$50 per student enrolled in a P-TECH program.¹⁴

03.

Dual Enrollment Work-Based Courses in Tennessee

Since 2021, JFF has partnered with the Tennessee Department of Education (TDOE) on the [Tennessee SySTEM project](#), funded by a grant from the U.S. Department of Education's Education Innovation and Research (EIR) Program, to test a new dual enrollment work-based course model.¹⁵ This new model blends dual enrollment and work-based learning to give students access to both experiences in one course. Work-based learning connects structured instruction with valuable workplace experiences, giving students a direct route to jobs in a particular career field. Dual enrollment work-based courses integrate the classroom and the workplace by using the classroom as the setting where students learn industry-specific content and the workplace as a hands-on learning lab where students have the opportunity to reinforce and practice skills learned in the classroom. To date, more than 600 students in 12 high schools have participated in dual enrollment work-based courses, according to internal JFF data.

Key Features and Benefits of Dual Enrollment Work-Based Courses

- ✓ High schools take an existing STEM or computer science dual enrollment course and transform it into a dual enrollment work-based course by partnering with a local employer and dividing the course competencies between the classroom setting and the workplace setting. High schools and their partners can also select a dual enrollment course in another high-need, high-wage industry sector in their community or region.
- ✓ Eighty percent of the course is taught in the traditional classroom setting; the remaining 20% of the course is taught through an employer at a worksite. Learning and performance in both settings contribute to a student's final grade in the course.
- ✓ Passing the course allows students to fulfill requirements for high school graduation and earn college credit while gaining workplace skills.

- ✓ Successful implementation requires strong collaboration between school districts, employers, and postsecondary partners to ensure that classroom learning aligns with on-the-job learning.
- ✓ Students are very successful in these courses because of the applied learning approach; 100% of Tennessee students in dual enrollment work-based courses passed in the fall 2024 semester, according to internal JFF data.

Local Example: Fayetteville High School's Welding Lab

Fayetteville High School in Southern Middle Tennessee took the course model a step further by partnering with a local employer to create an on-site welding lab for students. Fayetteville City Schools is a small school district in an area with industry demand for people with welding skills, but it lacked a qualified instructor, necessary equipment, and classroom space. A grant opportunity from the state's [Innovative School Models](#) program provided enough funding for all necessary welding equipment.¹⁶ Through partnerships with AriensCo, a local manufacturing plant, and the Tennessee College of Applied Technology (TCAT), Fayetteville City Schools found both the space and the instructor to offer a full welding program accessible to students across the region; in addition to students from Fayetteville High School, students from three other small school districts in the area can take part in the program.

The welding space at AriensCo is a fully enclosed learning lab on the plant floor with a classroom space and safe welding trainers for high school students to use. The TCAT welding instructor comes into the classroom space to teach dual enrollment students, who can earn college credit in TCAT Shelbyville's [Welding Technology program](#).¹⁷ The AriensCo plant manager observes the students' welding work and

Inside the Course





advises and mentors them. Students also have the opportunity to job shadow a wide variety of occupations on the plant floor right outside their classroom. This co-located approach creates a mutually beneficial relationship between a local employer, a technical college, and several small school systems—all to ultimately benefit students and the regional economy.

Enabling Policies

Tennessee's dual enrollment work-based courses are made possible through the state's dual enrollment policy, which enables eligible students to receive a [Dual Enrollment Grant](#) that covers their tuition in dual enrollment courses.¹⁸ This state-level funding helps to remove the financial barrier that may limit student access to dual enrollment work-based courses.

Additionally, a federal EIR grant awarded to JFF and TDOE supports the work by providing \$45,000 per year to each school site. Fayetteville High School used this funding to cover a portion of the TCAT welding instructor's salary, and other school sites used the funding to cover student supplies needed for dual enrollment work-based courses, like textbooks and protective gear for worksites. This grant also enabled ongoing collaboration between TDOE and JFF to support grantees and find state-level policy solutions to barriers they experienced.

American Institutes for Research will develop a final evaluation of this EIR grant in June 2026. That evaluation will include interviews with Tennessee's local grant leads and students as well as assessments of student data to identify the most successful elements of the course model and determine where there are opportunities for improvement.

100%

In the fall 2024 semester, all of the students in Tennessee's dual enrollment work-based learning courses passed.



Conclusion

Dual enrollment is a proven strategy for aligning education with the needs of a rapidly changing workforce. As employer demands evolve, these programs are uniquely positioned to respond more quickly and effectively than traditional, siloed education models. Investing in these important programs will benefit students, communities, and the economy.

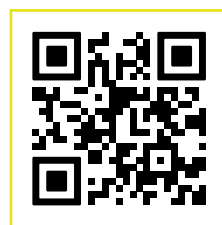
To learn more about dual enrollment policies and the various approaches that different states have taken to implement this model, contact JFF at policy@jff.org or explore the following resources:



Benefits of
Dual Enrollment
Programs



Improve Today,
Invent Tomorrow: A
Call to Reboot Dual
Enrollment



Dual Transformation
in Dual Enrollment:
Accelerating
Outcomes through
Innovation



Dual Enrollment Is
Taking Over Community
College: Is a New
Institution Emerging?

Endnotes

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