

U.S. Department of Education

**A Planning Guide for Aligning
Career and Technical Education
(CTE) and Apprenticeship
Programs**

Mini-Guide for Employers



A Planning Guide for Aligning Career and Technical Education (CTE) and Apprenticeship Programs

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**Prepared for the U.S. Department of Education
Office of Career, Technical, and Adult Education**

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U.S. Department of Education

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ALIGNING SECONDARY CTE AND APPRENTICESHIP PROGRAMS

High school career and technical education (CTE) and apprenticeship programs both seek to equip students with the academic, technical, and employability skills necessary to succeed in high-demand careers. The goal of the Potential Role of Secondary CTE Programs in Preparing Students for Apprenticeship Programs initiative, launched by the U.S. Department of Education's Office of Career, Technical, and Adult Education, was to explore how CTE providers across the United States are working to connect secondary school students with apprenticeship programs. This effort included site visits to eight programs that have aligned CTE instruction and provided students with articulation options to apprenticeship programs. Site visit profiles and a synthesis of results can be found in the [study report](#).

Target Audience

This mini-guide was designed to provide targeted guidance and simple action items to support local and regional efforts for improving student access to apprenticeships. It includes a description of the benefits of aligning CTE and apprenticeship programs, an overview of alignment dimensions, action steps, and local program examples. Content for this mini-guide was drawn from the comprehensive [*Planning Guide for Aligning Career and Technical Education \(CTE\) and Apprenticeship Programs*](#).

BENEFITS OF ALIGNMENT

When an apprenticeship program is aligned to fit within or be a natural extension of a CTE program, more students may choose to enter an apprenticeship and persist once enrolled, building out the pipeline of workers entering the profession. To students and parents, the value is the opportunity for students to engage in real-world, hands-on experiences in the career paths of their interest. An additional value is the opportunity to gain postsecondary credit or even degrees, which is a cost-savings for the students or parents. Aligned programs can

- **increase the quality of CTE programs through expanded industry input.**
 - » To align CTE and apprenticeship programs, the [Green Academy at Salinas High School](#) revised its CTE curriculum to better align to industry expectations.

- **expand post-program options for CTE program completers.**
 - » Participants in [Apprenticeship Catawba](#) can enter an apprenticeship while completing high school. At [Upper Valley Career Center](#), students who complete the pre-apprenticeship program can receive preferred consideration into a registered apprenticeship.

- **improve the quality of apprenticeship programs through stronger education connections.**
 - » In addition to providing a pathway for CTE students to enter an apprenticeship, alignment expands the potential for educational attainment for apprentices. For the [Charleston Youth Apprenticeship Program](#), and nearly all the sites profiled, the apprenticeship training contributes credits toward a high school diploma, a postsecondary certificate, and/or an associate degree.

- **increase the number of qualified apprentices for high-demand, high-wage, and high-skill careers.**
 - » Since 2001, the [Edward J. Malloy Initiative for Construction Skills](#) has placed more than 1,800 graduating high school seniors into apprenticeship programs. Participating unions and employers see these programs as an important stream of diverse talent for New York’s building trades.

SITE PROFILES

Read about the work of eight sites that are making great strides toward aligning their CTE and apprenticeship programs. The profiles describe the history, structure, impact, and partnerships of each program.

Program Name

- [Apprenticeship Catawba – Hickory, NC](#)
- [Bayless Floor Layers Middle Apprenticeship Program – St. Louis, MO](#)
- [Charleston Youth Apprenticeship Program – Charleston, SC](#)
- [Edward J. Malloy Initiative for Construction Skills – New York City, New York](#)
- [Green Academy at Salinas High School – Salinas, CA](#)
- [Puget Sound Skills Center Construction Technology Program – Seattle, WA](#)
- [Tech Ready Apprentices for Careers in Kentucky \(TRACK\) – Dr. Schneider Automotive Systems – Russell Springs, KY](#)
- [Upper Valley Career Center School-to-Apprenticeship Program – Piqua, OH](#)

VIDEOS TO GET YOU STARTED

To deepen your understanding of the benefits of alignment, watch video 1 below, [Expanding Opportunities: Aligning Career and Technical Education \(CTE\) and Apprenticeship](#). Explore the [Elements of Career and Technical Education \(CTE\) and Apprenticeship Alignment](#) in video 2 below, to see the variety of approaches used to meet the needs of students, employers, and education institutions across the country.



DIMENSIONS OF ALIGNMENT

Instructional Alignment

The degree to which secondary school CTE students' instruction aligns with apprenticeship training.

Full— There is no distinction between the content taught in a secondary school CTE program and in the training offered to an apprentice. A fully aligned program provides students with focused skill instruction tailored to address the entry requirements of an apprenticeship. Coursework fulfills both the education requirements necessary for students' high school graduation and the performance expectations of entering an apprenticeship, as well as other educational and career opportunities.

Embedded— Apprenticeship skills training is integrated into a student's CTE program and may be applied towards fulfilling course credit and high school graduation requirements. Students also receive technical instruction that may go beyond the scope of the apprenticeship program and that is intended to prepare them for other educational and career opportunities.

Substituted— All related technical instruction for an apprenticeship is delivered outside of the secondary school setting, typically by a postsecondary education partner or established program intermediary. To increase access to apprenticeship opportunities, secondary school students may not be required to have taken relevant CTE courses prior to entry. Those who are enrolled in a CTE program may be eligible to receive some high school and/or early postsecondary credit within their CTE field of study for the apprenticeship's related technical instruction, with the degree of recognition varying by site.

External— Secondary school students who may be recruited from secondary school CTE programs and other sources, participate in an apprenticeship program with all instruction delivered outside the secondary school setting (during or after the school day). Students participating in such programs receive no education credit, though they may apply some or all of their hours worked toward fulfilling the entry requirements of an employer- or union-sponsored apprenticeship, or be positioned for preferred entry upon completion.

Program Articulation

The extent to which instruction articulates with apprenticeships to ease student entry into programs.

Full— There is no distinction between a CTE program and an apprenticeship program. Students are fully enrolled as apprentices or pre-apprentices while in high school and, upon their graduation, continue on as apprentices, with all credits and hours counting towards full program completion.

Preferred Entry— Students participate in CTE programs that may prepare them for entry into an apprenticeship, though students are not enrolled as apprentices. Apprenticeship and pre-apprenticeship sponsors formally agree to offer preferred entry into their programs to students who complete specific requirements through a CTE program, with the possibility of applying education credits or hours worked toward an apprenticeship.

Optional Entry— Students participate in programs that prepare them for entry into an apprenticeship but they are not formally enrolled as apprentices. Optional entry programs typically do not guarantee students a direct pathway to an apprenticeship program, but rather they are designed to prepare students for multiple post-graduate options, including employment and/or postsecondary education and training. Students opting to continue in an apprenticeship may receive advanced credit for their experiences on a case-by-case basis.

Exploratory— Students participate in programs that allow them to explore career options, which may prepare them for entry into a pre-apprenticeship or an apprenticeship program, but they receive no credit towards their program nor preferential consideration for entry.

DIMENSIONS OF ALIGNMENT

This chart places the eight programs along the alignment dimensions and describes their different approaches. Click on any site to begin.

Alignment Approaches at a Glance

Note: The digital version of this image includes interactive features. Content may be missing when printed.

Instructional Alignment

Sites seeking to connect CTE with high-quality apprenticeship programs took intentional steps to sequence and align instructional content, often with input from employer or labor sponsors. Four common approaches are: Full, Embedded, Substituted, and External.



Program Articulation

The ease and seamlessness of the transition from secondary school CTE to apprenticeships varied across the sites, driven by the programs' goals and designs. Four common degrees of articulation are: Full, Preferred Entry, Optional Entry and Exploratory.

EMPLOYER ACTION ITEMS TO CONSIDER

The following lessons learned provide employers with simple action items to improve CTE student access to apprenticeships.

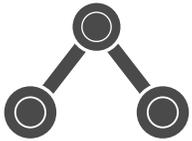


Lead the Way

Play a leading role in designing and promoting the program.

Advocate for the program at the local and state levels.

Use an intermediary (industry associations, employer councils, chambers of commerce, nonprofit and community-based organizations) to represent shared employer interests.



Build the Path

Build an apprenticeship that acts as a comprehensive benefits package, including graduated wages, employment,

and postsecondary education. Such programs are an attractive postsecondary pathway among both students and parents.

Provide program completers with advanced standing once they enter their apprenticeships. Ensuring students receive credit for their learning decreases the time required to finish their apprenticeships.

Ensure that the program benefits provided to students are portable.

Learn from other employers who have developed similar CTE apprenticeship programs to build a model that meets individual employers' workforce needs and supports the larger employer community.

Set rigorous entrance requirements for apprenticeships to create an environment of high expectations and commitment on the part of students.



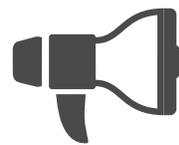
Expand Partnerships

Work with an intermediary to connect schools, students, and employers, and make each student's entry into a program as smooth as possible.

Recruit other employers to participate through sector partnerships and industry associations.

Maintain a strong working relationship between labor and management; this is essential for a pre-apprenticeship program intended to connect with union-sponsored apprenticeships.

Collaborate with the education system and other partners to identify a common set of competencies that enables student learning and future success.



Promote the Opportunity

Participate in or host public signing days to celebrate the students and recruit future participants.

Recruit other employer and union partners to offer apprenticeships and expand opportunities for students.

EMPLOYER EXAMPLES IN ACTION

Due to the complexity involved in connecting CTE and apprenticeship programs, designing the aligned programs can be challenging. These programs do not always fit within traditional methods of delivering CTE and apprenticeship training and, therefore, may require new strategies for providing education and training. Below are a few examples of how employers have actively engaged to connect secondary school CTE students to apprenticeship programs.

INVESTING IN THE FUTURE

Tech Ready Apprentices for Careers in Kentucky (TRACK) – Dr. Schneider Automotive Systems, Russell Springs, KY

“Apprenticeship is not a burden, it is an investment for our future. That's what I always say. You can't measure it, but it's clear that it's very successful.”

–Torsten Langguth, Plant Manager,

Dr. Schneider Automotive Systems, Inc.

By design, TRACK requires each partner to have a shared vision for the program, and invest time and resources to deliver on their agreed-upon responsibilities. These basic roles and responsibilities are laid out in the state's [work-based learning manual](#).

Leaders at Dr. Schneider have dedicated significant time and resources to the development of the local TRACK program. This includes creating a new employee policies handbook for TRACK participants to adequately address issues that include youth labor laws, training current employees to be mentors, and creating strong support for the program across the company, including support from its human resources department.

Leaders at Dr. Schneider said that, as a company, they are not seeking an immediate return on investment. The company recognizes the contribution that TRACK can make in worker recruitment and, as such, expects program benefits to increase over time as the apprentices progress through their training and become full-time employees.

CREATING OPPORTUNITIES

Charleston Youth Apprenticeship Program, Charleston, SC

Hall Management Group, which operates six fine dining restaurants in downtown Charleston, was the first local restaurant group to participate in the apprenticeship program. In its first year, the company took on two high school-aged youths as apprentices. The state's youth apprenticeship coordinator worked directly with the executive chef at Hall Management Group to create the competency task lists for its youth apprenticeships. These task lists have since become a template for other culinary youth apprenticeships in the state. The involvement of Hall Management Group offered students a unique opportunity to gain work-based experience, since most higher-end restaurant kitchens are staffed with graduates of prestigious culinary schools. For the company's leadership, including the head chef, the reason for participating in the youth apprenticeship program was twofold: Leaders wished to be good community partners and to provide interested youths with an opportunity to explore a career in the culinary field.

LEVERAGING ONGOING PARTNERSHIPS

Edward J. Malloy Initiative for Construction Skills, New York City, NY

Strong, long-lasting partnerships are a critical component of Construction Skills' success. However, rather than being governed by formal agreements or protocols, these partnerships were formed and are maintained on the basis of existing labor-management relationships. Construction Skills program staff come from the union world, which enables them to serve as effective intermediaries between business and industry.

Strong, ongoing partnerships allow the program to offer its students direct-entry referral letters to use when applying to the city's competitive union building apprenticeships. Additionally, unions collaborate to validate and strengthen the program's curriculum, and provide journey-level instructors to help deliver the training.



RESOURCES

Below are links to resources and tools that employers can access for additional information.

DOCUMENTS

[Opportunities for Connecting Secondary Career and Technical Education \(CTE\) Students and Apprenticeship Programs](#)

[A Planning Guide for Aligning Career and Technical Education \(CTE\) and Apprenticeship Programs](#)

VIDEOS

[Expanding Opportunities: Aligning Career and Technical Education and Apprenticeship](#)

[Elements of Career and Technical Education \(CTE\) and Apprenticeship Alignment](#)

SITE PROFILES

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