

Career & Technical Education (CTE) in Missouri



Executive Summary

High school career and technical education (CTE) programs can provide students with **academic knowledge** (e.g., career-oriented courses, dual enrollment), **technical skills**, & **certifications** (e.g., industry-recognized credentials), as well as **real-world work experience** (e.g., career academies, internships, youth apprenticeships). CTE participation is associated with higher graduation rates and better employment outcomes. [House Bill 2171](#) and [Senate Bill 703](#) would make Individual Career and Academic Plans (ICAPs), which are currently optional, required for public school students prior to entering the 9th grade. Additionally, high school students would be required to announce their post-graduation plans prior to graduation. Lastly, these bills would require the state to provide the “means and capability” for high school students who are participating in CTE programs to learn about and apply for federal aid available under the [Workforce Innovation and Opportunity Act](#) (WIOA). [House Bill 1928](#) would modify an existing CTE-related requirement relating to the [visiting scholars program](#). [House Bill 2731](#) and [Senate Bill 1055](#) would expand the Dual Credit Scholarship Fund to include Dual Enrollment Scholarships allowing high school students to enroll in coursework at colleges/universities.

Highlights

- The Missouri Department of Elementary & Secondary Education offers CTE programs in high schools, regional career centers, and postsecondary institutions, covering a range of career pathways including agriculture, business, and STEM.
 - In the 2019-20 school year, 64% of Missouri high school students enrolled in at least one career education program and 5,366 students received industry-recognized credentials.
- Students who participate in CTE programs may be eligible for one or several current funding opportunities (e.g., YouthBuild, Workforce Pathways for Youth) available under WIOA.
- Missouri’s visiting scholars program allows individuals with specific degrees and/or employment experience to hold temporary, renewable teaching certifications in order to support students’ in-class teaching and career development needs.

Limitations

- Much of the information about the relationship between CTE and high school graduation rates comes from studies in schools where all students participate in CTE. Additional research is needed to understand the extent to which specific statewide CTE programs impact graduation rates and other career outcomes.

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Research Background

High School CTE Outcomes

Career and technical education programs during high school allow both college- and workforce-bound students to develop technical and transferable (e.g., teamwork, leadership, critical thinking) workplace skills. Students who participate in CTE programs are more likely to graduate from high school, especially when the courses are taken later in high school and/or as part of a series/concentration.¹⁻⁵ Compared to students who did not participate in CTE, graduates with CTE credits are less likely to be unemployed and more likely to work in a higher-paying job that provides benefits.^{4,6} While students often participate in CTE programs based on their academic and career interests, many benefits of CTE extend to students who do not enter the career pathway that they explore during high school. The real-world learning experience and transferable skills obtained during CTE participation may therefore explain many of the positive impacts associated with CTE.

Equity in CTE Programs

Historically, CTE/vocational education has been associated with educational inequities via “tracking,” or directing minoritized students into lower-wage jobs based on grades, race, and/or socioeconomic status.⁷ Current CTE programs, on the other hand, emphasize training students for high-demand, high-wage jobs. Although changes to CTE programs over the last fifteen years have improved overall access and quality, several student populations (e.g., rural, students with disabilities, girls, students of color) are underrepresented in CTE programs, primarily due to barriers in geographic and socioeconomic barriers to access.⁸ You can read more about barriers to educational resource access in our Science Note: [Education Opportunity Gaps](#).

State & Regional CTE Resources

The Missouri Department of Elementary & Secondary Education (DESE) offers career education programs for Missouri high school students in high schools, regional career centers, and/or postsecondary institutions; programs cover a range of career pathways including agriculture, business, and STEM. In the 2019-20 school year, 64% of Missouri high school students enrolled in at least one career education program and 5,366 students received industry-recognized credentials.⁹ Almost all (94%) of high school CTE graduates went on to be employed, continue their education, or enter the armed forces; 66% of graduates are working in the area related to their CTE experience(s).⁹ In addition to state-level initiatives, education nonprofits in Kansas City, led by [PREP-KC](#) and the [Kauffman Foundation](#), have identified four “market value assets” (MVAs) that are particularly valued by higher education and employers: (1) college credit earned in high school, (2) industry-recognized credentials, (3) career experiences (e.g., robust job shadowing and internships), and (4) entrepreneurial experiences with real-world projects. Students who graduate from high school with at least one “market value asset” are more likely to start college and/or be employed after graduation.¹⁰

Dual Enrollment and Dual Credit

The Dual Credit Scholarship Fund was established in 2016 by [SB 997](#). The fund provides scholarships to high school students enrolling in dual credit programs from a [list](#) of providers approved by the Department of Higher Education & Workforce Development. Proposed in the 2022 legislative session, [HB 2731](#) and [SB 1055](#) would expand the Dual Credit Scholarship Fund to include Dual Enrollment Scholarships allowing high school students to enroll in coursework at higher education institutions to earn credit. The dual enrollment program differs from dual credit programs because the courses might be taught entirely at a college/university campus and the credit might only be for higher education credit. Dual enrollment programs can also be online, hybrid, or taught at high schools similar to a dual credit program. The proposed legislation would have dual credit and enrollment scholarships pay for all of the tuition and fees associated with enrolling in such programs. Currently, only 50% of dual credit costs are covered with a yearly maximum of \$500 per student. Every state except for New York has a dual enrollment policy in place.¹¹ The structure for such programs varies widely from state to state as do funding mechanisms which can be funded by the state, by local districts, by students/parents, or by some combination of sources. In some states like Indiana, the student/parent pays for dual enrollment though Indiana also sets a list of priority dual credit courses with a cost of \$25/credit hour.

Missouri's Visiting Scholars Program

In 2018, [HB 1665](#) established the visiting scholar certificate, which allows individuals with relevant educational/occupational backgrounds to temporarily teach in Missouri public schools without undergoing the traditional certification process. In years following the passage of [HB 1665](#) passed, a majority of Missouri teachers (77%) continued to be certified through the traditional route, with very few certified through the visiting scholars program.¹²

Under current law, visiting scholars must be hired as part of a high school business-education partnership (e.g., Center for Advanced Professional Studies, or [CAPS](#), programs). [House Bill 1928](#) would expand the visiting scholar program to include any otherwise qualified person who is not currently participating in a business-education partnership and would allow the program to fill positions in “hard-to-staff public schools or hard-to-fill subject areas”. This change would increase the pool of eligible individuals and has been proposed as a mechanism to address both CTE improvement and [critical teaching shortages](#) in Missouri high schools.

Federal Aid & the Workforce Innovation and Opportunity Act (WIOA)

[House Bill 2171](#) and [Senate Bill 703](#) would also require the Missouri Department of Higher Education and Workforce Development (DHEWD) to establish procedures for CTE certificate students (RSMo [170.029](#)) to apply for federal aid under WIOA.¹³ The Employment and Training Administration (ETA) of the United States Department of Labor offers [several funding opportunities](#) to support career readiness in young adults. One of the primary responsibilities of the [ETA Division of Youth Services](#) is to provide funding for “comprehensive youth

development services so youth, particularly those most disadvantaged, have the academic, technical, and work-readiness skills they need to successfully transition to adulthood, career pathways, and post-secondary education and training.” Because funding opportunities vary from year to year, additional information is needed to estimate the total impact of WIOA-related grants on student and workforce outcomes. As with [FAFSA completion](#), obtaining financial aid may make it more likely that students will be successful in their future school/career endeavors.

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