



OCTAE Program Memorandum 23-2
UNITED STATES DEPARTMENT OF EDUCATION
OFFICE OF CAREER, TECHNICAL, AND ADULT EDUCATION

March 15, 2023

Dear Colleague:

By their very nature, career and technical education (CTE) programs supported by *the Carl D. Perkins Career and Technical Education Act*, as amended by the *Strengthening Career and Technical Education for the 21st Century Act* (Perkins V) span secondary and postsecondary education and strive to reflect state, regional, and local labor markets. CTE programs help to underpin America's workforce and seek to engage young people and adult learners at an economy of scale needed to address employer needs. The education industry is at a critical point, struggling to find its future workforce. It is important that CTE be part of a comprehensive strategy at the state and local levels to address this challenge.

Educator shortages are not new. Well before the pandemic, low wages in the education profession, the high costs of teacher preparation, and other factors contributed to a decline in new entrants to the profession and high rates of educator attrition, particularly in schools serving large concentrations of students from low-income backgrounds.¹ The COVID-19 pandemic has exacerbated a shortage of education professionals. Data reported by states to the U.S. Department of Education (Department) for the 2021-22 school year indicate that 48 states and Washington, DC (DC) had educator shortages – particularly in the areas of special education (48 states and DC); mathematics (43 states and DC); science (40 states and DC); and CTE (33 states and DC).² These shortages have continued into the 2022-23 school year, and most schools consider themselves to be presently understaffed. About half of all schools that have teacher vacancies in special education, mathematics, foreign language, and CTE described these vacancies as being very difficult to fill.³ For CTE programs, difficulty finding and retaining qualified teachers can be a barrier to keeping programs up to date and responsive to the labor market.⁴ History shows that teacher shortages disproportionately impact students of color, students from low-income backgrounds, students with disabilities, and students from rural communities.⁵

Another education workforce challenge is that elementary and secondary educators do not reflect the diversity of the children and youth in public schools. For example, in the most recent school years for which data are available, 15 percent of public school students were Black, and 28 percent were Hispanic, but the percentages of public school teachers who were Black and Hispanic were only 7 and 9 percent, respectively.⁶

Yet research suggests that when students have exposure to teachers of their own race or ethnicity, there can be significant benefits, particularly for students of color.⁷ These benefits may include increased academic achievement, increased enrollment in more rigorous courses, reduction in exclusionary discipline, improved attendance, and increased high school graduation with an intent to enroll in postsecondary education.⁸ For example, emerging evidence indicates that exposure to Hispanic educators for Hispanic public school students is associated with higher reading and mathematics scores,

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The Department of Education's mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.

fewer disciplinary incidents, lower dropout rates, and the increased likelihood of high school graduation.⁹

Ensuring that all teachers are provided with competitive and livable compensation is essential to addressing effectively shortages in the profession.¹⁰ In addition, we must make strides to improve educator recruitment, preparation, development, and retention, and increase the diversity of the profession, through high-quality programs and partnerships between school districts, institutions of higher education, and state education and workforce agencies that strengthen the educator preparation pipeline. These programs include “Grow Your Own” initiatives that recruit and prepare aspiring educators as early as high school, teacher residency programs, and Registered Apprenticeships for educators that are used to support teaching residencies, allowing teacher apprentices to earn a good wage while learning. Also important is forging seamless transfer and enrollment policies between educator preparation programs offered at community and technical colleges and those provided by baccalaureate degree-granting institutions of higher education. CTE programs can and should be at the center of each of these efforts.

This letter describes the wide-ranging challenges impacting CTE programs and participants. The companion fact sheet describes allowable activities and strategies for which the \$1.43 billion appropriated each year through the Carl D. Perkins Career and Technical Education Act of 2006, as amended by the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), may be used to improve the recruitment and preparation of future CTE educators as well as educators that teach other subjects. Just as CTE has risen to address other workforce challenges, we too must respond to the workforce shortages that we now see within our own industry. We look forward to working with you to address and overcome these challenges.

Sincerely,

/s/

Amy Loyd, Ed.L.D.
Assistant Secretary for Career, Technical, and
Adult Education

Carl D. Perkins Career and Technical Education Act of 2006: Strengthening the Pipeline for Career and Technical Education Teachers and Other Educators

The U.S. Department of Education (Department) awards approximately \$1.43 billion annually for Career and Technical Education (CTE) state formula grants authorized under the *Carl D. Perkins Career and Technical Education Act of 2006*, as amended by the *Strengthening Career and Technical Education for the 21st Century Act* (Perkins V). Perkins V assists states and outlying areas in expanding and improving CTE in secondary schools, area CTE centers, and community colleges. Each state uses program funds to support a variety of CTE programs and activities developed in accordance with its state plan. The use of these funds by states, local educational agencies (LEAs), community colleges, and other subrecipients must supplement, and may not supplant, non-federal funds expended to carry out CTE activities.¹¹

States may use up to 10 percent of their allocations to carry out state leadership activities,¹² including recruiting, preparing, or retaining CTE teachers and faculty, and may use up to 5 percent of their allocations or \$250,000 (whichever is greater) for administrative costs.¹³

At least 85 percent of state grant funds must be allocated by formula to LEAs and postsecondary educational institutions,¹⁴ and a state may reserve up to 15 percent of those funds to make grant awards to LEAs in rural areas, areas with high percentages or high numbers of CTE students, or areas with performance gaps, or to foster innovative and promising CTE programs or promote programs of study and career pathways that are aligned with state-identified high-skill, high-wage, or in-demand occupations or industries.¹⁵ States determine the share of funds awarded at the secondary and postsecondary levels. During the 2020-21 school year, states allocated an average of 62 percent of their state grant funds at the secondary education level and 38 percent at the postsecondary education level.¹⁶

LEAs, community colleges, and other entities that receive Perkins V subgrants must conduct a comprehensive needs assessment related to CTE and update it every two years.¹⁷ They must use subgrant funds to develop, coordinate, implement, or improve CTE programs to meet the needs identified in the needs assessment.¹⁸ The CTE programs they support with subgrant funds must, among other activities, provide career exploration and career development activities; provide professional development for teachers, faculty, school leaders, administrators, and specialized instructional support personnel; and support the integration of academic skills.¹⁹

The Department has several important programs that invest in building high-quality, comprehensive pathways into the teaching profession, including the [Teacher Quality Partnership Program](#), [Augustus F. Hawkins Centers of Excellence Grants](#), and [Individuals with Disabilities Education Act State Personnel Development Grants](#). This fact sheet describes how Perkins V funds are another valuable asset that may be used strategically by states, LEAs, and community colleges to strengthen the pipeline of educators, including specialized instructional support personnel,²⁰ to address shortages of educators that are straining our educational system.

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Strengthening the CTE Teacher Pipeline

CTE Teacher Preparation Opportunities for States

The recruitment, preparation, development, or retention of CTE teachers, faculty, and other CTE instructional personnel is one of the required uses of state leadership funds under Perkins V. State leadership funds are the 10 percent of the Perkins V state formula allocation that is available to state eligible agencies (states).²¹ States may only use these funds to supplement, and may not supplant, non-federal funds expended to carry out CTE activities.²²

- State leadership funds may be used to support the development and implementation of a wide range of **CTE educator preparation programs (CTE EPPs)**, including baccalaureate degree and post-baccalaureate degree programs, that provide comprehensive, high-quality pathways into CTE teaching.²³ For example, *teacher residency programs* are an evidence-based EPP model that has been successful in preparing teachers from diverse backgrounds in high-need fields. Residencies are implemented through partnerships between institutions of higher education (IHEs) and local educational agencies (LEAs) and combine pedagogical training with paid classroom experience alongside a master teacher. Participants who complete teacher residencies have significantly lower rates of attrition than new teachers who are prepared by other types of programs.²⁴

New York City's [Success Via Apprenticeship](#) recruits recent high school graduates who concentrated their studies in CTE and prepares them to be effective CTE teachers through a 5-year program that includes industry experience, classroom teaching under the supervision of a teacher mentor, and pedagogical instruction in the college courses necessary to be licensed by the New York State Education Department as a CTE teacher. Participants are paid a competitive salary, and receive health insurance benefits, membership in United Federation of Teachers, and free college tuition.

- State leadership funds may be used to pay **students' costs of attendance** at CTE EPPs in return for a commitment to serve as a CTE teacher, through scholarships or loan forgiveness as well as the costs of support services such as childcare or transportation that aspiring CTE teachers may need in order to participate.²⁵ Research indicates that service scholarships or loan forgiveness programs are promising teacher recruitment and retention tools, but only if they cover a significant portion of tuition and living costs and are not administratively burdensome to access.²⁶ Evidence also suggests that financial incentives can boost recruitment of teachers of color.²⁷

The [Washington State Educator Workforce Program](#) offers scholarships to aspiring teachers in high-need fields in return for a commitment to teach in Washington State schools. The program includes a scholarship for prospective CTE teachers of up to \$8,000 per year for two years. Priority is given to applicants who have a professional license or industry experience applicable to the CTE endorsement they intend to pursue. Scholarship recipients must teach full time in Washington State or a Tribal school for two entire school years for each year of funding received.

- States may use state leadership funds to assist individuals with relevant industry experience in obtaining state teacher licensure or credential requirements through **teacher licensure and certification changes** and other strategies to leverage the talent of industry professionals to deliver CTE instruction while not lowering standards for incoming teachers.²⁸

Kentucky's [adjunct teacher certification program](#) enables industry professionals to teach part-time in CTE classrooms without giving up their regular jobs. Adjunct CTE teachers must have a high school diploma and at least four years of work experience in their subject area. Certification as an adjunct must be renewed annually and does not lead to regular certification as a CTE teacher. LEAs and schools that employ adjuncts often provide professional development opportunities on pedagogy and classroom management to better prepare them to be successful in the classroom.²⁹

- States may use state leadership funds to support **induction and mentoring programs for new CTE teachers**.³⁰ Early career educators who participate in high-quality induction and mentoring programs are half as likely to leave the profession or move to another school as beginning teachers who do not receive these supports. Key elements of a high-quality induction and mentoring program include a mentor teacher from the same field, common planning time with other teachers in the same subject, regularly scheduled collaboration with other teachers, and support from an external network of teachers.³¹

The [Kansas Center for Career and Technical Education](#) (KCCTE) at Pittsburg State University matches CTE teachers within their first two years of teaching with experienced CTE teachers in the same content area who have completed mentoring training provided by KCCTE. Participants receive one-on-one individualized instruction, online group instruction, confidential feedback from their mentors, learning opportunities within their content area, and opportunities to network with other early career CTE teachers.

- Other allowable uses of state leadership funds include paying the **fees associated with state testing and certification or licensure** for aspiring CTE teachers and recruitment campaigns, which may target prospective CTE teacher candidates from racial and ethnic groups, as well as other groups, that are underrepresented in the CTE teacher workforce and industry experts in high-demand fields.³²

CTE Teacher Preparation Opportunities for Community Colleges

Community colleges and other entities that receive Perkins V postsecondary education subgrants under section 132 may use these funds to recruit and retain CTE teachers and faculty.³³ Funds may also be used to provide professional development for CTE teachers and faculty.³⁴ The focus of the professional development may include “opportunities to advance knowledge, skills, and understanding of all aspects of an industry, including the latest workplace equipment, technologies, standards, and credentials,”³⁵ “opportunities to advance knowledge, skills, and understanding in pedagogical practice,”³⁶ and other topics, such as providing “appropriate accommodations for individuals with disabilities.”³⁷ Professional development also may include support for “the recruitment, hiring, and training of effective educators, including educators who became certified through State and local alternative routes to certification.”³⁸

In addition, community colleges may use Perkins V subgrant funds to equip aspiring CTE educators with the skills necessary to pursue a career in this high-skill and in-demand occupation, such as by developing and providing the first two years of a “2+2” CTE EPP that leads to a **baccalaureate degree in education** or, for community colleges in states that authorize community colleges to award baccalaureate degrees, all four years of a baccalaureate degree CTE EPP.³⁹ Coordinating with the baccalaureate degree-granting institution and supporting the development of articulation agreements can help ensure that students will be able to enroll easily and transfer the credits they earn in community college when they transfer institutions to complete their CTE EPP.

After the University of Wyoming (UW) shuttered its baccalaureate degree EPP for CTE teachers due to low enrollment, requests from Wyoming LEAs to restore the program prompted UW to revive and reimagine the program in partnership with the state’s community colleges and the Wyoming Professional Teaching Standards Board. UW’s [CTE teacher EPP](#) is now a 3+1-degree program, with community colleges providing the first three years of general education and CTE content that is followed by a culminating year of pedagogical training at UW that is principally provided online.⁴⁰

Community colleges may also address shortages of CTE teachers in secondary schools by using their adjunct faculty to increase **dual enrollment opportunities in CTE subjects**, tapping their Perkins V subgrant for these activities. Perkins V subgrants may be used for “expanding opportunities for CTE concentrators to participate in accelerated learning programs” that may include “dual or concurrent enrollment programs” and “early college high schools.”⁴¹

Subgrant funds used by community colleges for professional development and EPPs must supplement, and may not supplant, non-federal funds expended to carry out these activities.⁴²

CTE Teacher Preparation Opportunities for Local Educational Agencies

LEAs that receive Perkins V secondary subgrants under section 131 of Perkins V may use these funds to recruit and retain CTE teachers. Recruitment and retention costs could include reasonable financial incentives, such as signing bonuses, payments to reduce student loan debt in exchange for a commitment to teach for a minimum number of years (e.g., 4 years in an underserved school), and the payment of costs associated with being certified to teach in the state.⁴³

Like community colleges that receive funds under section 132 of Perkins V, LEAs may use their section 131 subgrant funds to support EPPs for CTE teachers, which could include teacher residencies. Funds also may be used to support induction and mentoring programs for new CTE teachers so long as the induction and mentoring programs meet the definition of “professional development” in section 3 of Perkins V.⁴⁴

As a reminder, subgrant funds used by LEAs for professional development and EPPs must supplement, and may not supplant, non-federal funds expended to carry out these activities.⁴⁵

Strengthening the Educator Pipeline in Other Subject Areas

Educator Preparation Opportunities for States

Teaching is a career that may be the focus of CTE programs at the secondary and postsecondary levels.⁴⁶ Perkins V presents several opportunities for state eligible agencies to support activities in high schools and community colleges to strengthen the pipeline of educators in subject areas other than CTE provided that funds are used to supplement and do not supplant non-federal support for these activities.

- States may seek to increase the number of LEAs and IHEs that offer EPPs that span secondary and postsecondary education and culminate with a recognized postsecondary credential⁴⁷ such as a baccalaureate degree and state certification as a teacher by **developing and promoting a statewide EPP program of study**, which may include standards, curriculum, and course development, and career exploration, guidance, and advisement activities and other resources.⁴⁸ State leadership funds also may be used to support the implementation of the EPP program of study by eligible recipients,⁴⁹ as well as to award incentive grants to eligible recipients for effectively developing connections between EPPs that begin in high school and culminate in a recognized postsecondary credential.⁵⁰

The Delaware Department of Education used Perkins V state leadership funds to develop the [Teacher Academy Career Pathway](#). The Teacher Academy program is a CTE program of study that was developed at the state level. Using Perkins V reserve funds, the state offered incentives for LEAs to adopt the program. The Teacher Academy program consists of three or more courses offered across all partnering high schools that present students with the opportunity to earn nine college credits in an education major, sit for their paraprofessional and Praxis exams, and participate in a practicum experience. More than half of Delaware's high schools have adopted the program, including comprehensive, technical, and charter school systems. The program currently enrolls thousands of youth, the majority of whom are individuals of color. School systems that participate also seek to employ completing students as substitute teachers and paraprofessionals and offer open contracts for teaching positions upon student completion of a bachelor's degree.⁵¹

- **Dual enrollment**⁵² is a proven, evidence-based strategy to increase high school achievement and completion and to boost postsecondary enrollment and credential attainment.⁵³ State leadership funds may be used to develop and improve dual enrollment opportunities that enable high school students to get a head start on earning postsecondary education credits in an associate degree or baccalaureate degree EPP, such as by providing start-up funding for early colleges, middle colleges, and other EPP accelerated learning opportunities.⁵⁴

Developed in partnership with Northwestern State University and the Consortium for Education, Research, and Technology of North Louisiana, the Louisiana Department of Education's [Students Teaching and Reaching](#) (STAR) program is a two-year dual enrollment program that introduces high school juniors and seniors to careers in teaching and provides foundational pedagogical knowledge and skills that will give participants a head start if they enroll in a baccalaureate degree EPP after graduation.⁵⁵

- Supporting **career academies** focused on teaching is another allowable use of state leadership funds.⁵⁶ Career academies are small learning communities, or schools-within-schools in which the curriculum is centered on one career, occupation, or industry and combines academic and technical aspects relevant to the career. They typically provide internships and other work-based learning experiences, often through partnerships with local employers.⁵⁷
- **Extensive clinical experience** in the classroom is an integral part of EPPs. States may use state leadership funds to establish, identify, or expand paid practica and other work-based learning opportunities for aspiring educators that are aligned to CTE programs and program of study.⁵⁸
- Supporting **CTE student organizations**⁵⁹ for students interested in teaching careers is another allowable use of state leadership funds, especially with respect to efforts to increase the participation of students who are members of special populations in these organizations.⁶⁰
- With men comprising 24 percent of the nation's public-school teaching corps,⁶¹ teaching is a non-traditional field for men. States may use state leadership funds for **non-traditional fields** to support outreach and recruitment efforts to encourage young men to consider careers in teaching.⁶²
- To ensure students have accurate information about careers in teaching and pathways to pursue these careers, states may use state leadership funds to improve **career guidance and academic counseling programs** focused on the teaching profession.⁶³
- At the postsecondary level, state leadership funds may be used to develop and implement the first two years of a **"2+2" EPP** that begins in community college and leads to a baccalaureate degree in education. Similarly, state leadership funds may be used to connect credential and degree programs across postsecondary education, such as the development of paraprofessional to educator pathways or articulation agreements between early childhood education associate degree and elementary education baccalaureate degree programs.⁶⁴
- States may use state leadership funds to improve the transfer and completion rates of aspiring educators who begin their studies in community college by establishing and implementing **statewide articulation agreements and admissions procedures** that facilitate the transition of students with associate degrees in early childhood or teacher education to baccalaureate degree EPPs.⁶⁵

North Carolina has built seamless transfer pathways between the teacher education programs delivered through its community college system with the baccalaureate degree EPPs offered by public and private colleges and universities throughout the state. The [Uniform Articulation Agreement in Teacher Education/Educator Preparation](#) between the State Board of the North Carolina Community College System (NCCS) and the University of North Carolina (UNC) System Board of Governors facilitates the transfer of students who earn an Associate in Arts in Teacher Preparation (AATP) or an Associate in Science in Teacher Preparation (ASTP) at a state community college to baccalaureate degree EPPs at any UNC institution, guaranteeing that they receive at least 60 semester hours of academic credit for courses with a grade of C or better upon admission to a UNC institution. The [Uniform Articulation Agreement in Teacher Preparation](#) between NCCS and North Carolina Independent Colleges and Universities provides for the same 60-credit transfer for students with AATP or ASTP degrees who are admitted to a baccalaureate degree EPP at any of the 24 private institutions of higher education that signed the agreement.

States may also set aside a reserve fund that is up to 15 percent of the funds available for local distribution⁶⁶ to be used to award grants to foster innovation through the identification and promotion of promising and proven CTE programs, practices, and strategies or to promote the development, implementation, and adoption of programs of study or career pathways aligned with in-demand occupations or industries. The funds may be awarded competitively or by formula to eligible recipients in rural areas, areas with high percentages of CTE concentrators or CTE participants, areas with high numbers of CTE concentrators or CTE participants, and areas with disparities or gaps in performance.⁶⁷ Nationwide, about \$173 million is available to states in FY 2022 for the reserve fund.

These reserve funds may be used to support the creation, expansion, or improvement of EPPs at the secondary or postsecondary levels. They could also be used to address persistent teacher shortages in rural communities throughout the state. For example, a state could award reserve funds to eligible recipients in rural areas to create “Grow Your Own” EPPs that span secondary and postsecondary education.

Educator Preparation Opportunities for Community Colleges

In carrying out their biennial comprehensive local needs assessment,⁶⁸ community colleges should consult with nearby LEAs to consider staffing challenges they may be experiencing and subsequently could use their Perkins V subgrant funds to address those challenges through EPPs for teachers in subject areas other than CTE. These may include “2+2” programs articulated with baccalaureate degree programs, teacher residencies, and early college high schools and other “Grow Your Own” programs that give high school students the opportunity to earn postsecondary credits in an EPP. The costs of establishing articulation agreements that facilitate credit transfer between associate degree and baccalaureate degree EPPs are allowable as well.⁶⁹

For students who are members of special populations, costs for tuition, along with support for the transportation, childcare, and other out-of-pocket expenses for these students to enroll in the EPP may be provided.⁷⁰ Perkins V subgrants may be used to recruit students for the EPP;⁷¹ support practica, internships, or other clinical experiences that are part of an EPP;⁷² and support CTE student organizations for aspiring educators.⁷³

Serving a diverse student body that is predominantly Native Hawaiian and Asian, [Leeward Community College](#) in Oahu, Hawaii, has become a hub of innovation in teacher preparation to address the island's persistent educator shortages. It created a 2+2 EPP in which Leeward delivers the first two years of a baccalaureate degree in teaching that students finish at a partner university, in the interim receiving an associate degree in teaching that qualifies recipients to teach as paraeducators in Hawaii Public Schools. For industry professionals interested in becoming CTE educators, Leeward offers a postbaccalaureate program that provides the pedagogical training needed to become certified to teach CTE in Hawaii. A similar program prepares individuals with baccalaureate degrees to become licensed to teach special education. Leeward also offers a Culturally Responsive Teaching certificate to prepare aspiring and current teachers to work as "culturally responsive educators versed in Hawaiian and indigenous knowledge, pedagogy, and worldview."⁷⁴

Registered Apprenticeship EPPs are an emerging innovation to prepare the education workforce.⁷⁵ Community colleges may use Perkins V subgrants to develop Registered Apprenticeship EPPs or to pay the costs of related training and instruction as part of a Registered Apprenticeship EPP administered by other entities.⁷⁶

Educator Preparation Opportunities for Local Educational Agencies

LEAs should consider their own workforce needs in carrying out their biennial comprehensive local needs assessment⁷⁷ and identify strategies to use Perkins V funds to address these staffing needs. Perkins V subgrant funds may be used to support the development, implementation, and improvement of EPPs that may begin as early as the middle grades and continue through the attainment of a recognized postsecondary credential.⁷⁸ This could include, for example, CTE courses that introduce students to the teaching profession, education-focused career academies that begin students' preparation as educators, and dual enrollment programs that give high school students an opportunity to get a head start on an associate and baccalaureate degree in education.

Designed with a specific focus on increasing the diversity of the teaching profession, the University of Colorado's [Pathways2Teaching](#)[®] is a concurrent enrollment teacher preparation program for high school juniors and seniors for which students earn college credit that is offered in 11 LEAs and 40 schools in Colorado. Students engage in a weekly field experience teaching elementary school students vocabulary and reading comprehension skills. College readiness skills are integrated throughout the curriculum with an emphasis on developing writing skills. Students also examine historical and current issues related to equity in education and write a research paper and make a presentation on a related topic they choose.⁷⁹ Pathways2Teaching[®] is recognized as a program of study by Colorado's State Board for Community Colleges and Occupational Education for which LEAs may use Perkins V funding.⁸⁰

LEAs also may use their subgrants to:

- Advance students' knowledge of career opportunities in education and assist them in preparing for and pursuing participation in EPPs.⁸¹
- Reduce or eliminate out-of-pocket expenses for special populations participating in EPPs or the CTE coursework needed to prepare for EPPs and pay the costs associated with fees, transportation, childcare, or mobility challenges.⁸²
- Support paid practica, internships, or other clinical experiences that are part of an EPP or the CTE coursework needed to prepare for them.⁸³
- Support CTE student organizations for aspiring educators.⁸⁴
- Pay fees associated with certification examinations for participants in EPPs who are special populations.⁸⁵

Operated by Charlotte-Mecklenburg (NC) Public Schools in collaboration with the Cato College of Education in the University of North Carolina at Charlotte (UNC-Charlotte), the [Charlotte Teacher Early College](#) was launched to create a strong pathway to a professional career and economic mobility for students from low-income backgrounds and to recruit more teachers of color and from multilingual backgrounds. During the first year of the five-year program, ninth grade students take honors-level academic courses while participating in seminars and workshops about public schools and the teaching profession. In their sophomore year, students enroll in a course based on North Carolina's [Teacher Cadet](#) program, which includes an internship at a local school for 3-4 days per week. Beginning in their junior year, students transition to begin taking some college-level courses that satisfy the university's general education requirements and electives related to teacher preparation as they continue their clinical placements at local schools. After earning their high school diploma in grade 12, students can continue their postsecondary education studies at UNC-Charlotte or transfer the college credits they have earned to another postsecondary institution at which they choose to enroll.⁸⁶

Frequently Asked Questions: Perkins V and Teacher Preparation

1. Is the teaching profession an occupation for which Perkins V funds may be used to prepare individuals?

Yes, Perkins V funds may be used to develop and support programs that prepare individuals for teaching careers, provided the education and training programs that equip students with the skills necessary to pursue these careers meet the definition of “career and technical education” in section 3(5) of Perkins V and other requirements.

The law defines CTE, in part, as a sequence of courses that “provides individuals with rigorous academic content and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions, which may include high-skill, high-wage, or in-demand industry sectors or occupations.” The teaching profession is both a high-skill and in-demand occupation. The sequence of courses must provide “technical skill proficiency or a recognized postsecondary credential,” which may include “an industry-recognized certificate or certification, a certificate of completion of an apprenticeship, a license recognized by the State involved or Federal Government, or an associate or baccalaureate degree.⁸⁷ State certification as a teacher is a “recognized postsecondary credential.”

LEAs, IHEs, and other eligible recipients must use Perkins V subgrant funds to develop, coordinate, implement, or improve CTE programs that address local needs identified in a biennial needs assessment, which are described in the applications for funds they submit for approval to the state.⁸⁸ The CTE programs they support must be “of sufficient size, scope, and quality to be effective,”⁸⁹ terms which are defined by the state in its state plan, and meet other requirements established by the state. Perkins V subgrants may only be used to supplement and may not supplant non-federal funds available for CTE.⁹⁰

It is possible to design a program that prepares individuals for teaching careers that meets these and all other requirements for the use of Perkins V funds.

2. May eligible recipients use Perkins V funds to develop and implement comprehensive programs of study focused on the teaching profession that begin in high school and continue through postsecondary education, including Grow Your Own programs?

Yes, eligible recipients at both secondary and postsecondary education levels may use their Perkins V subgrants to develop and implement new CTE programs of study that prepare individuals to be teachers.⁹¹ These programs may begin in high school and continue through postsecondary education.⁹² State eligible agencies may also use state leadership funds to develop such CTE programs of study⁹³ and may use reserve funds to support eligible recipient development and adoption of these programs.⁹⁴

3. May Perkins V funds be used to support programs for students interested in entering the education profession to earn college credits while still in high school, including through dual enrollment and early college programs?

Yes, eligible recipients at both secondary and postsecondary education levels may use their Perkins V subgrants to support programs that enable students interested in education professions to earn college credits while still in high school, including through dual enrollment and early college programs. One of the allowable uses of funds for eligible recipients is “expanding opportunities for CTE concentrators to participate in accelerated learning programs (as described in section 4104(b)(3)(A)(i)(IV) of the Elementary and Secondary Education Act of 1965),⁹⁵ including dual or concurrent enrollment programs, early college high schools, and the development or implementation of articulation agreements as part of a career and technical education program of study.”⁹⁶ States also may use state leadership funds to provide support for “accelerated learning programs” that are part of a CTE program of study.⁹⁷

4. May Perkins V funds be used to develop and support high-quality work-based learning opportunities and simulated work environments for high school students, such as internships, residencies, and mentorship programs in the education profession?

Yes, eligible recipients at both the secondary and postsecondary education levels may use their Perkins V subgrants for “a continuum of work-based learning opportunities, including simulated work environments.”⁹⁸ States may also use state leadership funds for “establishing and expanding work-based learning opportunities that are aligned to career and technical education programs and programs of study.”⁹⁹

5. May Perkins V funds be used to pay the costs of certification or licensing examinations for students enrolled in an EPP?

Yes, when it is deemed reasonable and necessary, eligible recipients at both the secondary and postsecondary levels may use their Perkins V subgrants to pay fees associated with certification examinations for participants in EPPs¹⁰⁰—for example, for students who are members of special populations.¹⁰¹ A state may use leadership funds to develop a statewide program of study that embeds the attainment of early childhood or paraprofessional credentials within an EPP or that bridges these credentials with an EPP by evaluating the learning and experience associated with these credentials to identify college credit equivalencies are transferable. State leadership funds also may be used to develop a Registered Apprenticeship EPP as a statewide program of study.¹⁰²

6. May Perkins V funds be used for career guidance and academic counseling for students interested in the education profession?

Yes, eligible recipients at both secondary and postsecondary education levels may use their Perkins V subgrants for career guidance and academic counseling for students interested in the education profession. Allowable uses of subgrant funds include “introductory courses or activities focused on

career exploration and career awareness” and “career guidance and academic counselors that provide information on postsecondary education and career options.”¹⁰³

7. May Perkins V funds be used to create or expand high school educator development pipeline activities that focus on underrepresented groups in the teaching profession?

Yes, eligible recipients at both secondary and postsecondary education levels may use their Perkins V subgrants for activities for students from groups that are underrepresented in the teaching profession to advance their knowledge of career opportunities in teaching and assist them in making informed decisions about future education and employment goals.¹⁰⁴ In addition, state eligible agencies must use a portion of their state leadership funds “for the recruitment of special populations” and “non-traditional gender concentrators” to enroll in CTE programs, which could be focused on CTE programs that prepare individuals for teaching careers.¹⁰⁵ States may also use their leadership funds to provide eligible recipients with professional learning, support, and technical assistance in “eliminating inequities in student access” to “high-quality programs of study that provide skill development.”¹⁰⁶

8. How may Perkins V funds be used to recruit and support industry experts and professionals in earning certification to become CTE educators?

States must spend a portion of their state leadership funds on recruiting, preparing, or retaining CTE teachers, faculty, and other CTE instructional personnel. These funds may be used to—

- Develop and implement CTE educator preparation programs (CTE EPPs), including teacher residencies;
- Pay students’ costs of attendance at CTE EPPs through scholarships or loan forgiveness provided in return for a service commitment (e.g., 4 years at an underserved school), as well as for the costs of support services such as childcare or transportation that aspiring CTE teachers may need in order to participate;
- Offer financial incentives to industry experts to become certified to teach CTE courses;
- Supplement the salaries of CTE educators in high-need or hard to staff positions; and
- Prepare CTE educators in fields with declining labor market demand to teach CTE courses in higher-demand fields.¹⁰⁷

If there are inequities in student access to effective CTE teachers, states also may use state leadership funds to address those inequities by developing, piloting, and evaluating changes in state licensure and certification requirements that remove barriers to certification as a CTE educator for industry experts and professionals while maintaining high standards to enter the profession.¹⁰⁸

Additionally, eligible recipients may use subgrant funds to pay the costs associated with becoming a fully certified or licensed CTE educator.¹⁰⁹

9. May Perkins V funds be used to develop and implement high-quality mentoring and induction programs for beginning CTE educators?

Yes, if mentoring and induction programs for beginning CTE educators meet the definition of “professional development” in section 3(40) of Perkins V, then eligible recipients at the secondary and postsecondary levels may use subgrant funds on these programs.¹¹⁰ Further, states may use state leadership funds for these mentoring and induction programs.¹¹¹

10. May Perkins V funds be used for professional development?

Yes, Perkins V funds may be used for professional development at the state and local level provided it is consistent with the law’s definition of “professional development”:

“The term ‘professional development’ means activities that—

(A) are an integral part of eligible agency, eligible recipient, institution, or school strategies for providing educators (including teachers, principals, other school leaders, administrators, specialized instructional support personnel, career guidance and academic counselors, and paraprofessionals) with the knowledge and skills necessary to enable students to succeed in career and technical education, to meet challenging State academic standards under section 1111(b)(1) of the Elementary and Secondary Education Act, or to achieve academic skills at the postsecondary level; and

(B) are sustained (not stand-alone, 1-day, or short-term workshops), intensive, collaborative, job-embedded, data-driven, and classroom-focused, to the extent practicable evidence-based, and may include activities that—

(i) improve and increase educators’—

(I) knowledge of the academic and technical subjects;

(II) understanding of how students learn; and

(III) ability to analyze student work and achievement from multiple sources, including how to adjust instructional strategies, assessments, and materials based on such analysis;

(ii) are an integral part of eligible recipients’ improvement plans;

(iii) allow personalized plans for each educator to address the educator’s specific needs identified in observation or other feedback;

(iv) support the recruitment, hiring, and training of effective educators, including educators who became certified through State and local alternative routes to certification;

(v) advance educator understanding of—

(I) effective instructional strategies that are evidence-based; and

(II) strategies for improving student academic and technical achievement or substantially increasing the knowledge and teaching skills of educators;

(vi) are developed with extensive participation of educators, parents, students, and representatives of Indian Tribes (as applicable), of schools and institutions served under this Act;

(vii) are designed to give educators of students who are English learners in career and technical education programs or programs of study the knowledge and skills to provide

instruction and appropriate language and academic support services to those students, including the appropriate use of curricula and assessments;

(viii) as a whole, are regularly evaluated for their impact on increased educator effectiveness and improved student academic and technical achievement, with the findings of the evaluations used to improve the quality of professional development;

(ix) are designed to give educators of individuals with disabilities in career and technical education programs or programs of study the knowledge and skills to provide instruction and academic support services to those individuals, including positive behavioral interventions and supports, multi-tier system of supports, and use of accommodations;

(x) include instruction in the use of data and assessments to inform and instruct classroom practice;

(xi) include instruction in ways that educators may work more effectively with parents and families;

(xii) provide follow-up training to educators who have participated in activities described in this paragraph that are designed to ensure that the knowledge and skills learned by the educators are implemented in the classroom;

(xiii) promote the integration of academic knowledge and skills and relevant technical knowledge and skills, including programming jointly delivered to academic and career and technical education teachers; or

(xiv) increase the ability of educators providing career and technical education instruction to stay current with industry standards.”¹¹²

11. May Perkins V funds be used to support high-quality professional development for CTE educators?

Yes, high-quality professional development on a wide range of topics is an allowable use of state leadership funds by states¹¹³ and of subgrant funds by eligible recipients.¹¹⁴ Professional development supported by Perkins V must be “sustained (not stand-alone, 1-day, or short-term workshops), intensive, collaborative, job-embedded, data-driven, and classroom-focused, to the extent practicable evidence-based.”¹¹⁵

12. May Perkins V funds be used to provide professional development to teachers who are not CTE educators?

Yes, Perkins V funds may be used by states and eligible recipients to provide professional development to teachers who are not CTE educators if the purpose is to equip them with the knowledge and skills necessary to enable CTE students to succeed in CTE, meet state academic standards, or achieve academic skills at the postsecondary level.¹¹⁶ Perkins V does not generally limit participation in professional development funded by the law to CTE educators, and, in some cases, explicitly encourages the inclusion of educators who teach CTE students other subjects that are part of a CTE program of study, such as in the integration of academic and technical content.¹¹⁷

Legal Requirements

Other than statutory and regulatory requirements referenced in the document, the contents of this document do not have the force or effect of law and do not bind the public and school communities. This document is intended only to provide clarity regarding existing requirements under the law or agency policies.

Legal Disclaimer

This document contains resources (including links to those resources) that are provided for the user's convenience. Inclusion of these materials is not intended to reflect their importance, nor is it intended to endorse any views expressed or products or services offered. These materials might contain the views and recommendations of various subject-matter experts, as well as hyperlinked text, contact addresses, and websites to information that other public and private organizations created and maintain. The opinions expressed in any of these materials do not necessarily reflect the positions or policies of the Department. The Department does not control or guarantee the accuracy, relevance, timeliness, or completeness of any outside information included in these materials. For the reader's convenience, this document contains examples of potentially useful resources and methodologies in use by states, LEAs, and institutions of higher education. Inclusion of such information does not constitute an endorsement by the Department or the federal government, nor a preference or support for these examples as compared with others that might be available and be presented.

¹ Podolsky, A., Kini, T., Bishop, J. and Darling-Hammond, L. (2016), *Solving the Teacher Shortage: How to Attract and Retain Excellent Educators*. Palo Alto, CA: Learning Policy Institute. Retrieved from: <https://learningpolicyinstitute.org/product/solving-teacher-shortage>

² U.S. Department of Education, Office of Postsecondary Education, *Teacher Shortage Area Data*. Retrieved from: <https://tsa.ed.gov/#/home/>.

³ U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (2022), *School Pulse Panel (2022–23)*. Retrieved from: <https://ies.ed.gov/schoolsurvey/spp/>.

⁴ About 44 percent of local educational agencies surveyed in 2016-17 reported that finding and retaining teachers in in-demand industries and occupations was a large or very large barrier to offering CTE programs. See Gray, L., and Lewis, L. (2018), *Career and Technical Education Programs in Public School Districts: 2016–17: First Look* (NCES 2018-028). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from: <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018028>. A 2017 survey by Advance CTE of state CTE directors found that the greatest shortages of CTE teachers were in the fastest-growing occupations like information technology and health. See Advance CTE (2018), *CTE Teacher and Faculty Shortages*. Retrieved from: https://cte.careertech.org/sites/default/files/Teacher_Shortage_Fact_Sheet_2018.pdf.

⁵ Goldhaber, D. & Gratz, T. (2021), *School District Staffing Challenges in a Rapidly Recovering Economy*, CEDR Flash Brief No. 11082021-1. University of Washington, Seattle, WA. Retrieved from: <https://eric.ed.gov/?id=ED622160>; Sutchter, L., Darling-Hammond, L., & Carver-Thomas, D. (2016), *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute. Retrieved from: <https://eric.ed.gov/?id=ED606665>; and Cardichon, J., Darling-Hammond, L., Yang, M., Scott, C., Shields, P. M., & Burns, D. (2020), *Inequitable opportunity to learn: Student access to certified and experienced teachers*. Palo Alto, CA: Learning Policy Institute. Retrieved from: <https://learningpolicyinstitute.org/product/crdc-teacher-access-report>

⁶ 2017-18 is the most recent school year for which data on the characteristics of public school teachers are available. See U.S. Department of Education, Institute of Education Sciences, National Center for Education

Statistics (2022), “Characteristics of Public School Teachers.” Condition of Education. Retrieved from: <https://nces.ed.gov/programs/coe/indicator/clr>. 2020-21 is the most recent school year for which data on the characteristics of public school students are available. See U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (2022), “Racial/Ethnic Enrollment in Public Schools.” Condition of Education. Retrieved from: <https://nces.ed.gov/programs/coe/indicator/cge>.

⁷ Gershenson, S., Hansen, M. and Lindsay, C.A. (2021), *Teacher Diversity and Student Success: Why Racial Representation Matters in the Classroom*. Harvard University Press. Retrieved from: <https://www.hepg.org/hepg-home/books/teacher-diversity-and-student-success>

⁸ Egalite, A., Kisida, B. and Winters, M.A. (2015), “Representation in the Classroom: The Effect of Own-race Teachers on Student Achievement,” *Economics of Education Review*, 45 (April 2015), 44–52 Retrieved from: <https://www.sciencedirect.com/science/article/pii/S0272775715000084>; Grissom, J., Kabourek, S., and Kramer. J. (2020), “Exposure to Same-race or Same-ethnicity Teachers and Advanced Math Course-taking in High School: Evidence from a Diverse Urban District,” *Teachers College Record*, 122 (2020), 1–42. Retrieved from: <http://www.tcrecord.org/Content.asp?ContentId=23323>; and Lindsay, C. and Hart C., (2017). “Exposure to Same-race Teachers and Student Disciplinary Outcomes for Black Students in North Carolina,” *Educational Evaluation and Policy Analysis*, 39 (2017), 485–510. Retrieved from: <https://journals.sagepub.com/doi/full/10.3102/0162373717693109>.

⁹ Lindsay, C., Monarrez, T., and Luetmer, G. (2021), *The Effects of Teacher Diversity on Hispanic Student Achievement in Texas*, the Urban Institute. Retrieved from: https://www.urban.org/sites/default/files/publication/105325/the-effects-of-teacher-diversity-on-hispanic-student-achievement-in-texas_0_0.pdf.

¹⁰ Patrick, S.K. and Carver-Thomas, D. (2022), *Teacher Salaries: A Key Factor in Recruitment and Retention*, Learning Policy Institute. Retrieved from: <https://learningpolicyinstitute.org/blog/teacher-salaries-key-factor-recruitment-and-retention>. See also, Allegretto, S. and Mishel, L. (2020), *Teacher pay penalty dips but persists in 2019*, Economic Policy Institute. Retrieved from: <https://www.epi.org/publication/teacher-pay-penalty-dips-but-persists-in-2019-public-school-teachers-earn-about-20-less-in-weekly-wages-than-nonteacher-college-graduates/>.

¹¹ Perkins V section 211(a).

¹² Perkins V section 112(a)(2).

¹³ Perkins V section 112(a)(3).

¹⁴ Perkins V section 112(a)(1).

¹⁵ Perkins V sections 112(a)(1) and 112 (c).

¹⁶ U.S. Department of Education, Office of Career, Technical, and Adult Education (2022), Perkins Collaborative Resource Network, State Profiles National Summary. Retrieved from: <https://cte.ed.gov/profiles/national-summary>

¹⁷ Perkins V section 134(c).

¹⁸ Perkins V section 135(a).

¹⁹ Perkins V section 135(b).

²⁰ Perkins V defines “specialized instructional personnel” using the definition from section 8101(47)(A) of the Elementary and Secondary Education Act of 1965. The term includes “school counselors, school social workers, and school psychologists” and “other qualified professional personnel, such as school nurses, speech language pathologists, and school librarians, involved in providing assessment, diagnosis, counseling, educational, therapeutic, and other necessary services (including related services as that term is defined in section 602 of the Individuals with Disabilities Education Act (20 U.S.C. 1401)) as part of a comprehensive program to meet student needs.”

²¹ Perkins V section 112(a)(2).

²² Perkins V section 211(a).

²³ Perkins V section 124(a)(1)(C).

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- ²⁴ Espinoza, D., Saunders, R. et al. (2018), *Taking the long view: State efforts to solve teacher shortages by strengthening the profession*, Learning Policy institute. Retrieved from: <https://learningpolicyinstitute.org/product/long-view-report>.
- ²⁵ Perkins V section 124(a)(1)(C).
- ²⁶ Podolsky, A. & Kini, T. (2016), *How Effective Are Loan Forgiveness and Service Scholarships for Recruiting Teachers?*, Learning Policy Institute. Retrieved from: <https://learningpolicyinstitute.org/product/how-effective-are-loan-forgiveness-and-service-scholarships-recruiting-teachers>.
- ²⁷ Carver-Thomas, D. (2018), *Diversifying the teaching profession: How to recruit and retain teachers of color*, Learning Policy Institute. Retrieved from: <https://learningpolicyinstitute.org/product/diversifying-teaching-profession-report>.
- ²⁸ Perkins V section 124 (b)(5)(C).
- ²⁹ Advance CTE (2018), *CTE on the Frontier: Strengthening the Rural CTE Teacher Pipeline*. Retrieved from: <https://careertech.org/resource/cte-frontier-strengthening-rural-teacher-pipeline>.
- ³⁰ Perkins V section 124(a)(1)(C).
- ³¹ Ingersoll, R., & Smith, T. M. (2004), *Do Teacher Induction and Mentoring Matter?* Retrieved from https://repository.upenn.edu/gse_pubs/134.
- ³² Perkins V sections 124(a)(1)(C) and (b)(5)(C).
- ³³ Perkins V section 135(b)(5)(G).
- ³⁴ Perkins V section 135(b)(2).
- ³⁵ Perkins V (section 135(b)(2)(E).
- ³⁶ Perkins V section 135(b)(2)(F).
- ³⁷ Perkins V section 135(b)(2)(G).
- ³⁸ Perkins V section 3(4)(B)(iv).
- ³⁹ Perkins V section 135(b)(3).
- ⁴⁰ University of Wyoming (2019), “UW Restarts Career Technical Teacher Education Program” (May 16, 2019, press release). Retrieved from: <https://www.uwyo.edu/uw/news/2019/05/uw-restarts-career-technical-teacher-education-program.html>. See also University of Wyoming (n.d.), “Secondary Career & Technical Education, B.A.S.” and University of Wyoming (n.d.), “Major in Career and Technical Education.” Retrieved, respectively, from https://acalogcatalog.uwyo.edu/preview_program.php?catoid=9&poiid=10527 and <http://www.uwyo.edu/transfer/articulation/agreements/career-technical-education.html>.
- ⁴¹ Perkins V section 135(b)(5)(C).
- ⁴² Perkins V section 211(a)
- ⁴³ Perkins V section 135(b)(5)(G).
- ⁴⁴ Perkins V section 135(b)(2).
- ⁴⁵ Perkins V section 211(a).
- ⁴⁶ The Perkins V definition of “career and technical education” requires that CTE prepare individuals for “further education and careers in current or emerging professions, which may include high-skill, high-wage, or in-demand industry sectors or occupations” (see section 3(5)(A)(i)).
- ⁴⁷ Perkins V defines “recognized postsecondary credential” using the definition from section 3(52) of the Workforce Innovation and Opportunity Act, which is “a credential consisting of an industry-recognized certificate or certification, a certificate of completion of an apprenticeship, a license recognized by the State involved or Federal Government, or an associate or baccalaureate degree.” (Perkins V section 3(43)).
- ⁴⁸ Perkins V section 124(b)(1).
- ⁴⁹ Perkins V section 124(b)(20).
- ⁵⁰ Perkins V section 124(b)(7)(A)(ii).
- ⁵¹ Delaware Pathways (2022), “K-12 Teacher Pathway.” Retrieved from: <https://delawarepathways.org/pathways/k-12-teacher-academy/>.
- ⁵² Other terms sometimes used to describe this type of program include concurrent enrollment, dual credit, high school in college, early college high school, and middle college. See Higher Learning Commission (2013), *Dual*

Credit in U.S. Higher Education. Retrieved from:

https://download.hlcommission.org/DualCreditinUSHigherEd_2013_INF.pdf.

⁵³ What Works Clearinghouse, Institute of Education Sciences, U.S. Department of Education (2017), *Dual Enrollment Programs: WWC Intervention Report*. Retrieved from:

https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_dual_enrollment_022817.pdf.

⁵⁴ Perkins V section 124(b)(23).

⁵⁵ Louisiana Administrative Code (2022), Part CXXV. Bulletin 121—Students Teaching and Reaching (STAR) Content Standards Curriculum Framework. Retrieved from: <https://www.doa.la.gov/media/g5jevexg/28v125.pdf>

⁵⁶ Perkins V section 124(b)(24).

⁵⁷ Kemple, J., & Willner, C. (2008), *Career academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood*. MDRC. Retrieved from: <https://www.mdrc.org/publication/career-academies-long-term-impacts-work-education-and-transitions-adulthood>.

⁵⁸ Perkins V section 124(b)(18). Perkins V section 3(55) defines “work-based learning” as “sustained interactions with industry or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that foster in-depth, firsthand engagement with the tasks required of a given career field, that are aligned to curriculum and instruction.”

⁵⁹ Perkins V section 124(b)(17).

⁶⁰ Perkins V identifies nine groups of individuals as “special populations”: (1) individuals with disabilities; (2) individuals from economically disadvantaged families, including low-income youth and adults; (3) individuals preparing for non-traditional fields; (4) single parents, including single pregnant women; (5) out-of-workforce individuals; (6) English learners; (7) homeless individuals; (8) youth who are in, or have aged out of, the foster care system; and (9) youth with a parent who is a member of the armed forces on active duty (section 3(48)).

⁶¹ National Center for Education Statistics. (2022). *Characteristics of Public School Teachers. Condition of Education*. U.S. Department of Education, Institute of Education Sciences. Retrieved from <https://nces.ed.gov/programs/coe/indicator/clr>.

⁶² Perkins V section 124(a)(1)(A).

⁶³ Perkins V section 124(b)(14).

⁶⁴ Perkins V sections 3(5) and 124(b)(25).

⁶⁵ Perkins V section 124(b)(3).

⁶⁶ Perkins V section 112(a)(1).

⁶⁷ Perkins V section 112(c).

⁶⁸ Perkins V section 135(a).

⁶⁹ Perkins V section 135(b)(5). Articulation agreements that facilitate credit transfer may improve the college’s performance on the postsecondary performance indicator described in section 113(b)(2)(B)(i).

⁷⁰ Perkins V section 135(b)(5)(S).

⁷¹ Perkins V section 135(b)(1)(E).

⁷² Perkins V section 135(b)(5)(E).

⁷³ Perkins V section 135(b)(5)(O).

⁷⁴ Leeward Community College (n.d.), “Teacher Education Programs.” Retrieved from:

<http://teach.leeward.hawaii.edu/>. See also Partnership for the Future of Learning (2021), *Building a Strong and Diverse Teaching Profession: Teaching Profession Playbook*. Retrieved from: <https://futureforlearning.org/2021/05/03/teaching-playbook/>.

⁷⁵ U.S. Department of Labor (2022), *How Can Registered Apprenticeship Address Teacher Workforce Challenges and Shortages?* Retrieved from: <https://www.apprenticeship.gov/educators>.

⁷⁶ See Office of Career, Technical, and Adult Education Program Memorandum 23-1.

⁷⁷ Perkins V section 135(a).

⁷⁸ Perkins V section 135(a).

⁷⁹ Pathways2Teaching® (2022). Retrieved from: <https://www.pathways2teaching.com/about.html>

⁸⁰ Colorado Community College System (2021), “Secondary Pathways.” Retrieved from: <http://coloradostateplan.com/family-and-consumer-sciences/>.

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- ⁸¹ Perkins V section 135(b)(1)(E).
- ⁸² Perkins V section 135(b)(5)(S).
- ⁸³ Perkins V section 135(b)(5)(E).
- ⁸⁴ Perkins V section 135(b)(5)(O).
- ⁸⁵ Perkins V section 135(b)(5)(S).
- ⁸⁶ Coffee, H., Putman, S.M., et al. (2019), "Growing Them Early: Recruiting and Preparing Future Urban Teachers Through an Early College Collaboration Between a College of Education and an Urban School District," *Teacher Education Quarterly*, Winter 2019. Retrieved from: <https://eric.ed.gov/?id=EJ1202462>.
- ⁸⁷ Perkins V section 3(5).
- ⁸⁸ Perkins V section 134(b)(1).
- ⁸⁹ Perkins V section 135(b).
- ⁹⁰ Perkins V section 211(a).
- ⁹¹ Perkins V section 135(a).
- ⁹² Perkins V section 3(5).
- ⁹³ Perkins V section 124(b)(1).
- ⁹⁴ Perkins V section 112(c).
- ⁹⁵ "Accelerated learning programs" are described in section 4104(b)(3)(A)(i)(IV) of the Elementary and Secondary Education Act of 1965 as "postsecondary level courses accepted for credit at institutions of higher education, including dual or concurrent enrollment programs, and early college high schools" or "postsecondary level instruction and examinations that are accepted for credit at institutions of higher education, including Advanced Placement and International Baccalaureate programs."
- ⁹⁶ Perkins V section 135(b)(5)(C).
- ⁹⁷ Perkins V section 124(b)(23).
- ⁹⁸ Perkins V section 135(b)(5)(E).
- ⁹⁹ Perkins V section 124(b)(18).
- ¹⁰⁰ Perkins V section 135(b)(5)(F).
- ¹⁰¹ Perkins V section 135(b)(5)(S). Perkins V identifies nine groups of individuals as "special populations": (1) individuals with disabilities; (2) individuals from economically disadvantaged families, including low-income youth and adults; (3) individuals preparing for non-traditional fields; (4) single parents, including single pregnant women; (5) out-of-workforce individuals; (6) English learners; (7) homeless individuals; (8) youth who are in, or have aged out of, the foster care system; and (9) youth with a parent who is a member of the armed forces on active duty (section 3(48)).
- ¹⁰² Perkins V section 124(b)(1).
- ¹⁰³ Perkins V section 135(b)(1).
- ¹⁰⁴ Perkins V section 135(b)(1)(E).
- ¹⁰⁵ Perkins V sections 112(a)(2)(C) and 112(a)(2)(B), respectively.
- ¹⁰⁶ Perkins V section 124(b)(6).
- ¹⁰⁷ Perkins V section 124(a)(1)(C).
- ¹⁰⁸ Perkins V section 124(b)(6).
- ¹⁰⁹ Perkins V section 135(5)(F).
- ¹¹⁰ Perkins V section 135(b)(2).
- ¹¹¹ Perkins V section 124(b)(5).
- ¹¹² Perkins V section 3(40).
- ¹¹³ Perkins V section 124(b)(5).
- ¹¹⁴ Perkins V section 135(b)(2).
- ¹¹⁵ Perkins V section 3(40).
- ¹¹⁶ Perkins V section 3(40).
- ¹¹⁷ Perkins V section 124(b)(5)(A) and section 135(b)(2)(A).