Adequacy Study 2024

K-12 Career and Technical Education

Prepared for the House and Senate Committees on Education

June 4, 2024

Contents

Table of Contents

Introduction

Arkansas Code § 10-3-2102 does not explicitly require the House and Senate Committees on Education to include a review and analysis of Career and Technical Education (CTE) in the biennial adequacy study. This report is provided in response to Education Committee members' requests and CTE's relevancy to the current educational adequacy definition.

The definition states that the state's "curriculum and career and technical frameworks" include the standards on what must be taught to Arkansas students. Career and Technical Education is one of the required content areas that must be included in the mandatory thirty-eight (38) Carnegie Units defined by the Arkansas Standards of Accreditation. This report examines career and technical education in the state's public K-12 schools, including the CTE requirements for students and districts, the governance, funding, and delivery of CTE, as well as the various programs of study and courses available for Arkansas's students.

Arkansas Career and Technical Education (CTE) Policy Background

CTE Oversight

General control and supervision of all programs of vocational, technical, and occupational education in secondary institutions is under the authority and responsibility of the State Board of Education[1] and the Division of Career and Technical Education (DCTE).[2]

The DCTE within the Arkansas Department of Education (ADE)[3] approves and oversees public school CTE programs across the state. DCTE is responsible for adopting rules governing CTE programs, prescribing academic standards for CTE programs and teachers, and approving the Programs of Study and courses districts can offer based on federal requirements.[4] In addition, the DCTE is responsible for receiving and distributing federal and state funds intended to support CTE in secondary schools[5] and for ensuring CTE instructors are appropriately licensed and permitted.[6]

K-12 Public School Requirements

According to the *Rules Governing Arkansas Standards for Accreditation*, school districts are required to provide all students in grades 5-12 with instruction in career and technical education in their curriculum annually.[7] In collaboration with the Division of Elementary and Secondary Education (DESE) and the Division of Higher Education (ADHE), DCTE is required to develop the college and career readiness standards for CTE courses and establish a common course numbering system incorporating CTE Program of Study courses at the secondary and postsecondary level.[8]

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[1] Ark. Code Ann. § 6-11-203.

[2] Ark. Code Ann. § 25-30-107.

[3] Act 910 of 2019 moved the Department of Career Education under the Arkansas Department of Education

[4] *See* Ark. Code Ann. § 6-16-140.

[5] Ark. Code Ann. § 6-11-205.

[6] *See* Ark. Code Ann. §§ 6-15-102(f)(5) and 6-15-1004(d)(3).

[7] *See* "Arkansas Division of Elementary and Secondary Education Rules Governing Standards for Accreditation of Arkansas Public Schools and School Districts," May 2, 2022, Rules 1-A.1.2 and 1-A.1.3.

[8] Ark. Code Ann. § 6-5-1003.

In 2023, districts offered CTE instruction to students in grades 5-8 through a required KeyCode or Keyboarding course and Career Development course.[9] Other approved courses connected to CTE subject areas may also be offered to students at this level. For students in grades 9-12, the Standard 1-A.1.3 requires that public school districts offer annually a total of 38 units of instruction. Nine of those units are to be "sequenced career and technical education courses representing three (3) occupational areas."[10] Three sequential levels of CTE courses make up a CTE Program of Study. To comply with state standards, schools must offer at least three different programs of study each year.

The programs are selected from any combination of three of the following occupational areas:

- Agricultural Science and Technology
- Business and Marketing Technology
- Family and Consumer Sciences
- Science, Technology, Engineering and Mathematics (STEM)
- Trade and Industry

Survey Says: High school principals were asked to identify how many CTE programs of study were offered in each occupational area. The top three areas with the most programs were Business and Marketing Technology (438), Trade and Industry (436), followed by Agricultural Science and Technology (412)

State law also requires a career and technical education program of study to be available, which is defined in statute as a "planned program of courses and learning experiences that:
    (1) Begins with the exploration of career options;
    (2) Supports basic academic and life skills; and
    (3) Enables achievement of:
        (A) High academic standards;
        (B) Leadership;
        (C) High-skill, high-wage employment preparation; and
        (D) Advanced continuing education."[11]

CTE Expenditures

A calculation of total school district expenditures for K-12 CTE is difficult to obtain because CTE instruction is provided in a variety of ways by different types of entities. For example, many districts pay other school districts or Secondary Technical Centers to provide CTE instruction for their students. This report attempts to document the total CTE expenditures of districts and charter schools as recorded in the Arkansas Public School Computer Network (APSCN).

In 2023, Arkansas public schools spent over $129 million on K-12 Career and Technical Education. Approximately 74% of CTE expenditures were from foundation funding. The following expenditures have already been accounted for in other Adequacy reports. For example, the $107 million for Teachers Grades 1-12 was included in the prior report on school staffing expenditures for Teachers Grades 1-12. Even so, CTE teachers are not provided for within the 18.8 K-12 teachers component of the matrix.
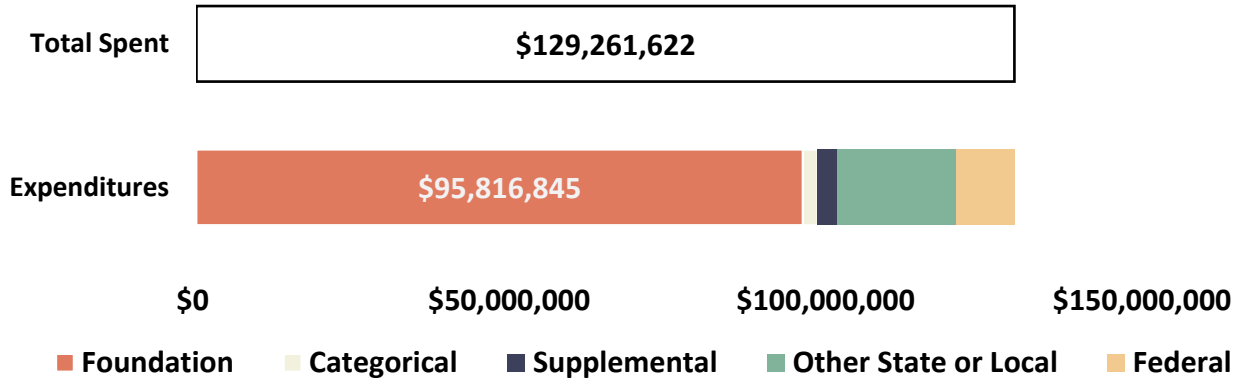
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[9] DCTE Program Operational Guide: 2022-2023 School Year (July 2022)

[10] "Arkansas Division of Elementary and Secondary Education Rules Governing Standards for Accreditation of Arkansas Public Schools and School Districts," May 2, 2022, Rule 1-A.1.3.9.

[11] Ark. Code Ann. § 6-5-1002

The chart below shows the different fund sources used for Career and Technical Education throughout the 2022-2023 school year.

Career and Technical Education: Spending by Fund Source

Total Spent $129,261,622

Expenditures $95,816,845

$0 $50,000,000 $100,000,000 $150,000,000

■ **Foundation**   ■ **Categorical**   ■ **Supplemental**   ■ **Other State or Local**   ■ **Federal**

The following table shows the percentage breakdown for all CTE spending. As these expenditure categories were discussed in earlier Resource Allocation reports, the statewide column shows the percentage of CTE expenditures from the total expenditures for each of those categories.[12] The vast majority (83%) of CTE expenditures in 2023 were for Teachers Grades 1-12. Of all expenditures for Teachers Grades 1-12, CTE expenditures made up 5.5%.

Expenditure Category	CTE Expenditures	% of Total CTE Expenditures	% of Statewide Expenditures
Teachers Grades 1-12	$107,319,753	83%	5.5%
Non-Athletic Instructional Materials	$7,770,248	6%	4.7%
Instructional Supplies and Objects	$7,244,103	5.6%	5.0%
Technology	$3,305,085	2.6%	1.6%
Extra Duty	$1,441,140	1.1%	4.5%
Instructional Aides	$1,432,042	1.1%	0.6%
Substitute Teachers	$749,252	0.6%	1.2%

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[12] 2022-23 Expenditure Data from APSCN.

The following table provides 2023 instructional expenditures by occupational area. The largest total of instructional expenditures was for Business and Office Occupations.[13]

Function	Definition	Total Expenditures
Business/Office Occupations (includes Information Technology Fundamentals, MADD and EAST Initiatives)	Learning experiences that allow students to gain an overall understanding of business principles and practices and prepare them for employment in office occupations.	$43,424,092
Agriculture	Learning experiences that provide opportunities for students to prepare for or improve their competency in agricultural occupations.	$25,985,534
Home Economics/Culinary Arts	Learning experiences that prepare students with requisite knowledge, understanding, and skills for entry into home economic/culinary arts occupations.	$22,977,737
Trade and Industrial (including Industrial Arts)	Learning experiences that allow students to acquire an overall understanding of industry and technology or prepare students for entry into skilled or semi-skilled occupations in trade and industry.	$14,721,426
Career Orientation	Learning experiences which provide students with sufficient knowledge and understanding of the workplace and occupational tracks to enable them to make intelligent career decisions.	$8,493,264
Health Careers/Occupations	Learning experiences that prepare students with the knowledge, skills, and abilities required in health professions.	$5,457,082
Special Needs	Includes Tech Prep, Workplace Readiness, Regional Technical Coordination, and Other Career Projects.	$2,616,207
General Cooperative	Learning and working experiences which provide students with knowledge and skills in occupational programs and the opportunity to acquire on-the-job training experience.	$2,927,588
Marketing and Distributive Education	Learning experiences that prepare students to enter or improve their competency level in distributive occupations.	$1,712,031
Keystone (includes PLTW Gateway)	Designed to help 9th graders successfully navigate high school through instruction on study skills, time management, and goal setting strategies. Includes career exploration and Project Lead the Way (PLTW) Gateway to Technology for middle school students.	$946,661

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[13] APSCN Function Classifications for Instruction, Career Education Programs, 2023 Financial Accounting Handbook

CTE Funding

The matrix does not provide a dollar amount specifically for CTE; however, districts can and do use state foundation funding to provide CTE instruction. Districts are also able to use Enhanced Student Achievement funds for access to postsecondary opportunities, including supporting their participation in the College and Career Coaches Program administered by DCTE.[14] Funding sources for CTE programs include Carl D. Perkins federal funding and career education programs within the Public School Fund (PSF). Through DCTE, three competitive grant opportunities are available for CTE. All districts are eligible for State Start-Up Grants, but recipients of the Innovation and Non-Traditional Grants must also be eligible for Perkins V funding.

Carl D. Perkins Federal Funds

Perkins V federal funds received through DCTE are used to improve CTE programs and services for students enrolled in CTE Programs of Study, which may also include other uses as outlined in Perkins V,[15] including support and Career Preparation courses. Only CTE Programs of Study or CTE Modified Programs approved by DCTE are eligible for Perkins funding and student graduation credits. If program approvals are unavailable due to unforeseen circumstances, Perkins funding and graduation credits will not be negatively impacted.[16]

Analysis of 2023 expenditure data showed almost $6.13 million disbursed directly to public school districts in grants and aid for Career and Technical Education. Less than 2.5% of the total adjusted budget amount was left over after all expenditures.[17]

Fund Source	2023 Funding
Carl D. Perkins	$17,683,543

Arkansas's FY2023 allocation of Carl D. Perkins funds was $14,767,530.[18] Of the total funds that come to the state from the Perkins Act, 85% is distributed to local recipients, and the remaining 15% is used at the state level for administration (5%) and leadership (10%).[19] The 85% distributed is then further split between secondary (75%) and post-secondary (25%) recipients.

According to the Act, the secondary funds are to be distributed by the following formula:[20]

- 70% based on number of persons ages 5-17 that reside in each district from families with incomes below the poverty line
- 30% based on number of persons ages 5-17 that reside in each district or on the actual K-12 enrollment in districts as reported to the National Center for Educational Statistics (NCES).

State Start-Up Grants

DCTE State Start-Up Grants are provided on an annual, competitive basis to assist with the start-up expenses of a new Program of Study. These grant awards are exclusively for the purchase of equipment including required training, assessments, software, and industry-recognized credentials that support the

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[14] DCTE Policies and Procedures for Career and Technical Education, September 2021. *See also* Ark. Code Ann. § 6-20-2305(b)(4)(C)(i)(1)(a)(6).

[15] Strengthening Career and Technical Education for the 21st Century Act, Pub. Law No. 115-224 (2018).

[16] DCTE Policies and Procedures for Career and Technical Education, September 2021, 28

[17] ASIS Expenditure Data provided by BLR Fiscal Division, March 2024.

[18] U.S. Department of Education, National Perkins Reporting System 2023

[19] Carl D. Perkins Career and Technical Education Act of 2006, 20 U.S.C. § 2322, Sec. 112(a).

[20] *Id.* at Sec. 131(a).

newly approved programs. The funding is authorized under the Public School Fund (PSF) for Career Education, and all public school districts are eligible to apply. Schools receive a maximum of 85% of the cost to implement the program, and the district is responsible for providing 15%.[21]

Both approval and the amount of the grant awards are contingent on all of the following determining factors:

Fund Source	2023 Funding
Vocational Start-Up Grants	$2,370,000

- funds available
- state priority
- labor market data
- evaluation and review of application and rubric[22]

Analysis of FY2023 expenditure data for Vocational Start-Up Grants showed about 7% remaining from the total amount of funding available.[23]

In 2023, 77 schools in 69 school districts and open-enrollment charters received funding. Nearly $3.58 million was awarded for the start-up of 37 different CTE programs. A full list of 2022-2023 Start-Up Grant Award recipients by school and district can be found in Appendix B.

According to financial records provided by DCTE, 65% of the State Start-Up Grants were awarded from the Vocational Start-Up Grants fund. The remaining 31% was from federal ESSER funds and 4% from leftover Computer Science from the Department of Education's PSF account.

Schools were granted start-up funding for more STEM programs than any other area. Significantly fewer, but larger individual grants went towards Agricultural Science programs. The chart below shows percentages of the total award amount by the occupational area assigned to each grant.

Cumulatively, eleven CTE Programs of Study were awarded more than $100,000 through multiple start-up grants, with over $500,000 awarded to new Computer Science programs.

Percentage of Total Award Amount Represented by Program Area
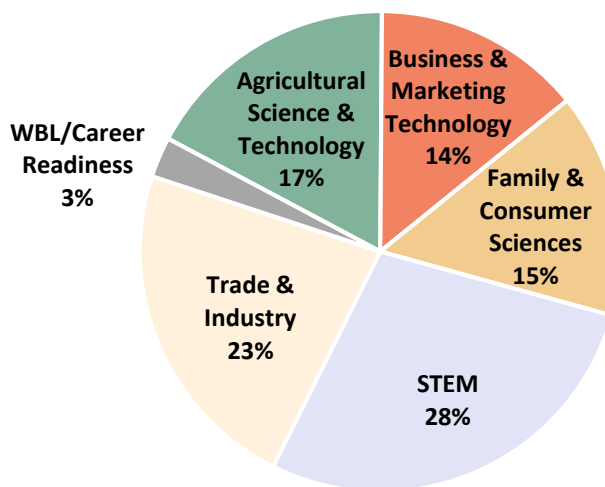
Programs Awarded Over $100,000

Computer Science
Plant Systems
Pre-Engineering
AV/Tech & Film
Marketing Business Enterprise
Nutrition Science and Dietetics
Pre-Educator
Advertising and Graphic Design
Animal Systems
Sports Medicine
Biomedical Sciences

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[21] DCTE Policies and Procedures for Career and Technical Education (September 2021), 12

[22] *Id.* at 11

[23] ASIS Expenditure Data provided by BLR Fiscal Division, March 2024.

Secondary Technical Centers

Funding to support Secondary Technical Centers (STCs) is to be determined by DCTE, in consultation with the Office of Skills Development, and with approval by the State Board of Education.[24]

Called "secondary career centers" or "vocational centers" in statute and a variety of names in rules, these centers are typically sponsored by high schools or two-year colleges.

The purpose of these centers as specified in statute is to:

Fund Source	2023 Funding
Vocational Center Aid	$20,620,498

- Support economic, industrial, and employment development efforts
- Provide equity and substantially equal access to quality vocational programs
- Improve school programs to assist schools in meeting accreditation standards

For new Secondary Technical Centers, statute directs the State Board of Education to review recommendations from the Career Education and Workforce Development Board (CEWDB) to establish centers in locations where services are needed to serve high school students from several school districts.[25] The Office of Skills Development (OSD), operating under the direction of the CEWDB, has responsibilities for the funding to Secondary Technical Centers providing secondary level CTE instruction. The Office is also required to provide an annual report to the State Board of Education on the financial viability of vocational centers, programs, enrollment, and the success of students.[26]

> **Survey Says:** 69% of responding superintendents reported students in their district attended a state-funded Secondary Career Center or satellite.
>
> Of the 31% reporting no students attending STCs, the top two reasons were because the district offered a sufficient array of CTE courses on campus (35%), and because there were no centers or satellites within 25 miles or 30 minutes of the high schools (32%).[27]

There were 30 Secondary Technical Centers with 32 satellite locations in place during the 2023 school year. DCTE and the CEWDB have recently added satellites to serve high school students within a defined geographical region, but no new centers have been added in the past few years. Approximately two-thirds of the programs offered at STCs were under the Trade and Industry occupational area. According to 2023 student enrollment data provided by DCTE, Nursing Services and Welding were the top programs in both Fall and Spring Semesters. A list of all Secondary Technical Centers and locations, followed by available programs can be found in Appendix C.

CTE Program Alignment

Arkansas statute defines a "rigorous career and technical education program of study" as one that "links secondary education and postsecondary education and combines academic and technical education in a structured sequence of courses that progresses from broad foundation skills to occupationally specific courses."[28] Additionally, one of the State Perkins Plan's requirements is that the Programs of Study

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[24] Ark. Code Ann. §6-20-2305 (b)(2)(B)(i)(a)

[25] Ark. Code Ann. § 6-51-302 (concerning the subchapter on multidistrict vocational centers and its references to the approval of the establishment of secondary vocational centers that are operated by a postsecondary vocational-technical school or two-year college). Notably, Arkansas Code § 6-51-302(d) predicates the requirements of Arkansas Code § 6-51-302 on "the appropriation of funding necessary to allow the State Board of Education to carry out the duties assigned to" the Board under that section.

[26] *Id.* at § 6-51-302(f).

[27] *See* Superintendents Survey Responses, questions 28 and 29.

[28] Ark. Code Ann. § 6-5-1002(b)

offered in schools lead to high-skill, high-wage, or in-demand occupations and prepare students for careers within the state, regional, or local economy.[29]

Programs of Study are reviewed annually to ensure they:

- Meet the federal Perkins V definition of a Program of Study
- Follow all policies and procedures
- Remove all critical elements identified in tiered support review(s)
- Follow all required CTE guidelines

Generally, CTE Programs of Study are offered under one of five occupational areas and one of the 16 career clusters developed by the National Career Cluster Framework. These programs are then connected by career pathways for related occupations within those career clusters, based on knowledge and skills identified and validated by industry.[30]

A full list of programs by occupational area, career cluster, and CTE Pathway can be found in Appendix A.

5 Occupational Areas

16 Career Clusters

33 CTE Pathways

55 Programs of Study
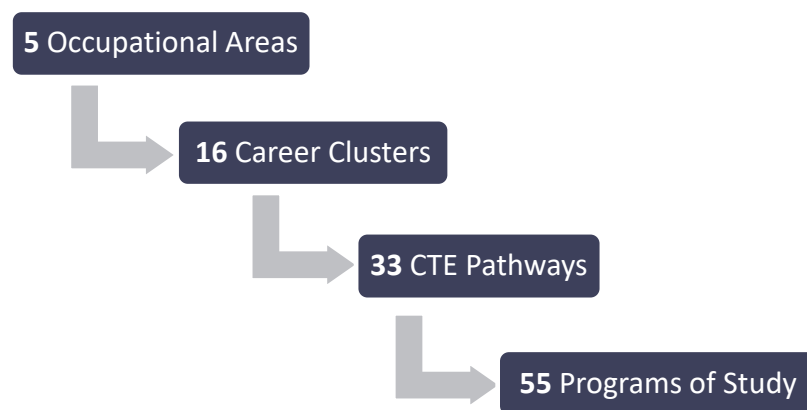
Note: Five career clusters fall under more than one occupational area.

Programs of Study

In addition to the statutory definition, Arkansas follows the federal definition in which a Program of Study is a "coordinated, non-duplicative sequence of academic and technical content" that also addresses employability skills, incorporates challenging State standards, and is aligned with industry needs. According to DCTE Policies and Procedures, there are two types of CTE Programs of Study—a Program of Study (POS) defined by Perkins V legislation and a CTE Modified Program defined by DCTE. [31] CTE Modified Programs are designed to provide school districts with additional flexibility and options for offering CTE instruction. However, any approved CTE program must meet all Perkins requirements in order to count towards the three Programs of Study required by state accreditation standards.

Program Personnel

CTE teachers' licensures are submitted through the DESE's Office of Educator Licensure. Additional endorsement and training requirements are outlined in DCTE's policies. CTE instructors teaching at a Secondary Technical Center (STC) must have a minimum of an associate's degree within the area of instruction, have completed all necessary background checks, and have met all college accrediting standards for instructors.[32]

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[29] Arkansas Perkins V Plan 2020, Appendix F

[30] DCTE Policies and Procedures for Career and Technical Education, September 2021, 6.

[31] *Id.* at 10.

[32] *Id*. at 23.
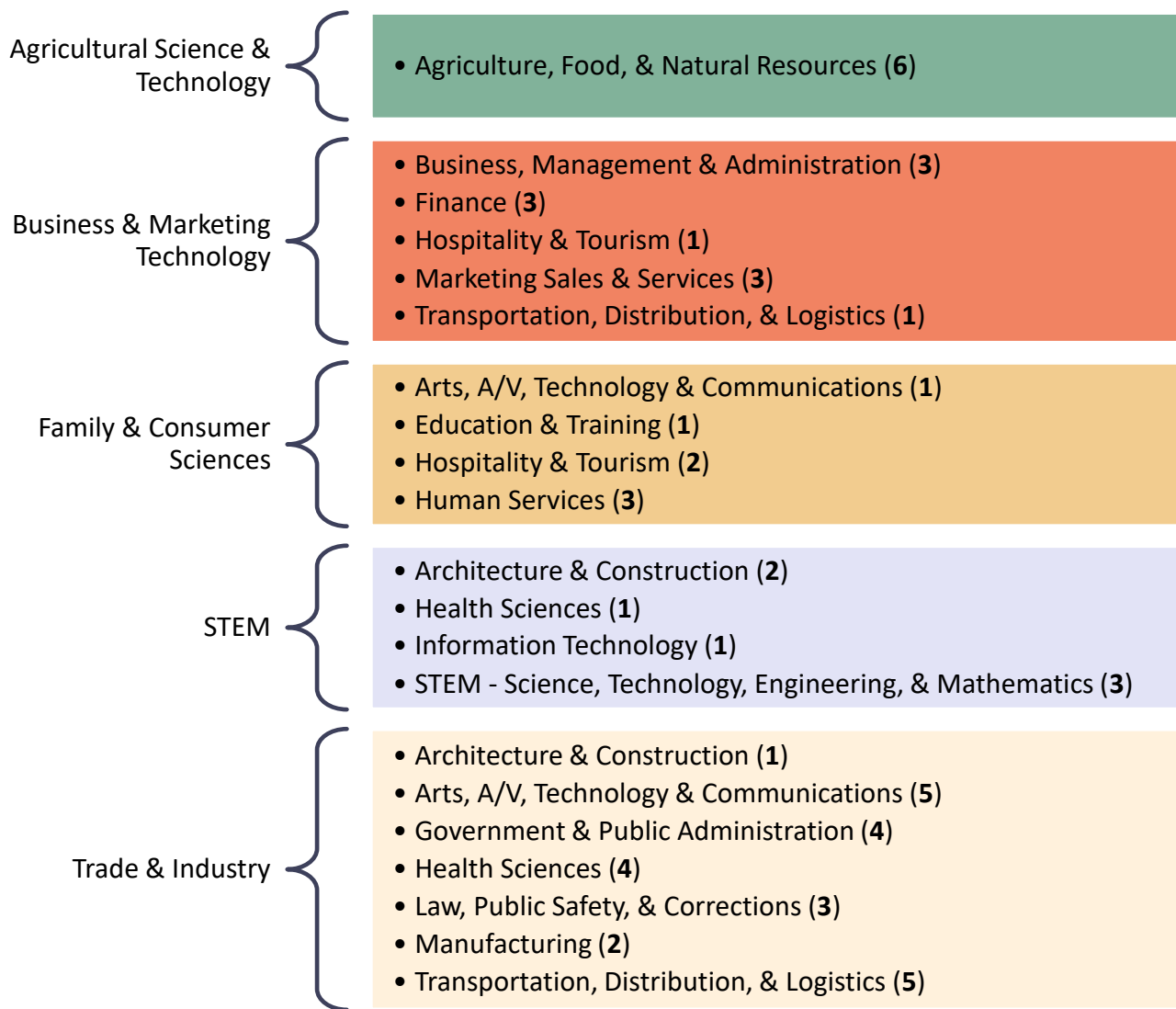
Program Delivery

Districts that do not offer required programs of study on campus may utilize other public schools, Secondary Technical Centers, or postsecondary institutions to meet requirements with DCTE approval.[33]

Survey Says: 62% of responding high school principals reported their CTE programs are offered both on campus and through Secondary Career Centers.[34]

Applications to implement new CTE programs of study are reviewed by content area personnel within the Department of Education with input from industry leadership, as well as secondary and postsecondary partners.

In 2023, there were 33 Career Pathways and 55 unique CTE Programs of Study offered. The diagram below identifies the career clusters by occupational area. The number of programs offered in each career cluster during the 2023 school year are shown in parenthesis. For the five career clusters that fall under two placements, the available programs of study differ depending on the occupational area.

Agricultural Science & Technology
- Agriculture, Food, & Natural Resources (**6**)

Business & Marketing Technology
- Business, Management & Administration (**3**)
- Finance (**3**)
- Hospitality & Tourism (**1**)
- Marketing Sales & Services (**3**)
- Transportation, Distribution, & Logistics (**1**)

Family & Consumer Sciences
- Arts, A/V, Technology & Communications (**1**)
- Education & Training (**1**)
- Hospitality & Tourism (**2**)
- Human Services (**3**)

STEM
- Architecture & Construction (**2**)
- Health Sciences (**1**)
- Information Technology (**1**)
- STEM - Science, Technology, Engineering, & Mathematics (**3**)

Trade & Industry
- Architecture & Construction (**1**)
- Arts, A/V, Technology & Communications (**5**)
- Government & Public Administration (**4**)
- Health Sciences (**4**)
- Law, Public Safety, & Corrections (**3**)
- Manufacturing (**2**)
- Transportation, Distribution, & Logistics (**5**)

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[33] DCTE Policies and Procedures for Career and Technical Education, September 2021, 7.

[34] *See* Principal Survey Responses, question 56.

Course Offerings

Students are not required to take career and technical education courses, but they are required to complete six units of "career focus" credits to meet graduation requirements. These credits can be fulfilled by CTE courses. In 2023, there were 1,214 courses coded as "Career Focus."[35] Of those courses, less than half were identified as Career & Technical Course Offerings.

As mentioned earlier, school districts are required to offer CTE instruction that allows students in grades 9-12 to complete nine units of sequenced courses.[36] Each approved CTE Program of Study has three levels of courses increasing in specificity. To meet state accreditation standards, entry level (Level One) foundation courses for at least three programs of study must be offered each year. Other course offerings can alternate semesters and school years, and not all higher level courses are necessarily taught every semester.[37] When Standards for Accreditation are met, schools can offer additional CTE courses as an elective or stand-alone course. These are considered to be independent of an approved CTE Program of Study and can include courses related to approved programs, or other types of CTE courses, such as Jobs for Arkansas Graduates (JAG) and career readiness courses.

Concurrent Credit

Concurrent credit enrollment opportunities are typically available later in the course sequence for CTE Programs of Study. Students completing these courses are eligible to receive both high school and college credits. Act 456 of 2019 created the Arkansas Concurrent Challenge Scholarship Program, which allocates funds remaining after the Division of Higher Education awards Arkansas Academic Challenge and Arkansas Workforce Challenge scholarships, and awards scholarships to cover concurrent credit expenses for eligible students.[38] In 2023, a total of 177 districts and charter school systems taught two or more CTE concurrent credit courses. Skilled Trades: Manufacturing was the most taught course for concurrent credit, followed by Shielded Metal Arc Welding and Medical Terminology. However, Medical Terminology had the highest student enrollment.

Weighted Credit

Weighted credit is available for certain courses, meaning that students earn the same number of credits as they do for Advanced Placement courses. Under Act 632 of 2019, which amended statute concerning public schools' grading scales, DESE, in collaboration with DCTE, may approve a course for "weighted credit" if the course exceeds the curriculum standards for a non-weighted course and leads to an approved industry recognized credential.[39] According to DCTE, CASE Agriculture—approved in January 2020—was the first weighted credit course approved under Act 632.[40] In 2023, Principles of Agriculture Science-Animal (CASE) was the most taught CTE weighted credit course.

Work-Based Learning

Work-Based Learning (WBL) is a nationally recognized umbrella term that includes industry-focused experiences that provide an opportunity for students to explore and engage in the learning and skills necessary to prepare them for the future workforce. The Perkins V federal definition of Work-Based

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[35] Credit courses that included a "Career Focus" designation by State Graduation Requirements or Smart Core, Division of Elementary and Secondary Education's (DESE) Course Code Management System

[36] *See* "Rules Governing Standards for Accreditation" (May 2022), Rule 1-A.1.3.

[37] 2022-2023 Perkins V Manual, July 2022

[38] Ark. Code Ann. § 6-85-401, et seq., creating the Arkansas Concurrent Challenge Scholarship Program.

[39] Ark. Code Ann. § 6-15-902

[40] Meeting with DCTE Director, April 2022.

Learning is "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, first-hand engagement with the tasks required in a given career field, that are aligned to curriculum and instruction."[41]

The following WBL courses (paid or unpaid) meet federal requirements:
- Career Practicum
- Internship
- Pre-Apprenticeship

Most WBL courses are offered to specific grade levels. Career Practicums, in particular, are Level Three courses for most CTE Programs of Study. Based on the number of districts teaching these courses and student enrollment in 2023, most students were completing programs of study in these three pathways: Agriculture, Food, and Natural Resources; Human Services; and Marketing Sales and Services.

In 1991, the Arkansas General Assembly enacted companion measures, Acts 546 and 553,[42] which direct DCTE to "develop and implement work-based learning programs to provide additional educational and training opportunities for Arkansas high school students." The measures further provide that the programs should include high-quality supervised learning opportunities on work sites, integrate academic and vocational teaching and learning, use competency-based measures for evaluating student progress, and provide both academic and occupational credentials. In 2023, Work-Based Learning courses and four 0.5 credit Career Readiness courses were included in a program category distinct from the other occupational areas.[43] These courses are included in the WBL course count below.

CTE Courses

A total of 430 distinct CTE courses were taught across the state in all public school districts and open-enrollment charters serving grades 9-12. The number of courses taught varied widely, as depicted by the state map of 2023 courses by district. Every school district taught at least 10 different CTE courses, and each charter taught at least two courses.
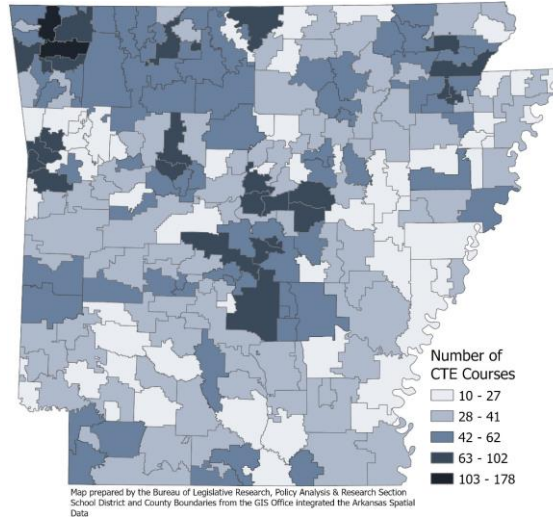
Course Type	Course Count	Student Enrollment	Districts/ Charters
CTE (Total)	**430**	**185,769**	**251**
CTE Concurrent	160	11,926	191
CTE WBL & Career Readiness	25	19,173	184
CTE Weighted	9	1,654	62

Number of CTE Courses
- 10 - 27
- 28 - 41
- 42 - 62
- 63 - 102
- 103 - 178

Map prepared by the Bureau of Legislative Research, Policy Analysis & Research Section
School District and County Boundaries from the GIS Office integrated the Arkansas Spatial Data

The above table shows the total number of CTE courses by type of course, student enrollment, and the number of districts and open-enrollment public charters in which they were taught. Overall, twelve courses were taught by more than half of all school districts; 51 courses were taught exclusively at one location in the state.

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[41] Perkins V: The Official Guide to Strengthening Career and Technical Education for the 21st century Act, 12

[42] Ark. Code Ann. § 6-50-501 et seq.

[43] DCTE Program Operational Guide: 2022-2023 School Year (July 2022)

Based on the courses taught at the district and school level, most Arkansas public schools are offering programs of study in the Business and Marketing Technology occupational area. The foundational course for all programs of study in that area[44]—Survey of Business—was taught in 237 districts across the state. This course also had the highest student enrollment, followed by Level One courses Family and Consumer Sciences and Survey of Agriculture Systems.
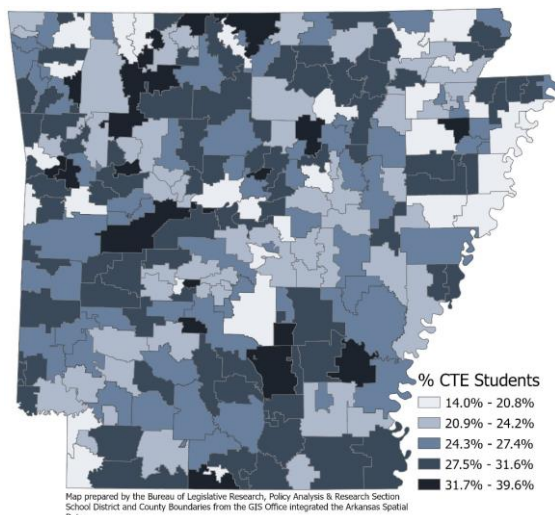
By a wide margin, these were the top courses both taught by districts and taken by students statewide. Analysis of all CTE courses indicate that programs and pathways in Business Marketing and Technology, Family and Consumer Sciences, and Agricultural Science and Technology were generally most popular with districts and students in 2023.

CTE Students

The following state map shows the percentage of students enrolled in CTE courses by school districts. On average, CTE students made up about 24% of total statewide enrollment.

In the district with the fewest number of students taking CTE courses, the percentage of CTE students was nearly 22% of that district's total enrollment; in the district with the most CTE students, the percentage by enrollment was approximately 28%.

The distinct student and course counts for open-enrollment charters can be found in Appendix D, as well as a map showing student counts by district.

% CTE Students
- 14.0% - 20.8%
- 20.9% - 24.2%
- 24.3% - 27.4%
- 27.5% - 31.6%
- 31.7% - 39.6%

Map prepared by the Bureau of Legislative Research, Policy Analysis & Research Section School District and County Boundaries from the GIS Office integrated the Arkansas Spatial Data

Upon completing the eighth grade, each student is required to have a Student Success Plan on file. The Student Success Plan[45] includes, among other requirements, college and career components for pathways to graduation, recommended secondary courses to be taken, and postsecondary plans. Districts are required to use college and career readiness assessment data to update Student Success Plans. Other uses include supporting strategies or programs that increase college preparation rates and increase "the attainment of career credentials or technical certificates through expanded opportunities for students."[46]

Once students begin taking CTE courses and pursuing programs of study, the State Perkins Plan identifies the following student goals:

1. Each CTE student will complete their CTE program with the most competitive academic, technical, and employability skills for future success.
2. Each CTE student will establish an individual career plan and successfully accomplish the goals in that plan.
3. Each CTE student will develop and apply personal competencies and soft skills that promote learning and success in college, career, and life.
4. One year after graduation, each CTE student will be actively engaged in college, further career preparation, military service, and/or competitive employment.[47]
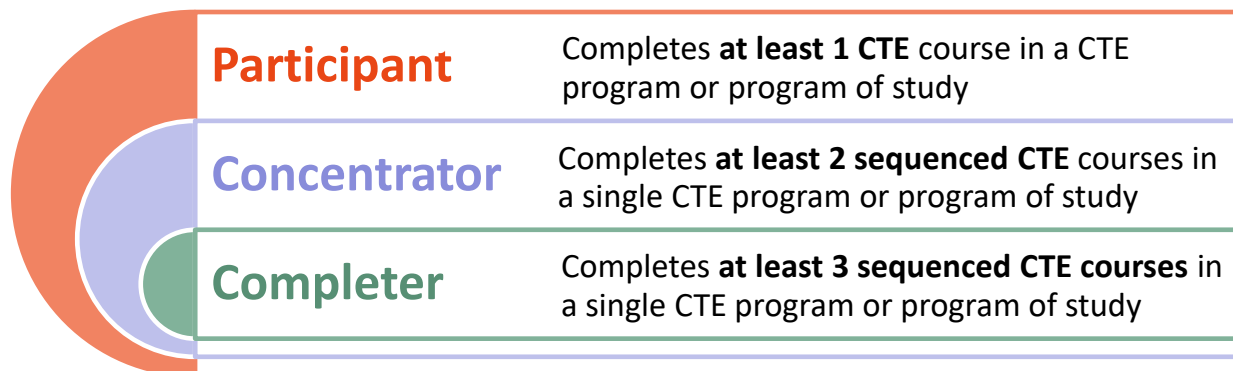
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[44] DCTE Program Operational Guide: 2022-2023 School Year (July 2022)

[45] Ark. Code Ann. § 6-15-2911(b).

[46] Ark. Code Ann. § 6-5-2911(c)(4)(C).

[47] Arkansas Perkins V Plan, 2020

The following diagram outlines the different terms used to define CTE students.

Participant	Completes **at least 1 CTE** course in a CTE program or program of study
Concentrator	Completes **at least 2 sequenced CTE** courses in a single CTE program or program of study
Completer	Completes **at least 3 sequenced CTE courses** in a single CTE program or program of study

By the Perkins V federal definition, a CTE concentrator in secondary education has completed at least two courses in a single CTE program or program of study. The levels of these courses must progress in specificity. DCTE applies this definition to a "CTE Program of Study Concentrator," and defines a "CTE Modified Program Concentrator" as a student who has completed two courses within a career cluster.[48] Career clusters and pathways are often used interchangeably within DCTE, so these expanded definitions include students taking sequenced courses within a career pathway.[49] This distinction also applies to completers.

According to DCTE policies and procedures, participants and completers are not federal accountability measures, but they are tracked and recognized at the state level. Once a student has completed three sequenced courses within a single program, they are identified as a completer regardless of grade level. The status is also carried through any transfers to other schools or districts in the state. For Perkins V accountability, only the student's concentrator status is used to measure performance. In Arkansas, a concentrator is a student who has completed "one foundational CTE credit and one additional CTE credit within the same approved CTE program of study."[50] The courses taken must total 2.0 credits. Completers must have earned credits for all core course levels—Levels One, Two, and Three.

Performance Indicators

As required under the federal Perkins Act, DCTE must report to the federal government measures of student performance in career and technical education. The following table provides 2023 CTE concentrator data for the approved Perkins V performance measures.[51]

Perkins V Performance Measures	Target	2023 Performance
Graduation Rate (4-YR Adjusted Cohort)	87.18%	97.2%
Academic Performance	ELA: 48.95% MATH: 42.77% SCIENCE: 48.90%	ELA: 65.92% MATH: 58.53% SCIENCE: 66.57%
Post-Secondary Placement	76.75%	82.78%
Non-Traditional Program Enrollment	13.33%	39.14%
Post-Secondary Credentials	33.29%	55.22%

[48] Policies and Procedures for Career and Technical Education, September 2021, 10

[49] Meeting with DCTE Director, March 2024

[50] Accountability Performance Measures "Definitions," 2022-2023 Perkins V Manual, 36

[51] Office of Innovation for Education, University of Arkansas, Data Retrieved February 2024

The percentages for academic performance are based on the ACT Aspire for students in grades 9 and 10, and on the ACT for students in grades 11 and 12 in the 2022-2023 school year. The postsecondary measures report on students who graduated or exited in the previous school year. The methodology for these measures can be found in Appendix E.

For 2023, the "concentrator" definition was changed to specify students who completed a Level One course followed by a Level Two course in the same approved CTE program or program of study. In prior years, a student could be counted after taking any two CTE courses, regardless of the program. These new definitions were applied for the first time in the 2022-2023 school year. Arkansas's performance in all measures continued to exceed the target levels, with a less than 2% change in the graduation rate and academic measures. The other measures were more significantly impacted by changes to the definition, CTE program restructuring, or data reporting differences between years. [52]
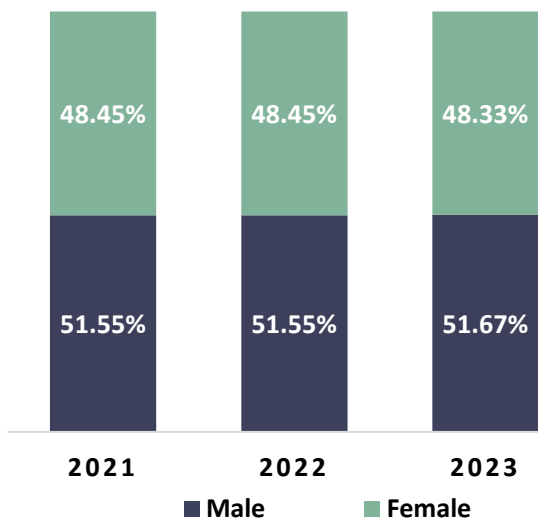
Student Demographics

The following chart shows the total number of CTE participants, concentrators, and completers, according to the state's newly adopted definitions.[53]

2022-2023	14,109	37,648	119,878

■ **Completers**   ■ **Concentrators**   ■ **Participants**
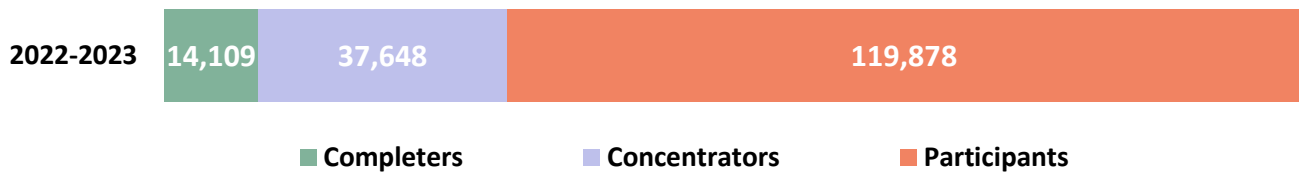
The table and charts below show the percentages of CTE participants by gender, race/ethnicity, and students classified in special populations as defined within Perkins V over the past three school years.

CTE Participants	2021	2022	2023
English Learner	6.2%	6.2%	6.4%
Students with Disabilities	11.4%	11.7%	11.6%
Economically Disadvantaged	59.0%	59.3%	60.2%

CTE PARTICIPANTS BY GENDER

	2021	2022	2023
Female	48.45%	48.45%	48.33%
Male	51.55%	51.55%	51.67%

■ **Male**   ■ **Female**

CTE PARTICIPANTS BY RACE/ETHNICITY

	2021	2022	2023
Other	5.69%	6.11%	6.54%
Hispanic	13.06%	13.90%	14.71%
Black	18.22%	17.82%	17.72%
White	63.03%	62.17%	61.04%

■ **White**   ■ **Black**   ■ **Hispanic**   ■ **Other**
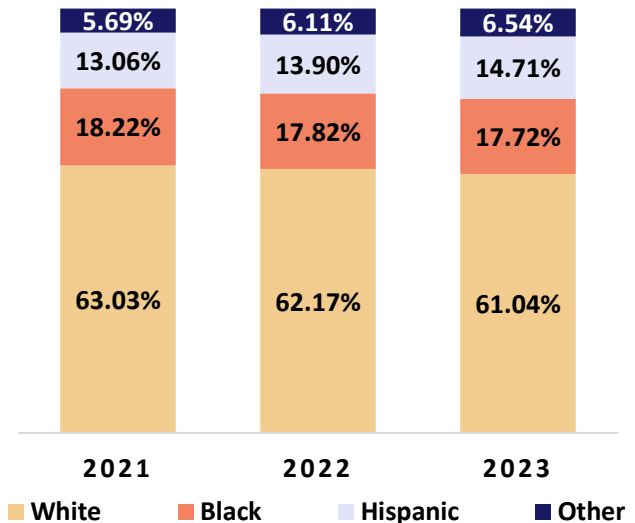
[52] Office of Innovation for Education, University of Arkansas, e-mail communications, April 2024

[53] Office of Innovation for Education, University of Arkansas, Data Retrieved February 2024

Between 2022 and 2023, several Programs of Study were consolidated, removed, and renamed. According to the Office for Innovation for Education (OIE), this also impacted the number of reported concentrators in some clusters more than others by adding new course level designations. For example, four Programs of Study were removed from the Manufacturing cluster, and nine different computer science Programs of Study were combined into one Computer Science program—reducing the number of Programs of Study in the Information Technology cluster to one.

The table below provides statewide participant and concentrator data, arranged by the number of concentrators in each career cluster.[54]

Career Cluster	Concentrators	Participants
Agriculture, Food, and Natural Resources	22,024	45,105
Business Management and Administration	14,117	61,330
Human Services	10,282	49,947
Hospitality and Tourism	7,831	69,328
Marketing Sales and Services	4,672	50,073
Finance	4,539	50,034
Information Technology	4,497	35,701
Transportation, Distribution and Logistics	4,356	53,084
Health Sciences	2,660	22,261
STEM (Science, Technology, Engineering, & Mathematics)	1,936	10,268
Education and Training	1,717	39,531
Architecture and Construction	1,397	7,281
Arts, Audio/Video Technology and Communications	1,335	42,232
Government and Public Administration	1,280	6,975
Law, Public Safety, Corrections and Security	841	4,872
Manufacturing	671	5,166

According to the 2023 course enrollment data, more students were interested in courses from the following pathways: Family and Community Services (Human Services), Therapeutic Services (Health Sciences), Manufacturing Production (Manufacturing), and Marketing Sales and Services.

Workforce Connections

According to state statute and by federal Perkins V definitions, a CTE program of study is expected to culminate in the attainment of a recognized postsecondary credential.[55] All CTE programs offer a state-approved credentialing opportunity, though all students may not attain a certification upon completing a program of study. In Arkansas, certificates and degrees awarded by two-year and four-year institutions

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[54] Office of Innovation for Education, University of Arkansas, Data Retrieved February 2024
[55] *See* Ark. Code Ann. § 6-5-1002(b)(2).

are recognized postsecondary credentials.[56] The number of DCTE Industry-Recognized Certifications approved for each career cluster for 2022-23 can be found in Appendix F.

The goal of secondary career and technical education is to help high school students explore career options and expose them to a variety of occupations and industries. Through Career and Technical Education Programs of Study, students have the opportunity to begin building the skills they need for the work world, regardless of their post-secondary education plans. Additional programs such as the Arkansas College and Career Coach Program, Jobs for Arkansas Graduates (JAG), and Career and Technical Student Organizations (CTSOs) are also resources available to students through DCTE.

Because CTE is rooted in the mission of preparing today's youth for future careers, it is important to understand the current landscape of education attainment and employment in Arkansas. The following lists, developed by the Arkansas Division of Workforce Services, provide the top 10 occupations in Arkansas based on the projected number of annual job openings and by the level of education typically needed.

Top 10 Occupations by Education Level Typically Required Based on State of Arkansas' 2021-2023 Short-Term Occupational Projections Net Growth			
	High School or Less	Associate Degree or Vocational Training	Bachelor's Degree or Higher
1	Stockers and Order Fillers	Heavy and Tractor-Trailer Truck Drivers	General and Operations Managers
2	Insurance Sales Agents	Preschool Teachers, Except Special Education	Clergy
3	Retail Salespersons	Hairdressers, Hairstylists, and Cosmetologists	Software Developers and Software Quality Assurance Analysts and Testers
4	Insurance Claims and Policy Processing Clerks	Licensed Practical and Licensed Vocational Nurses	Registered Nurses
5	Laborers and Freight, Stock, and Material Movers, Hand	Medical Assistants	Medical and Health Services Managers
6	Industrial Truck and Tractor Operators	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Accountants and Auditors
7	Cooks, Restaurant	Physical Therapist Assistants	Management Analysts
8	Cashiers	Computer User Support Specialists	Nurse Practitioners
9	Customer Service Representatives	Bookkeeping, Accounting, and Auditing Clerks	Market Research Analysts and Marketing Specialists
10	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Dental Assistants	Substitute Teachers, Short-Term
Source: Arkansas Division of Workforce Services - Department of Commerce, *Top 10 Occupations by Education Level*, https://www.discover.arkansas.gov/Career-Watch/Top-10-Occupations-By-Education.			

[56] Ark. Code Ann. § 6-5-1002(b)

2023 LEGISLATION

ACT 237 (SB294) requires that, beginning with the ninth grade class of 2024-2025, each public high school student have the option to earn a high school diploma through a career-ready pathway, which shall be developed by the Division of Elementary and Secondary Education. The act requires each public school district to offer at least one (1) career-ready pathway that is aligned to state and regional Workforce demands. Further, the act requires each public school district and open-enrollment public charter school to incorporate career awareness and exploration activities for students in grades six through eight (6-8). The act requires the Arkansas Workforce Development Board, in consultation with the Department of Education, to develop a system for collecting, analyzing, and reporting public school student outcomes associated with the completion of high-wage, high-growth career-ready pathways. The act also requires a public school student who is in a work-based learning opportunity provided in coordination with a public school district or open-enrollment public charter school to be covered by the workers' compensation insurance of the student's employer.

Diploma Pathways
The act requires a student's selected diploma pathway to be included in his or her student success plan. The act requires each student, beginning with the ninth grade class of the 2024-2025 school year, to have the option to earn a high school diploma through a career-ready pathway. The act requires the Division of Elementary and Secondary Education to develop career-ready pathways that include challenging academic courses and modern career and technical studies that are aligned with high-wage, high-growth jobs in the state.

ACT 242 (HB1329) requires that the Division of Elementary and Secondary Education include in the academic standards a means by which a public school student may substitute comparable elective coursework pertaining to career and technical education for core academic classes that are required for graduation. The act creates the Career and Technical Education with Embedded Academics Certification Committee for purposes of approving elective coursework pertaining to career and technical education as a substitute for core academic classes.

ACT 648 (SB451) amends the membership of the Career Education and Workforce Development Board, amends the duties of the Office of Skills Development and the Career Education and Workforce Development Board, and amends the law to coordinate various Workforce development programs.

ACT 654 (SB470) permits a career readiness assessment administered to a student in grades ten through twelve (10-12) to include without limitation the ACT WorkKeys National Career Readiness Certificate and requires that a Platinum, Gold, Silver, or Bronze credential through the ACT WorkKeys be used by an institution of higher education as transcribable credit towards the attainment of a postsecondary technical degree. The act allows a public high school student to meet the requirement to earn one (1) unit of credit in an approved high school computer science course by completing an approved high school computer science course or a computer science-related career and technical education course. The act also requires the Division of Career and Technical Education to review new and existing career and technical pathways to determine which courses within the career and technical pathways meet criteria for weighted credit and to publish a list of all approved career and technical pathways annually by January 1. The act permits weighted credit to be awarded for a career and technical pathway to a student upon the completion of the relevant career and technical pathway and the student's earning of the high-value industry credential aligned with the career and technical pathway.

APPENDIX A – PATHWAYS/PROGRAMS OF STUDY 2022-23

CTE Pathways Mapping

OCCUPATIONAL AREA	CAREER CLUSTER	CTE PATHWAY	PROGRAM OF STUDY
Agriculture Science and Technology	**Agriculture, Food, and Natural Resources**	Agribusiness Systems	Agribusiness Systems
		Agricultural Power, Structural, and Technical Systems	Agricultural Power, Structural, and Technical Systems
		Animal Systems	Animal Systems
		Food Products and Processing Systems	Food Products and Processing Systems
		Natural Resources/ Environmental Service Systems	Natural Resources/ Environmental Service Systems
		Plant Systems	Plant Systems
Business and Marketing Technology	**Business Management & Administration**	Administrative Support	Management
			Medical Office Administration
			Office Administration
	Finance	Accounting	Accounting
			Banking
			Business Finance
	Hospitality & Tourism	Travel and Tourism	Hospitality and Tourism
	Marketing Sales & Services	Marketing Management	Marketing Business Enterprise
		Marketing Research	Digital Marketing
		Merchandising	Retail Management
	Transportation, Distribution & Logistics	Logistics Planning and Management Services	Supply Chain and Logistics
Family and Consumer Sciences	**Arts, Audio/Video Technology & Communications**	Visual Arts	Clothing and Housing Design
	Education & Training	Teaching and Training	Pre-Educator
	Hospitality & Tourism	Restaurant and Food and Beverage Services	Culinary Arts
			Food Production, Management, and Services
	Human Services	Consumer Services	Consumer Services
		Family and Community Services	Human and Social Services
			Nutrition Science and Dietetics
Science, Technology, Engineering, and Mathematics (STEM)	**Architecture & Construction**	Design and Pre-Construction	Architectural/CAD
			Engineering/CAD
	Health Sciences	Biotechnology Research and Development	Biomedical Sciences
	Information Technology	Programming and Software Development	Computer Science

OCCUPATIONAL AREA	CAREER CLUSTER	CTE PATHWAY	PROGRAM OF STUDY
	STEM (Science, Technology, Engineering, & Mathematics)	Engineering and Technology	Automation and Robotics Technology
			Pre-Engineering
			Unmanned Aerial Systems (UAS)
Trade and Industry	**Architecture & Construction**	Construction	Construction Technology
	Arts, A/V Technology & Communications	A/V Technology & Film	A/V Technology and Film
		Journalism & Broadcasting	Digital Cinema Productions
			Radio Broadcasting Technology
		Visual Arts	Advertising and Graphic Design Technology
			Commercial Photography
	Government & Public Administration	National Security	JROTC: Air Force
			JROTC: Army
			JROTC: Marine
			JROTC: Navy
	Health Sciences	Therapeutic Services	Medical Skills and Services
			Nursing Services
			Pharmacy Technician
			Sports Medicine
	Law, Public Safety, Corrections & Security	Emergency and Fire Management Services	Emergency Services
			Firefighting
		Law Enforcement Services	Criminal Justice
	Manufacturing	Maintenance, Installation, and Repair or Production	Advanced Manufacturing
		Manufacturing Production	Welding
	Transportation, Distribution & Logistics	Facility and Mobile Equipment Maintenance and Repair	Automotive Collision Repair Technology
			Automotive Service Technology
			Aviation Technology
			Medium/Heavy Truck Technology
			Power Equipment Technology

Source: DCTE Program Operational Guide: 2022-2023 School Year (July 2022), Division of Career and Technical Education, Arkansas Department of Education

APPENDIX B – START-UP GRANT AWARDS (2023)

2022-2023 State Start-Up Grant Awards			
School District	**School**	**CTE Program**	**Grant Amount**
Arkadelphia	Arkadelphia High School	Business Finance	$24,225.00
Arkansas Arts Academy	Arkansas Arts Academy High School	Clothing and Housing Design	$22,374.31
Arkansas Arts Academy	Arkansas Arts Academy High School	Culinary Arts	$6,880.87
Bald Knob	Bald Knob High School	CS: Robotics	$30,430.00
Bauxite	Bauxite High School	CS: Programming	$26,877.00
Bay	Bay High School	Nutrition Science and Dietetics	$46,521.14
Bentonville	Bentonville High School	CS: Robotics	$15,215.00
Bentonville	Bentonville High School	Unmanned Aerial Systems	$20,094.42
Bentonville	Bentonville West High School	CS: Robotics	$15,215.00
Bentonville	Bentonville West High School	Unmanned Aerial Systems	$20,094.43
Bergman	Bergman High School	Banking	$24,225.00
Caddo Hills	Caddo Hills High School	A/V Tech and Film	$41,753.78
Carlisle	Carlisle High School	CS: Robotics	$5,678.00
Cedarville	Cedarville High School	Marketing Business Enterprise with Store	$37,187.50
Cutter Morning Star	Cutter Morning Star High School	Pre-Educator	$33,203.14
De Queen	De Queen High School	Television Production	$41,753.78
Deer/Mt. Judea	Deer High School	CS: Mobile Application Development	$36,459.90
Deer/Mt. Judea	Mt. Judea High School	CS: Mobile Application Development	$36,459.90
East End	Bigelow High School	Banking without Teller Services	$24,225.00
El Dorado	El Dorado High School	Animal Systems	$25,653.43
El Dorado	El Dorado High School	Agriculture Power, Structural, and Technical Systems	$62,905.27
Flippin	Flippin High School	Digital Marketing	$27,115.00
Flippin	Flippin High School	Medical Professions	$24,356.14
Glen Rose	Glen Rose High School	Plant Systems	$90,534.52
Gosnell	Gosnell High School	Medical Office Administration	$24,225.00
Gravette	Gravette High School	A/V Tech and Film	$41,753.78
Greenbrier	Greenbrier High School	Pre-Engineering with Environmental Sustainability	$62,012.75
Harmony Grove (Ouachita)	Harmony Grove High School	CS: Robotics	$30,430.00
Harmony Grove (Saline Co.)	Harmony Grove High School	Sports Medicine	$31,956.67
Harrison	Harrison High School	Agribusiness Systems	$25,878.08
Harrison	Harrison High School	Banking without Teller Services	$24,225.00
Hazen	Hazen High School	Chemistry of Foods	$8,814.53
Horatio	Horatio High School	Nutrition Science and Dietetics	$80,209.84

2022-2023 State Start-Up Grant Awards			
School District	**School**	**CTE Program**	**Grant Amount**
Hot Springs	Hot Springs World Class High School	Sports Medicine	$31,956.67
Hoxie	Hoxie High School	Marketing Business Enterprise	$27,115.00
Jasper	Jasper High School	Animal Systems	$30,307.77
Junction City	Junction City High School	Marketing Business Enterprise	$27,115.00
Junction City	Junction City High School	Food Production	$73,128.87
Lafayette County	Lafayette County High School	Pre-Educator	$33,203.14
Lakeside (Garland Co.)	Lakeside High School	CS: Cybersecurity	$29,500.10
Lakeside (Garland Co.)	Lakeside High School	CS: Programming	$26,877.00
Lakeside (Garland Co.)	Lakeside High School	Work-Based Learning	$24,225.00
Lakeside (Garland Co.)	Lakeside High School	Pre-Engineering with EDD	$44,771.44
LISA Academy Public Charter	LISA Academy North High School	PLTW Biomedical Sciences	$62,965.42
LISA Academy Public Charter	LISA Academy West High School	PLTW Biomedical Sciences	$62,965.42
Little Rock	Southwest High School	Unmanned Aerial Systems	$40,188.85
Little Rock	LR West School of Innovation	Plant Systems	$90,534.52
Magnolia	Magnolia High School	A/V Tech and Film	$41,753.58
Magnolia	Magnolia High School	CASE Animal Science	$26,673.00
Mammoth Spring	Mammoth Spring High School	Work-Based Learning	$24,225.00
Marmaduke	Marmaduke High School	Nutrition Science and Dietetics	$46,521.14
Melbourne	Melbourne High School	Work-Based Learning	$24,225.00
Monticello	Monticello High School	CS: Programming	$26,877.00
Mountain Home	Mountain Home High School Career Academies	Pre-Engineering IST	$48,823.64
Nashville	Nashville High School	Office Administration	$24,225.00
Nettleton	Nettleton High School	Criminal Justice	$17,742.52
Nettleton	Nettleton High School	Hospitality and Tourism	$27,115.00
Nettleton	Nettleton High School	Pre-Engineering with EDD	$44,771.44
Nettleton	Nettleton High School	Sports Medicine	$31,956.67
Nettleton	Nettleton Junior High School	Family CSI	$19,675.38
Nevada	Nevada High School	Animal Systems	$30,307.77
North Little Rock	North Little Rock Center of Excellence	Criminal Justice	$17,742.52
Ouachita River	Acorn High School	Construction Technology	$44,402.95
Ozark	Ozark High School	Consumer Services	$27,301.66
Parkers Chapel	Parkers Chapel High School	Pre-Engineering with CIM	$60,124.10
Pea Ridge	Pea Ridge High School	Advertising and Graphic Design	$49,706.88
Pea Ridge	Pea Ridge High School	Digital Marketing	$27,115.00
Pocahontas	Pocahontas High School	Office Administration	$24,225.00
Pulaski County Special	Joe T. Robinson High School	CS: Programming	$26,877.00
Pulaski County Special	Maumelle High School	Banking	$24,225.00

School District	School	CTE Program	Grant Amount
2022-2023 State Start-Up Grant Awards			
Pulaski County Special	Sylvan Hills High School	Sports Medicine	$31,956.67
Pulaski County Special	Sylvan Hills Middle School	PLTW Medical Detectives	$24,707.80
Pulaski County Special	Wilbur D. Mills University Studies High School	Advertising and Graphic Design	$49,706.88
Rivercrest	Academies at Rivercrest High School	Plant Systems	$90,534.52
Rivercrest	Academies at Rivercrest High School	Human and Social Services	$50,619.20
Rogers	Rogers High School	Medium/Heavy Truck Technology	$72,105.50
Rose Bud	Rose Bud High School	CS: Robotics	$30,430.00
Russellville	Russellville High School	A/V Tech and Film	$41,753.78
Salem	Salem High School	Office Administration	$24,225.00
Scranton	Scranton High School	Animal Systems	$25,653.43
Siloam Springs	Siloam Springs High School	Advertising and Graphic Design	$49,706.88
Sloan-Hendrix	Sloan-Hendrix High School	Marketing Business Enterprise with Kiosk	$43,987.50
Smackover-Norphlet	Smackover High School	CS: Robotics	$30,430.00
Star City	Star City High School	Business Finance	$24,225.00
Star City	Star City High School	CS: Cybersecurity	$29,500.10
Strong-Huttig	Strong High School	Career Readiness & College and Career Readiness	$24,225.00
Strong-Huttig	Strong High School	Pre-Educator	$25,590.37
Texarkana	Arkansas High School	Pre-Educator	$33,203.14
Trumann	Trumann High School	Commercial Photography	$66,342.79
Trumann	Trumann High School	A/V Tech and Film	$41,753.78
Trumann	Trumann High School	CS: Programming	$26,877.00
Valley View	Valley View High School	Television Production	$41,753.78
Van Buren	Van Buren High School	Plant Systems	$90,534.52
Watson Chapel	Watson Chapel High School	Pre-Educator	$33,203.14
White Co. Central	White Co. Central High School	CS: Robotics	$30,430.00
White Hall	White Hall High School	Animal Systems	$30,307.77
White Hall	White Hall High School	CS: Programming	$26,877.00
Wynne	Wynne High School	Marketing Business Enterprise with Kiosk	$43,987.50
Yellville-Summit	Yellville-Summit High School	CS: Robotics	$30,430.00
		37 Programs of Study	**$3,575,467.68**

Source: DCTE 2022-2023 State Start-Up Awards, Division of Career and Technical Education, Arkansas Department of Education.

APPENDIX C – SECONDARY TECHNICAL CENTERS

| Secondary Technical Center (STC)	City
Arkansas Northeastern College (ANC) Technical Center	Blytheville
Arkansas State University Beebe Regional Career Center* (2)	Beebe
Arkansas State University Mid-South Technical Center	West Memphis
Arkansas State University Mountain Home Technical Center	Mountain Home
Arkansas State University Newport IGNITE Academy* (1)	Newport
Arkansas State University Three Rivers Career Center* (1)	Malvern
Arkansas Tech University Career Center* (4)	Russellville
Black River Technical College Career & Technical Center* (2)	Pocahontas
Conway Area Career Center* (2)	Conway
Cossatot Community College of the University of Arkansas (CCCUA) Secondary Technical Center* (2)	DeQueen
East Arkansas Secondary Career Center* (1)	Forrest City
Metropolitan Career and Technical Center	Little Rock
Monticello Occupational Education Center* (2)	Monticello
National Park Technology Center	Hot Springs
North Central Career Center	Leslie
NorthArk Technical Center* (2)	Harrison
Northeast Arkansas Career & Technical Center	Jonesboro
Northwest Technical Institute Secondary Career Center* (4)	Springdale
Ozarka College Technical Center* (2)	Melbourne
Phillips Community College Career and Technical Center* (2)	Helena
SAU Tech Career Academy* (1)	Camden
South Arkansas Community College Secondary Technical Center	El Dorado
Southeast Arkansas College Career Center	Pine Bluff
Southeast Arkansas Community Based Education Center	Warren
University of Arkansas Community College Batesville Career Center	Batesville
University of Arkansas Community College Morrilton Career Center* (1)	Morrilton
University of Arkansas Hope Texarkana Secondary Career & Technical Education Center* (1)	Hope
University of Arkansas Pulaski Technical College Secondary Institute	North Little Rock
University of Arkansas at Rich Mountain Technical Center	Mena
Western Arkansas Technical Center* (2)	Fort Smith

*Number of Satellites

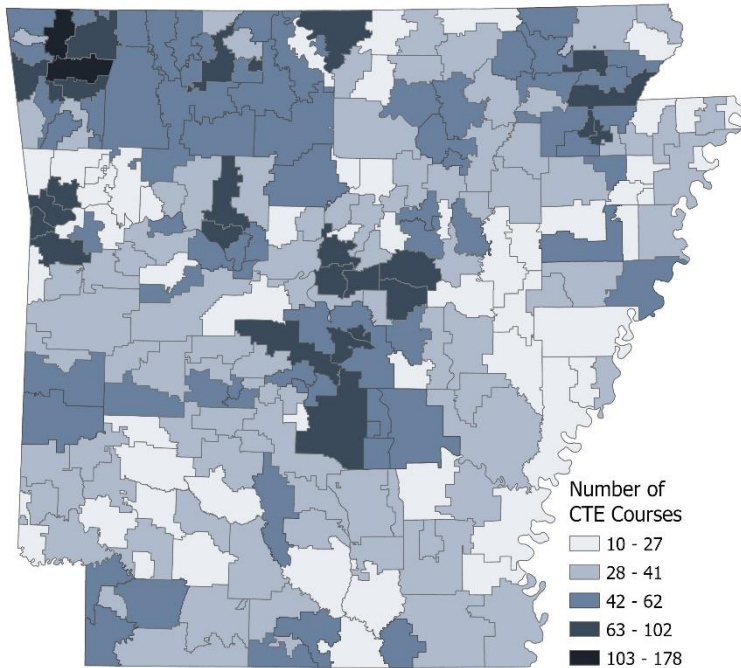| Program of Study	Number of STCs
Advanced Manufacturing	27
Architectural CAD	3
Automotive Collision Repair Technology	7
Automotive Service Technology	18
Aviation Technology	1
Computer Science: Computer Engineering	3
Computer Science: Cybersecurity	3
Computer Science: Networking	11
Computer Science: Programming	4
Construction Technology	8
Construction Technology (Includes HVACR)	3
Construction Technology: Furniture Manufacturing	1
Construction Technology: HVACR	6
Criminal Justice	10
Culinary Arts	5
Emergency Services	14
Firefighting	1
LPN Pilot	3
Medical Skills and Services	5
Medium/Heavy Truck Technology	6
Nursing Services	25
Nursing Systems	1
Pharmacy Technician	6
Power Equipment Technology	3
Pre-Engineering	1
Unmanned Aerial Systems (UAS)	2
Website Development	2
Welding	28

Source: Secondary Technical Centers Directory 2022-2023, Office of Skills Development

APPENDIX D – MAPS OF 2022-23 CTE STUDENTS AND COURSES

CTE Students Taught by School District

Number of CTE Students
- 64 - 299
- 300 - 634
- 635 - 1,389
- 1,390 - 2,679
- 2,680 - 6,119
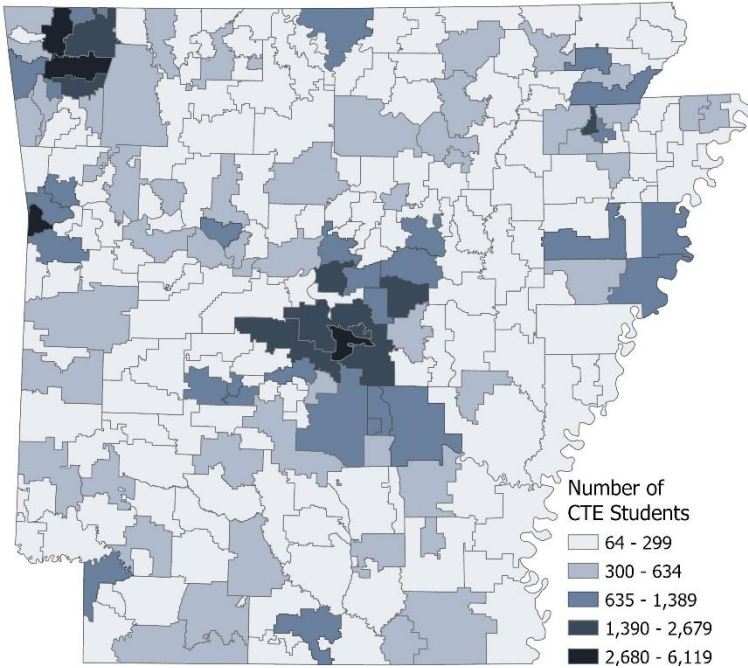
CTE Courses Taught by School District

Number of CTE Courses
- 10 - 27
- 28 - 41
- 42 - 62
- 63 - 102
- 103 - 178

Maps prepared by the Bureau of Legislative Research, Policy Analysis & Research Section
School District and County Boundaries from the GIS Office integrated the Arkansas Spatial Data

CTE Students & Courses Taught by Open-Enrollment Charters

LEA	Open-Enrollment Charter	CTE Students	CTE Courses
6040700	Academics Plus Public Charter Schools	166	20
0440700	Arkansas Arts Academy	157	9
0444700	Arkansas Connections Academy	1,046	20
6050700	Arkansas Lighthouse Academies	65	17
6043700	Arkansas Virtual Academy	1,789	93
6047700	eStem Public Charter School	166	20
0442700	Founders Classical Academies of Arkansas	36	17
3544700	Friendship Aspire Academies Arkansas	19	14
6640700	Future School of Fort Smith	135	20
6052700	Graduate Arkansas Charter	19	2
7240700	Haas Hall Academy	275	10
5440700	KIPP Delta Public Schools	196	19
6041700	LISA Academy	493	32
6053700	Premier High Schools of Arkansas	84	22
6062700	Responsive Ed Solutions Premier High School of North Little Rock	103	25
7242700	Responsive Ed Solutions Premier High School of Springdale	65	5
6060700	Scholarmade Achievement Place of Arkansas	25	2

Excluding the following charters that do not serve grades 9-12:
- Exalt Academy of Southwest Little Rock (6055700) serves grades K-8
- Hope Academy of Northwest Arkansas (0445700) serves K-4
- Imboden Charter School District (3840700) serves grades K-8
- Westwind School for Performing Arts (6063700) serves 6-8

APPENDIX E – PERKINS V PERFORMANCE MEASURES METHODOLOGY

Source: Arkansas Perkins V Plan 2020, Appendix M; 2022-2023 Perkins V Manual

Four-Year Graduation Rate

Numerator: The number of CTE concentrators who were members of the four-year adjusted cohort and earned a regular high school diploma within four years pursuant to the four-year adjusted cohort graduation rate

Denominator: Number of CTE concentrators who, in the reporting year, were included in the State's computation of its graduation rate as defined in the State's Consolidated Accountability Plan pursuant to Section 1111(b)(2) of the ESSA.

Rationale: The Four-Year Graduation Rate is calculated using the same methodology as utilized for the Arkansas ESSA School Index which is detailed in federal Non-regulatory guidance.

Students in the adjusted cohort who met requirements for CTE concentrator status in one or more programs of study during the four-year period for the cohort are included as CTE concentrators as expected to graduate. These CTE concentrators with documentation of graduation (SIS Cycle 9 Graduates Table) are included in the numerator as actual graduates. Students can complete requirements in multiple concentrations. The adjusted cohort graduation rate is a non-duplicate count of CTE concentrators where each student is counted only once in the denominator even if the student has completed more than one concentration.

Clarifying Note: Only concentrators are included in this metric and concentrators are only counted once in the metric.

Academic Performance

Numerator: CTE concentrator performance in the challenging State academic standards adopted by the State under section 1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in ELA, Math, and Science as described in section 1111(b)(2) of such Act.

Denominator: Number of CTE concentrators who took the ESEA assessments in ELA, Math, or Science whose scores were included in the program year in the State's computation of the annual measure for those subject tests. The denominator for this measure is a non-duplicate count of CTE concentrators where each student is counted only once in the denominator even if the student has completed more than one concentration.

Rationale: Section 113 (b)(2)(A)(ii) If the academic performance measure for Perkins V is aligned with the achievement and growth measures approved in Arkansas's ESSA plan; then, schools will have a unified focus on increased rigor and relevance in student learning opportunities and students will grow in their performance and increase their readiness for college, career, and community engagement. This is critical to a student-focused learning system. Utilizing a similar metric allows educators to support students in improving their readiness for success in the postsecondary opportunities they choose to pursue.

The proposed academic performance measures for ELA, Math, and Science includes the following: weighted achievement for grades 9 and 10 ACT Aspire and Dynamic Learning Maps (DLM) ELA, Math,

and Science scores, value-added growth for grades 9 and 10 ACT Aspire and DLM ELA, Math, and Science scores, and weighted achievement for Grades 11 and 12 ACT Reading, Math, and Science scores.

- The weighted achievement formula for Academic Performance in ELA, Math, and Science includes the Grade 9 and Grade 10 weighted achievement used in the ESSA School Index, calculated for CTE Concentrators in Grades 9 and 10. Points are assigned to each readiness or performance level of students. The number of students at each performance level are multiplied by the points earned and then summed and divided by the number of students tested (full academic year students only).

- Use In Need of Support (0 points), Close (0.5 point), Ready (1.0 point), Exceeds (1.0 or 1.25 points*) for ACT Aspire.

- Performance Levels 1 (0 points), 2 (0.5 point), 3 (1.0 point), 4 (1.0 or 1.25 points*) for DLM.

  *Points for Exceeding (and Performance Level 4) depend on the number of students in the lowest readiness level compared to the number in the Exceeding level. If a school has the same number or fewer concentrators in the highest readiness level than in the lowest, the multiplier for the highest level is 1.0. If a school has more concentrators in the highest readiness level then for each concentrator in the highest level, over and above the number in the lowest level, the multiplier is 1.25.

- The value-added growth score used for ELA, Math, and Science includes the value-added growth score calculated for the CTE Concentrators in Grades 9 and 10.

- The weighted achievement formula for Academic Performance includes the Grade 11 and 12 weighted achievement using the following points assigned to proxy readiness levels based on students' best score (3-year best ACT score is used in Arkansas's approved ESSA School Quality Student Success Indicator).

The Grades 11 and 12 weighted achievement is proposed for two reasons: (1) the majority of concentrations are earned by Grades 11 and 12 and (2) including Grades 11 and 12 ACT provides a mechanism for schools to improve the academic performance of each cohort of CTE Concentrators.

In order to provide incentive for schools to attend to improving students' achievement over their Grade 10 ACT Aspire scores, the calculation for each subject area Academic performance includes calculating weighted achievement for Grades 11 and 12 students using the ACT ELA, Math, and Science scores. For Grade 11 and Grade 12, the student's highest ACT score in each subject test is used to assign points (similar to the methodology used to determine weighted achievement). If a student does not have an ACT score in Grade 11 or 12 the students' prior Grade 10 ACT Aspire subject test score is used for the student.

Clarifying Note: Only concentrators are included in this metric and concentrators are only counted once in the metric.

Postsecondary Placement

Postsecondary Placement is a lagging Performance Measure. The data reported include the Grade 12 CTE concentrators who exited high school (graduated or withdrew during the previous school year).

Numerator: The number of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education or advanced training, military service or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are employed.

Denominator: The number of CTE concentrators who left secondary education during the reporting year.

DCTE has worked with the Office of Innovation for Education (OIE) and the Department of Information Systems (DIS) via a Data Sharing Agreement to collect Placement Information for CTE Concentrators. A spreadsheet of CTE Concentrators whose placement information is not found through the data sharing agreement will be sent to CTE Coordinators by July 15th each year for follow up regarding placement status. Prior to the 2023 school year, this data was submitted as self-report through CTE coordinators. [57]

Non-Traditional Program Enrollment

Numerator: The number of CTE concentrators from underrepresented gender groups who became a CTE concentrator in a program of study leading to a non-traditional career field.

Denominator: Number of CTE concentrators who became a CTE concentrator in a CTE program of study leading to a non-traditional field.

A program of study is classified as *nontraditional* if it prepares students for further education/training or for employment in a career field in which either gender is represented at 25% or less. Please note that it is the actual workplace statistics which determines the nontraditional status, and not the enrollment balance in the class.

Data are reported for clusters where at least one program of study has a non-traditional gender. Entities may not have data reported for clusters in which they do not offer at least one non-traditional program of study within the cluster.

Clarifying Note: Only concentrators are included in this metric. Concentrators are counted for Grades 9 - 12 for each concentration earned starting in their seventh grade year through the students' grade levels in the year in which this measure is reported.

Program Quality – Attained Recognized Postsecondary Credential

Numerator: The number of CTE concentrators graduating from high school having attained a recognized postsecondary credential.

Denominator: The number of CTE concentrators who graduated from high school.

Beginning in October 2022, CTE teachers will enter student certification achievement information when the certification is earned.

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[57] Office of Innovation for Education, University of Arkansas, e-mail communications, April 2024

APPENDIX F – DCTE RECOGNIZED CERTIFICATIONS 2022-2023

Few certifications are exclusive to one career cluster or program of study; most are accessible through more than one career cluster. Fifteen recognized certifications overlap all 16 career clusters.

- Career Readiness Certificate
  - **Bronze**
  - **Gold**
  - **Platinum**
  - **Silver**
- **First Aid/CPR/AED**
- MCAS - Microsoft Office
  - **Access**
  - **Excel**
- **Outlook**
- **PowerPoint**
- **Word**
- NOCTI: Employability Skills
  - **21st Century Skills for Workforce**
  - **Career Skills (Middle School)**
  - **Employability Skills**
  - **Workplace Readiness**
  - **Workplace Success Skills (Middle School)**

Career Cluster	Industry Recognized Certifications
Agriculture, Food, and Natural Resources	84
Architecture and Construction	68
Arts, Audio/Video Technology and Communications	46
Business Management and Administration	58
Education and Training	19
Finance	34
Government and Public Administration	29
Health Sciences	41
Hospitality and Tourism	38
Human Services	57
Information Technology	84
Law, Public Safety, Corrections and Security	31
Manufacturing	71
Marketing	51
STEM (Science, Technology, Engineering, & Mathematics)	36
Transportation, Distribution and Logistics	62

Source: 2022 – 2023 Arkansas Certification Cluster Crosswalk; Industry Recognized Certifications, Updated March 30, 2022 by Program Coordinators, Division of Career and Technical Education, Arkansas Department of Education