

CTE and Career Readiness in *Northwest Arkansas*

Prepared by **Insightful Education Solutions** | September 2023

WALTON FAMILY
FOUNDATION

Introduction



High-quality K-12 career and technical education (CTE) pathways that are aligned with regional economic needs can provide students with the knowledge, skills and credentials that can lead to continued advancement and economic security.

Northwest Arkansas (NWA) school districts offer students a range of CTE pathways to pursue based on their interests, but little is known about the quality and accessibility of these programs at a regional level. To learn more, the Walton Family Foundation engaged Insightful Education Solutions to research the following:

1.

What constitutes a high-quality program?

2.

Do NWA students have access to high-quality CTE programs?

3.

How do school CTE leaders and students feel about CTE as a pathway to postsecondary success?

The findings, a mixture of quantitative and qualitative data, can hopefully help the region's educators, postsecondary institutions and employers take steps to provide **NWA students with the pathways that matter most for success after high school.**

Based on these findings, recommendations are made regarding potential areas of programmatic focus and future research to address identified gaps and build on current strengths and interest in achieving greater access to high-quality programs across the region.



Research Question #1:

What Constitutes a High-Quality Program?

High-Quality CTE Pathway Definition

To learn from regional expertise and develop a framework to guide the research, we first convened an advisory group and researched best practices from other states to form a shared definition of high-quality CTE pathways.



A high-quality CTE pathway is a sequence of aligned, interconnected academic and workforce experiences that enable learners to master a particular subject, set of competencies or program, earn one or more employer-valued credentials and go on to pursue an occupation with sustainable wages.

Note: Strong state and local CTE programs should contain a range of high-quality pathways across a variety of industry sectors.

Attributes of a High-Quality CTE Pathway

In addition to the conceptual definition, these attributes were developed to serve as a rubric for identifying and building high-quality program pathways.



Aligns with high-demand, high-skill and higher-wage (H³) sectors and occupations



Offers credentials valued by employers



Reflects courses that are sequential and progressive



Includes robust standards that represent the necessary academic, technical and employability knowledge and skills



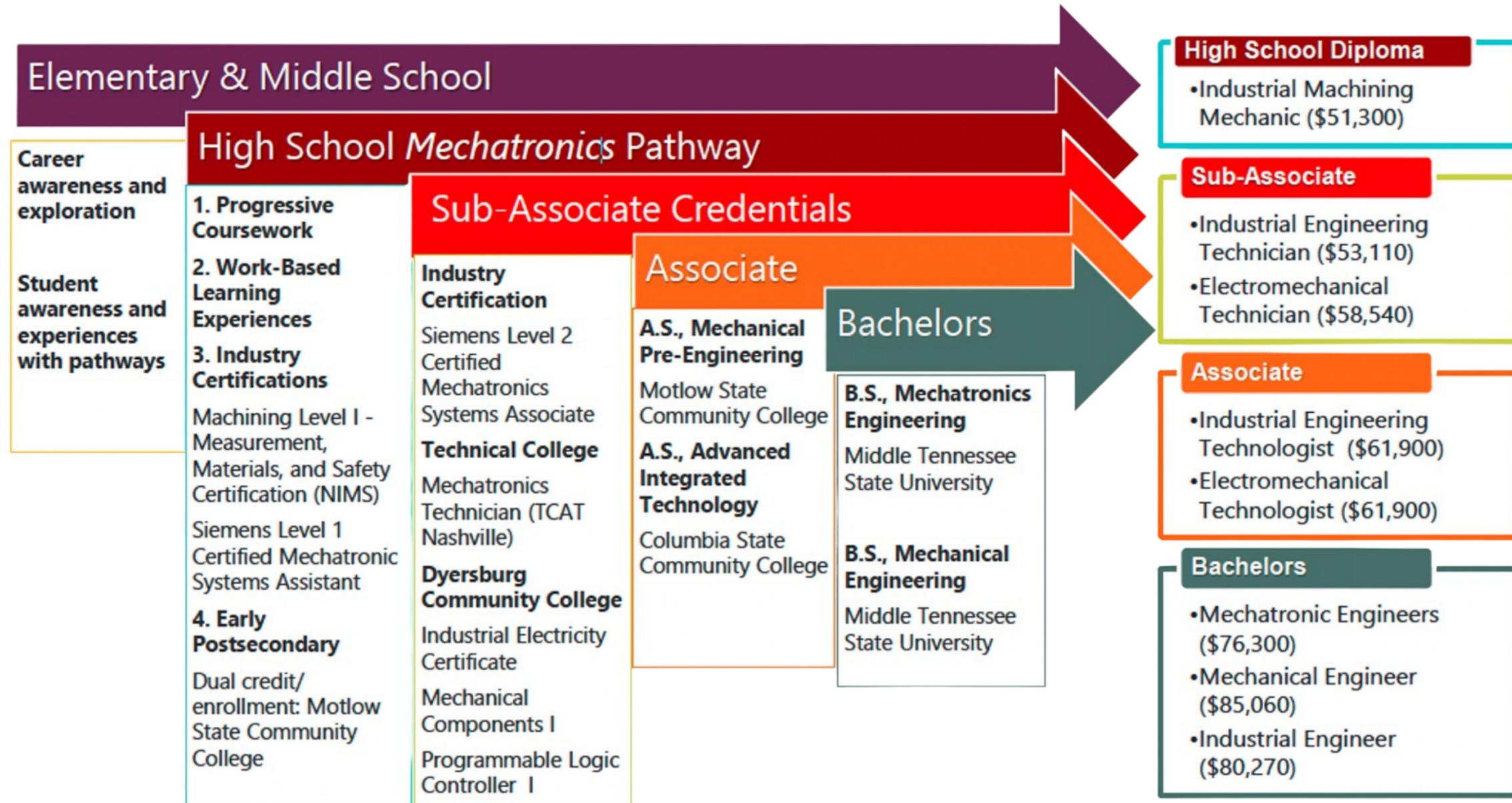
Includes courses and/or exams eligible for early postsecondary credit and aligns with postsecondary credentialed programs



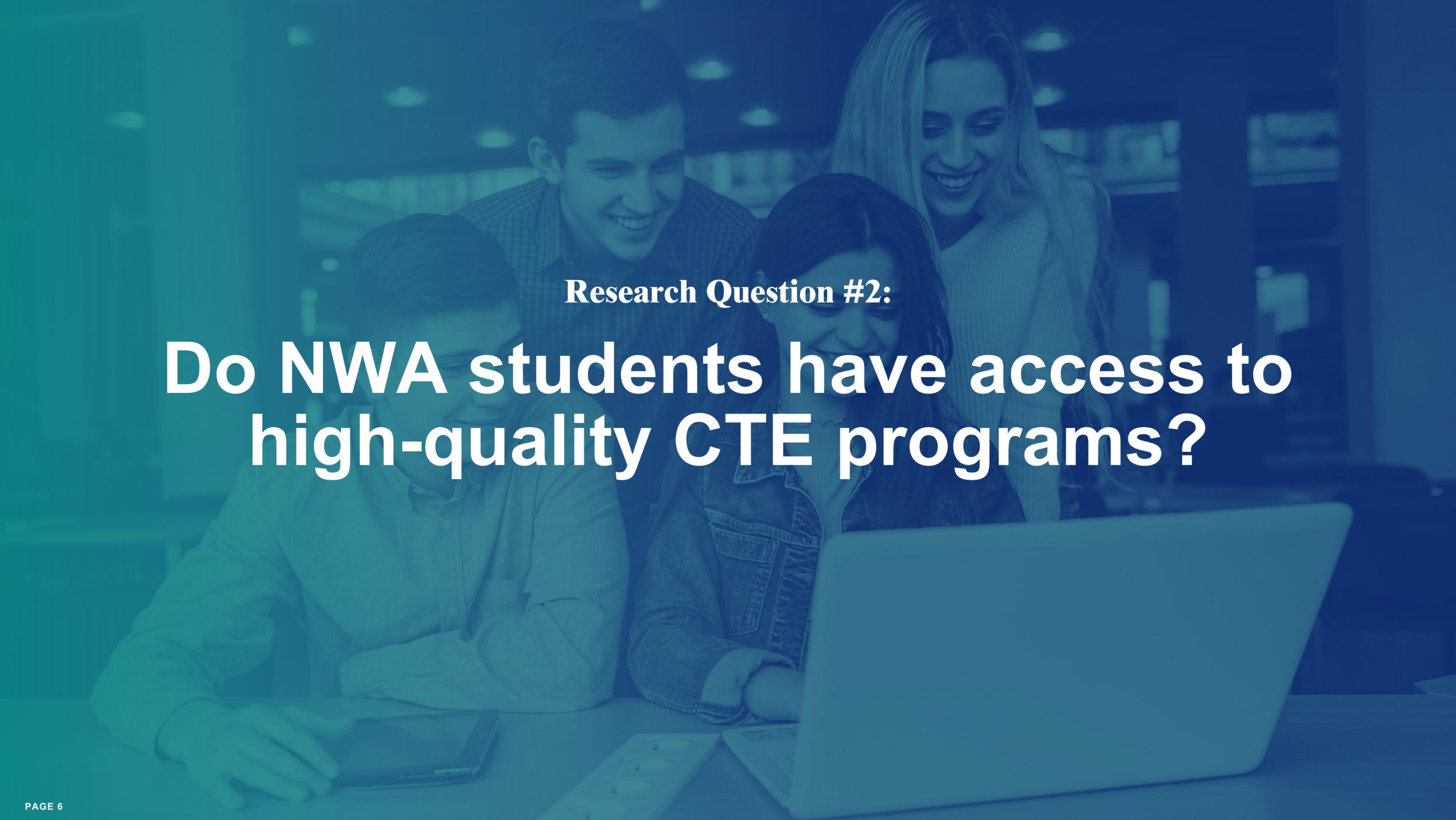
Incorporates a continuum of work-based learning experiences

Note: These attributes are consistent with the federal Perkins V federal grant definition as well as examples of high-quality CTE pathways in leading states and regions.

Example of a High-Quality CTE Pathway



Mechatronics/Advanced Manufacturing pathway adapted from Tennessee

A photograph of four students (three men and one woman) gathered around a laptop computer, looking at the screen with interest and smiling. The scene is set in what appears to be a library or a classroom, with bookshelves visible in the background. The entire image is overlaid with a semi-transparent blue filter.

Research Question #2:

Do NWA students have access to high-quality CTE programs?

Workforce Alignment

An initial step in assessing the quality of CTE programs in NWA was to map out regional workforce needs. The following were identified as high-demand, high-skill and higher-wage (H³) sectors/occupations.

Top 10 Industry Sectors - Northwest Arkansas	
Sector	Employed
Healthcare & Social Assistance	30,210
Manufacturing	29,104
Retail Trade	28,457
Accommodations & Food Service	25,276
Management of Companies & Enterprises	25,168
Educational Services	21,456
Transportation & Warehousing	19,683
Construction	17,871
Professional, Scientific & Technical Svcs.	15,795
Admin. Support & Waste Management and Remediation Svcs.	13,158

Source: Jobs EQ/Data from 2022 Q4

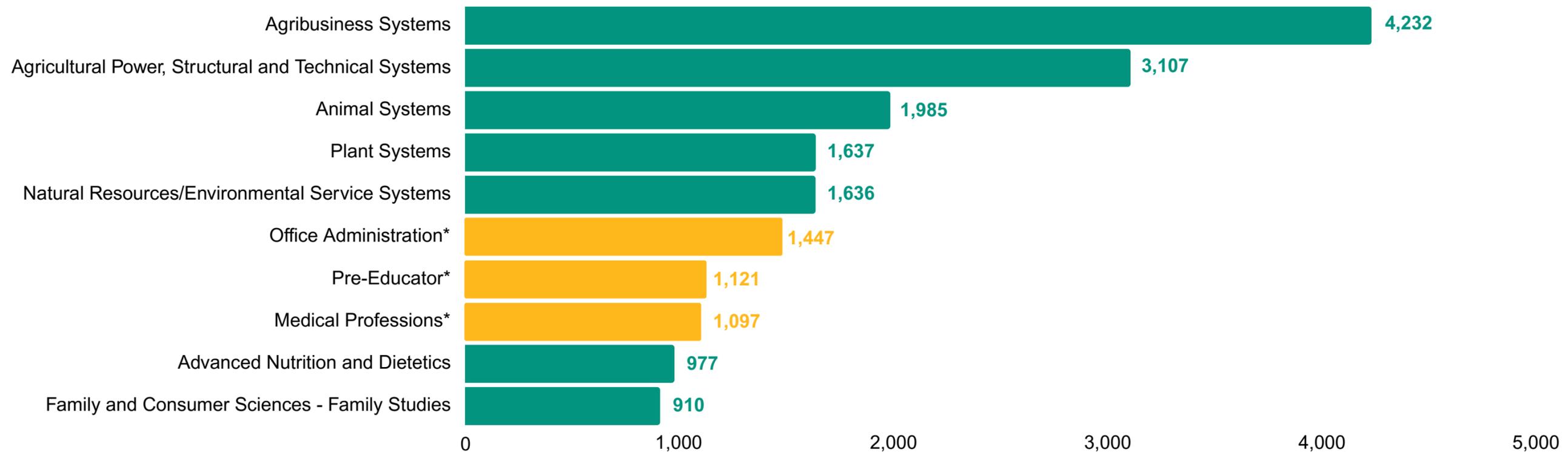
Top 10 Occupations - Northwest Arkansas		
Occupation	Employed	Annual Mean Wage
General & Operation Managers	6,453	\$97,200
K-12 Educators	5,279	\$63,100
First-Line Supervisors	4,838	\$65,050
Registered Nurses	4,047	\$71,500
Sales Reps, Wholesale & Manufacturing	3,304	\$88,900
Software, Web Developers, Programmers	2,802	\$95,100
Accountants & Auditors	2,256	\$78,600
Logisticians & Project Mgmt. Specialists	2,011	\$79,700
Business Operations Specialists	1,932	\$76,200
Financial Managers	1,740	\$150,600

Source: AR Economic Development Commission, AR Division of Workforce Svcs, U.S. Bureau of Labor Statistics, 2022 Q4

With workforce data in hand, we examined the number of CTE completers (those who have completed 3+ courses within a career cluster) by program of study.

Over the last three years, **just three*** of the region's top 10 completed CTE pathways are aligned with H³ jobs. In contrast, the top five completed pathways are in agriculture-related fields. Agriculture, Forestry, Fishing and Hunting industry sectors make up only 1.2% of the overall workforce in NWA.

Top 10 Programs of Study by Completions (2020-2022)



The top three sectors featuring high-skill and higher-wage occupations that are projected to grow the most in the next five years are:

Healthcare and Social Assistance

3,621 jobs

Management of Companies and Enterprises

2,495 jobs

Manufacturing

2,119 jobs

By comparison, regional jobs in the agriculture sector are projected to grow by only 180 jobs over this same period.

We found significant misalignment between CTE pathway completions and regional workforce needs. Only three of the top 10 completed pathways are directionally aligned with H³ occupations.

Top 10 CTE Pathways by Completion
Agribusiness Systems
Agricultural Power, Structural & Technical
Animal Systems
Natural Resources/Environmental Systems
Plant Systems
Office Administration
Pre-Educator
Medical Professions
Advanced Nutrition & Dietetics
Family & Consumer Sciences – Entrepreneurial Design

1/3

2/3

3/3

Top 10 High-Demand, High-Skill, Higher-Wage Occupations
General & Operational Managers
K-12 Educators
First-Line Supervisors
Registered Nurses
Sales Reps., Wholesale & Manufacturing
Software, Web Developers, Programmers
Accountants & Auditors
Logisticians & Project Management Specialists
Business Operations Specialists
Financial Managers

Program Quality

Too few K-12 students who complete CTE pathways are achieving metrics associated with pathway quality. On average,

34% of completers also earned early postsecondary credit

17% earned an industry credential

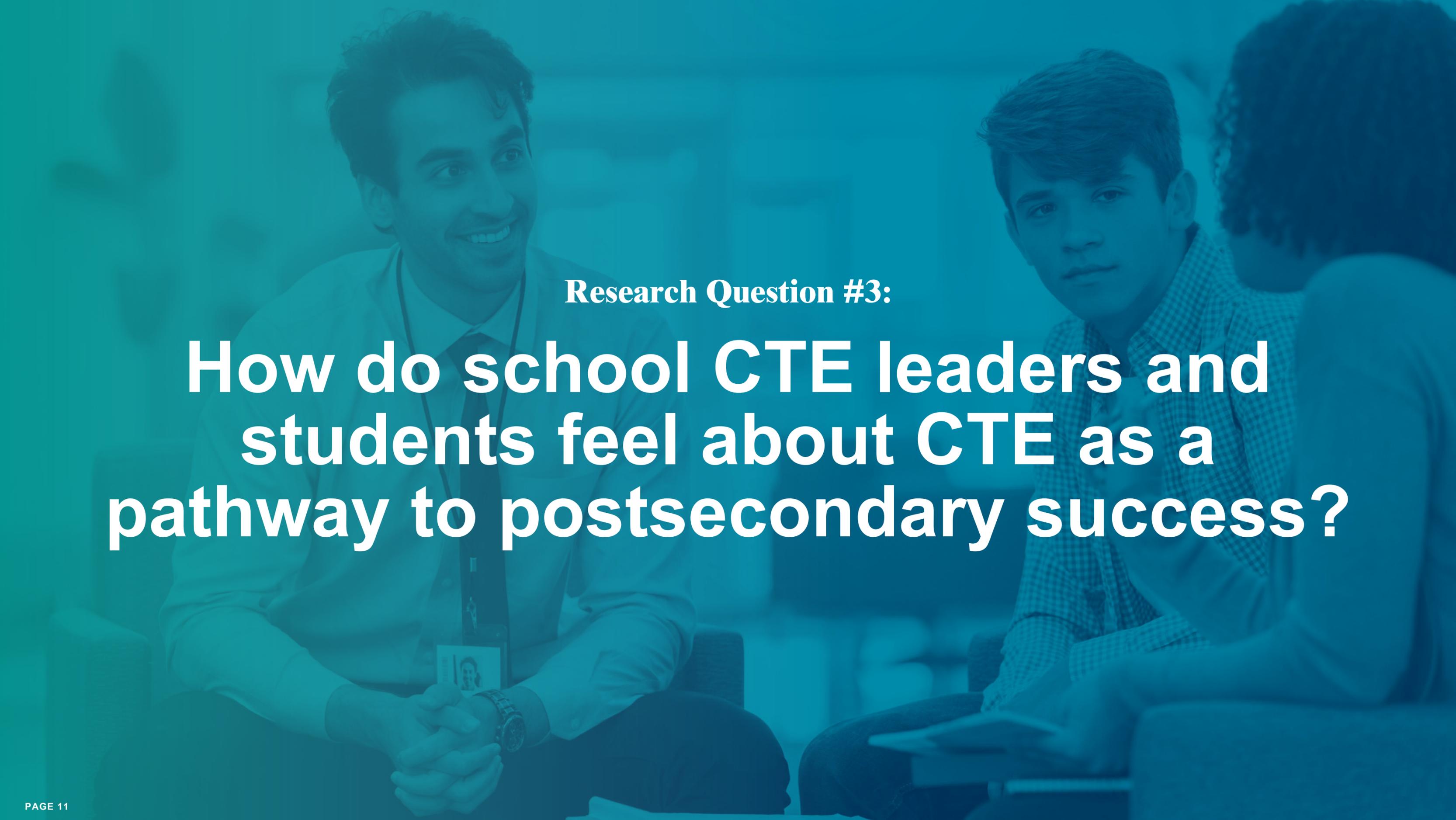
20% went on to enroll in a postsecondary program in the state after high school

Early postsecondary credit had the highest attainment rate across all programs; however, it is still relatively low. Students completing formal work-based learning experiences, another attribute of a high-quality program, were even lower than the three indicators referenced here with just 2% of completers in the last three years in Benton and Washington Counties attaining a WBL course credit.

Percent of completers that achieve **Industry Certification**, **Postsecondary Matriculation** or **Early Postsecondary Credit** varies widely across programs



Note: Industry credential data was not collected in 2019-20. Postsecondary matriculation data was not available for 2021-22.



Research Question #3:

How do school CTE leaders and students feel about CTE as a pathway to postsecondary success?

CTE Leader Survey

To better understand perceptions, successes and challenges of current CTE programs in NWA, we worked with the Office of Education Policy at the University of Arkansas to conduct a survey of CTE leaders in the spring of 2023. Respondents included CTE coordinators, principals/administrators and superintendents.

100%

Percent surveyed who responded that connecting academic learning to real-world skills is "As important as" meeting college entrance requirements.

100%

Percent surveyed who responded that CTE is "As important as" math, English, social studies and science.

100%

Percent surveyed who responded that gaining exposure to several different careers is "As important as" college planning.

n= 42 respondents

The survey found that CTE leaders in NWA highly valued the importance of outcomes associated with high-quality CTE programs and pathways.

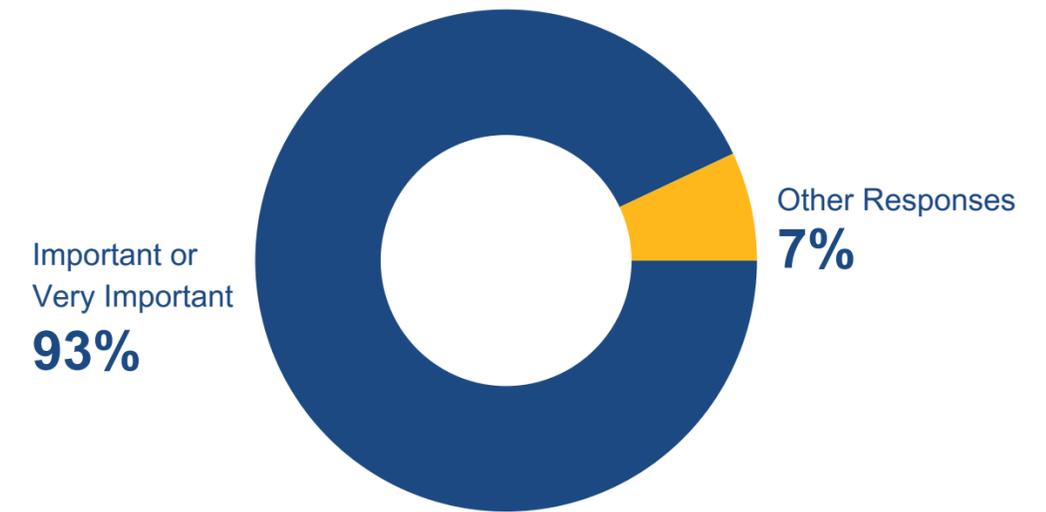
Despite challenges in alignment and quality, there is overwhelming enthusiasm and support for CTE programs in the region.



Students possess the knowledge, skills and experience needed in their chosen field or occupation.



Students have interacted with employers in their chosen field or occupation.



Students can continue working towards a credential aligned with their CTE pathways at the postsecondary/advanced trades level.

n= 42 respondents

CTE leaders noted three key challenges in being able to offer higher-quality CTE programs to their students.



Top Challenge #1

Aligning CTE pathways with high-skill, high-demand and higher-wage occupations in our region

Noted by 60%



Top Challenge #2

Having access to sustainable funding that can support high-priority CTE pathways

Noted by 57%



Top Challenge #3

Finding and/or hiring teachers with the advanced technical knowledge and skills to teach CTE courses

Noted by 55%

n= 42 respondents

In addition to survey data, we interviewed a number of stakeholders across the region. CTE directors and district/school administrators said:

-  **Overall, CTE is a priority and valued by districts.**

With a couple of exceptions, most administrators and CTE directors pointed to a strong district/school culture for CTE.
-  **Lack of intentional dedicated funding means that what gets offered is up to districts and not necessarily reflective of regional needs.**

Most CTE directors and administrators expressed the desire to offer more/different programs if they had more funding, the right staff and equipment, etc.
-  **Distance to/from postsecondary providers and lack of articulation agreements is a real barrier for students in smaller districts.**

Some students already spend a long time getting to/from their high school. Additional long distances to and from postsecondary partners make those providers difficult to access.
-  **Finding and working with employers is very much a district-by-district effort.**

CTE coordinators and administrators felt like this is an area in which they could use more support.

In focus groups with students, we heard:

- ✔ **CTE provides purpose and relevance to high school.**
Students spoke passionately about the opportunities to learn real-world skills and make connections with postsecondary experiences.
- ✔ **For rural district students, CTE allows them to meet people from across the state and nation.**
The student organizations associated with CTE programs provide opportunities to travel, present and engage with a variety of peers and adults.
- ✔ **Students spoke about the leadership skills they were learning in CTE.**
This was particularly true of students who were engaged in community projects or work-based learning.
- ✔ **Overall, they want more.**
From more school offerings to expanded access to postsecondary programs and work-based learning, students expressed a desire for more options (even though many understood limitations in funding, staff, etc).

Summary

1.

There is significant misalignment between CTE pathway completions and regional workforce needs.

The majority of CTE pathway completions are in the agriculture sector when regional workforce needs are most concentrated in healthcare, advanced manufacturing and management of companies/enterprises.

2.

Too few students who complete CTE pathways achieve metrics associated with high-quality pathways.

On average, 34% of completers also earned early postsecondary credit, 17% earned an industry credential and 20% went on to enroll in a postsecondary program in the state after high school.

3.

Despite challenges in alignment and quality, there is overwhelming enthusiasm and support for CTE programs in the region.

Education leaders surveyed were unanimous in prioritizing CTE as important opportunities, and students interviewed voiced their desire for more diverse and better program offerings.

The image shows three healthcare professionals in a clinical setting, overlaid with a teal gradient. On the left, a woman wearing a hijab and a white lab coat is smiling. In the center, a woman with curly hair, also in a white lab coat, is holding a clipboard and looking down at it. On the right, a man in a white lab coat and a stethoscope around his neck is looking towards the center. The background is a blurred clinical environment with medical equipment and shelves.

CTE Pathway Archetypes & Other Recommendations

Pathway Archetypes

The following pathway examples or "archetypes" represent possible offerings within high-demand sectors with high-skill and higher-wage occupations in Northwest Arkansas.

Included in each set of archetypes are several CTE programs of study that:

- 1) Directly lead to identified occupations**
- 2) Provide students an opportunity to earn valued industry credentials**
- 3) Matriculate to postsecondary credential programs**

Note: These archetypes were developed based on pathway/CTE programs of study in leading states and regions.

Pathway Archetypes

Example archetypes for **Northwest Arkansas** reflect in-demand, moderate-to-high-skill occupations, both current and emerging in the region.



Health Services

Occupations include RNs, Medical and Health Services Managers and Health Support Professionals



Building and Construction

Occupations include HVAC and NCCER Professionals



Advanced Manufacturing

Occupations include Industrial Maintenance Technicians, Machinists, First-Line Supervisors and Quality Control Professionals



Business Management and Administration

Occupations include General and Operations Managers, Business Operations Specialists, Management Analysts, Project Managers and HR Specialists



Marketing, Distribution and Logistics

Occupations include Business Managers, Logisticians, Supply Chain Specialists and General Managers



Education and Training

Occupations include K-12 Teachers, Education Administrators, Special Education Teachers, Librarians, Postsecondary and Career and Technical Education Educators

Health Services Pathway

In-demand, moderate-to-high-skill occupations in this industry sector in Arkansas include Registered Nurse (RN), Licensed Practice Nurse (LPN), Medical and Health Services Managers and Emergency Medical Technician (EMT).

Program of Study	Description	Example Course Sequence
Nursing Services (NS)	This program of study will equip students with the necessary knowledge and skills to pursue a postsecondary nursing program.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Health Services • Lvl 2: Medical Therapeutics or Medical Terminology • Lvl 3: Nursing Services I • Lvl 4: Nursing Services II and/or NS WBL
Emergency Medical Services (EMS)	This program of study will equip students with the knowledge and skills necessary for careers in the emergency medical field.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Health Services • Lvl 2: Medical Therapeutics • Lvl 3: Emergency Medical Services I • Lvl 4: Emergency Medical Services II and/or EMS WBL
Therapeutic Services (TS)	This program of study is designed to prepare students to pursue careers in the fields of dentistry, pharmacology, nutrition or rehabilitation.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Health Services • Lvl 2: Health Services Anatomy & Physiology • Lvl 3: Introduction to Dental Services, Pharmacology, Rehabilitation Services or Nutrition Science • Lvl 4: Kinesiology and/or TS WBL
Health Informatics (HI)	This program of study is designed to prepare students to pursue careers dealing with the management and use of patient information in accordance with regulatory requirements of the healthcare field.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Health Services • Lvl 2: Principles of Health Informatics or Medical Terminology • Lvl 3: Healthcare Information Security • Lvl 4: Healthcare Administration and Management and/or HI WBL
Diagnostic Services (DS)	This program of study will prepare students for careers specializing in the detection, diagnosis and treatment of disease and medical conditions.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Health Services • Lvl 2: Medical Therapeutics • Lvl 3: Diagnostic Services I • Lvl 4: Diagnostic Services II and/or DS WBL

Health Services Pathway

Program of Study	2030 Long-Term Employment Projections in NWA	Postsecondary Articulation	Example Industry-Valued Certifications
Nursing Services (NS)	<ul style="list-style-type: none"> Healthcare Practitioners and Technical Occupations +15.8% Healthcare Support Occupations +31.2% Regional Employers: <ul style="list-style-type: none"> Washington Regional Medical Center Northwest Health System Mercy Hospital NW Arkansas 	Northwest Arkansas Community College <ul style="list-style-type: none"> Health Professions <ul style="list-style-type: none"> CNA/PCA+ Dental Assisting EMS Health Information Management Nursing PT Assistant Respiratory Therapist Northwest Technical Institute <ul style="list-style-type: none"> Allied Health <ul style="list-style-type: none"> CNA Practical Nursing Sterile Processing Tech Surgical Tech 	<ul style="list-style-type: none"> Basic Life Saver (BLS) Biotech Assistant (BACE) EMT CNA FEMA-CERT FIRST AID CPR AED Infant & Child CPR Dental/Health Assisting Home Health Aide Practical Nursing Nutrition, Food and Wellness Pre-PAC Pharmacy Tech
Emergency Medical Services (EMS)			
Therapeutic Services (TS)			
Health Informatics (HI)			
Diagnostic Services (DS)			

Source: Arkansas Division of Workforce Services - NW Arkansas Workforce Development Area

Advanced Manufacturing Pathway

In-demand, moderate-to-high-skill occupations in this emerging industry sector in Arkansas include Industrial Maintenance Technicians, CNC Machinists, Production Supervisors, Welders, Quality Control Inspectors and Automation and Robotics Technicians.

Program of Study	Description	Example Course Sequence
Welding	This program of study will prepare students with the knowledge and skills to become Entry-Level or Higher-Level Welders.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Manufacturing • Lvl 2: Welding I • Lvl 3: Welding II • Lvl 4: Advanced Welding and/or Welding WBL
Electro-Mechanical Technology (EMT)	This program of study will equip students to pursue careers in advanced manufacturing facilities such as Maintenance and Repair, Industrial Machinery, Master Mechanic, Electro-Mechanical Technician or Electro-Mechanical Engineer.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Manufacturing • Lvl 2: Electro-Mechanical I • Lvl 3: Electro-Mechanical II • Lvl 4: Electro-Mechanical Systems Integration and/or EMT WBL
Machining Technology (MT)	This program of study is designed to prepare students to pursue careers such as Computer-Controlled Machine Tool Operator, CNC Machining Tool Programmer or Machinist.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Manufacturing • Lvl 2: Principles of Machining I • Lvl 3: Principles of Machining II • Lvl 4: Advanced Machining and/or MT WBL
Automation and Robotics Technology (ART)	This program of study will prepare students with the knowledge and skills to work in industries where manufacturing automation is emerging such as Automated Systems Technology or Robotics Maintenance and Development.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Manufacturing • Lvl 2: Automatic and Robotics Technology I • Lvl 3: Automatic and Robotics Technology II • Lvl 4: Automatic and Robotics Technology III and/or ART WBL

Advanced Manufacturing Pathway

Program of Study	2030 Long-Term Employment Projections in NWA	Postsecondary	Example Industry-Valued Certifications
Welding	<ul style="list-style-type: none"> • Installation, Maintenance and Repair Occupations +12.4% • Production Occupations +4.1% 	Northwest Arkansas Community College <ul style="list-style-type: none"> • Electronics Technology • Robotics • STEM • Business-Computer Information 	<ul style="list-style-type: none"> • AC/DC Electrical Systems • Amatrol (various) • AWS (various) <ul style="list-style-type: none"> ◦ Welding ◦ Data Analytics ◦ Machine Learning ◦ Cloud Practitioner • Basic Hydraulics
Electro-Mechanical Technology (EMT)	Regional Employers: <ul style="list-style-type: none"> • Walmart • Tyson Foods • JB Hunt Transport Services • Procter & Gamble • Georgia-Pacific • Rockline Industries • Bekaert Corporations • Ball Corporation 	Northwest Technical Institute <ul style="list-style-type: none"> • Electronics and Automation • Industrial Maintenance and Ammonia Refrigeration • Welding 	<ul style="list-style-type: none"> • Basic Pneumatics • CNC Certifications (various) • Blueprint Reading • Safety for Machining • Electric Motor Control • Electric Relay Control
Machining Technology (MT)			
Automation and Robotics Technology (ART)			

Source: Arkansas Division of Workforce Services - NW Arkansas Workforce Development Area

Building and Construction Pathway

In-demand, moderate-to-high-skill occupations in this industry sector in Arkansas include HVAC professionals and NCCER professionals.

Program of Study	Description	Example Course Sequence
Residential and Commercial (R&C) Construction	This program of study will prepare students with the knowledge and skills to enter and sustain a career in residential and/or commercial construction.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Building and Construction • Lvl 2: R & C Construction I • Lvl 3: R & C Construction II • Lvl 4: Construction Management and/or R&CC Construction WBL
Mechanical, Electrical and Plumbing (MEP) Systems	This program of study will equip students to pursue careers in an HVAC, electrical or plumbing trade of their choosing.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Building and Construction • Lvl 2: MEP Systems I • Lvl 3: MEP Systems II • Lvl 4: Applied MEP Systems Integration and/or MEP Systems WBL

Building and Construction Pathway

Program of Study	2030 Long-Term Employment Projections in NWA	Postsecondary	Example Industry-Valued Certifications
<p>Residential and Commercial (R&C) Construction</p>	<ul style="list-style-type: none"> • Construction and Extraction Occupations +7.8% • Construction Industry Growth +7% <p>Regional Employers:</p> <ul style="list-style-type: none"> • Baldwin & Shell • Nabholz Construction • Crossland Construction Company • Milestone Construction Company • Flintco • Metroplan Construction • Lindsey Management Company • Various retail and commercial developers 	<p>Northwest Arkansas Community College</p> <ul style="list-style-type: none"> • Construction Technology • Integrated Design • Electrical Apprentice • HVAC • Plumbing Apprentice • Construction Industry Safety (Certificate of Proficiency) <p>Northwest Technical Institute</p> <ul style="list-style-type: none"> • HVAC/R Certification 	<ul style="list-style-type: none"> • NCCER (various) <ul style="list-style-type: none"> ◦ Concrete Finishing ◦ Construction Technology ◦ Core ◦ Electrical • Basic Principles of Construction • Building Construction Occupations • Building Construction Technology • Carpentry • Construction Masonry (Block/Brick) • Fundamentals of Construction • Construction Certification (S/P2)
<p>Mechanical, Electrical and Plumbing (MEP) Systems</p>			

Marketing, Distribution and Logistics Pathway

In-demand, moderate-to-high skill occupations in this industry sector in Arkansas include Marketing Specialists/Managers, Market Research Analysts, Logisticians, Public Relations Specialists, Transportation, Storage, Distribution Managers, etc.

Program of Study	Description	Example Course Sequence
Marketing Management (MM)	This program of study will prepare students with the knowledge and skills to pursue a career in marketing, advertising, sales and business management.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Business and Marketing • Lvl 2: Advertising and Public Relations • Lvl 3: Digital Marketing and Market Analytics • Lvl 4: Marketing Operations and/or MM WBL
Supply Chain Logistics (SCL)	This program of study will provide students with a solid foundation of knowledge and skills necessary to understand and manage the complex systems involved in the movement of goods and materials from production to consumption.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Business and Marketing • Lvl 2: Supply Chain Logistics I • Lvl 3: Supply Chain Logistics II • Lvl 4: Supply Chain Logistics III and/or SCL WBL
Entrepreneurship	This program of study will prepare students interested in starting their own businesses or pursuing a career in entrepreneurship with the knowledge and skills necessary to understand the principles of entrepreneurship and develop the mindset required for success in the business world.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Business and Marketing • Lvl 2: Entrepreneurship I • Lvl 3: Entrepreneurship II • Lvl 4: Entrepreneurship Leadership and Innovation and/or WBL

Marketing, Distribution and Logistics Pathway

Program of Study	2030 Long-Term Employment Projections in NWA	Postsecondary	Example Industry-Valued Certifications
Marketing Management (MM)	<ul style="list-style-type: none"> • Transportation and Material Moving Occupations +12.2% • Professional and Business Services +8.7% 	<ul style="list-style-type: none"> • <u>Business Administration</u> <ul style="list-style-type: none"> ◦ <u>Business Management</u> <ul style="list-style-type: none"> ▪ <u>General Business</u> ▪ <u>Entrepreneurship</u> ▪ <u>Retail Management</u> ▪ <u>Logistics Management</u> 	<ul style="list-style-type: none"> • Entrepreneurship Endorsement (Certiport) • Facebook Blueprint • Google Analytics • Social Marketing Certification (Hootsuite) • Hubspot • ICEV Express Employment (various) • IC3 • Quickbooks • National Retail Federation (various), including Warehouse, Inventory and Logistics • PMP Lite
Supply Chain and Logistics (SCL)	<p>Regional Employers:</p> <ul style="list-style-type: none"> • Walmart • Tyson Foods • JB Hunt Transport Services 		
Entrepreneurship	<ul style="list-style-type: none"> • FedEx • McKee Foods • Nestle USA • Kimberly Clark 		

Source: Arkansas Division of Workforce Services - NW Arkansas Workforce Development Area

Business Management and Administration Pathway

In-demand, moderate-to-high-skill occupations in this industry sector in NWA include General and Operations Managers, Business Operations Specialists, Management Analysts, Project Management and Human Resources Specialists.

Program of Study	Description	Example Course Sequence
Business Management (BM)	This program of study will prepare students with the knowledge and skills necessary to succeed in various business environments and prepare them for future studies or entry-level employment in the field of business management.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Business Management • Lvl 2: Financial Management • Lvl 3: Business Strategy and Planning • Lvl 4: International Business Management and/or BM WBL
Human Resource Management (HRM)	This program of study will prepare students with the knowledge and skills necessary to excel in various human resources roles and prepare them for future studies or entry-level employment in the field of human resources management.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Business Management • Lvl 2: Business Communications • Lvl 3: Human Resource Management I • Lvl 4: Human Resource Management II and/or HRM WBL
Operations Management (OM)	This program aims to equip students with the skills and knowledge necessary to succeed in various operational roles and prepare them for future studies or entry-level employment in the field of operations management.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Business Management • Lvl 2: Operations Management I • Lvl 3: Operations Management II • Lvl 4: Operations Strategy and Supply Chain Management and/or BOM WBL

Business Management and Administration Pathway

Program of Study	2030 Long-Term Employment Projections in NWA	Postsecondary	Example Industry-Valued Certifications
Business Management (BM)	<ul style="list-style-type: none"> • Management Occupations +7.6% • Business and Financial Operations Occupations +10.9% 	Northwest Arkansas Community College <ul style="list-style-type: none"> • <u>Business Administration</u> <ul style="list-style-type: none"> ◦ <u>Business Management</u> <ul style="list-style-type: none"> ▪ <u>General Business</u> ▪ <u>Retail Management</u> ▪ <u>Banking & Finance</u> 	<ul style="list-style-type: none"> • Entrepreneurship Endorsement (Certiport) • Financial/Digital Literacy • Facebook Blueprint • Hubspot • Hootsuite • Google Analytics • ICEV Express Employment (various) • IC3 • Quickbooks • Microsoft Specialist (various) • PMP Light • Human Resources certification • Banking and Finance Operations
Human Resource Management (HRM)	Regional Employers: <ul style="list-style-type: none"> • Walmart • Tyson Foods • JB Hunt Transport Services • University System • Arvest Bank • Northwest Health • Supplier Companies (various) 		
Operations Management (OM)			

Source: Arkansas Division of Workforce Services - NW Arkansas Workforce Development Area

Education and Training

In-demand, moderate-to-high-skill occupations in this industry sector in Arkansas include K-12 Teachers, Education Administrators, Special Education Teachers, Librarians, Postsecondary and CTE Educators.

Program of Study	Description	Example Course Sequence
Teaching and Training (TT)	This program of study will equip students interested in the field of education with foundational knowledge of instruction, assessment, classroom management, lesson planning and educational technology.	<ul style="list-style-type: none"> • Lvl 1: Foundations of Teaching and Training • Lvl 2: Teaching and Training I • Lvl 3: Teaching and Training II • Lvl 4: Teaching and Training III and/or TT WBL

Program of Study	2030 Long-Term Employment Projections in NWA	Postsecondary	Example Industry-Valued Certifications
Teaching and Training (TT)	<ul style="list-style-type: none"> • Education, Training and Library Occupations +18.1% • Educational Services is #3 in the top 10 growth industries, expected to grow 14.6% <p>Regional Employers:</p> <ul style="list-style-type: none"> • NWA Public School Districts 	<p>Northwest Arkansas Community College</p> <ul style="list-style-type: none"> • <u>Associate of Arts Teaching</u> 	<ul style="list-style-type: none"> • Certified Teaching Assistant (CTA) • Parapro Praxis

Source: Arkansas Division of Workforce Services - NW Arkansas Workforce Development Area

Recommendations

1.

Given the enthusiasm for CTE and the identified labor shortages, regional partners should focus efforts to build out CTE programming in NWA in Healthcare, Advanced Manufacturing, Marketing/Distribution/Logistics, Building/Construction, Business Management and Administration and Education and Training.

2.

Any strategy to improve CTE should be grounded in the common definition for high-quality pathways that improves student outcomes and aligns with regional economic and workforce needs and priorities.

3.

Developing consistent cross-region CTE pathways will require shared resources, economies of scale and a shift away from "go it alone" approaches.

4.

Further analysis is needed around the longer-term outcomes of current NWA CTE programs for learners such as postsecondary credential attainment, employment, wage earnings, etc.

Appendix

Data & Methodology

Data Sources

Division of Career and Technical Education (DCTE)

- Perkins V data
- DCTE labor market data
- Work-based learning completion data

Arkansas Office of Innovation for Education

- CTE programs of study completion data
- Early postsecondary credit completion data
- Industry credential attainment data

Division of Elementary and Secondary Education

- Statewide enrollment data
- Postsecondary matriculation data

Office of Education Policy (University of Arkansas)/Insightful

- Survey data
- Focus group data

Other Sources

- Labor market data – JobsEQ, Arkansas Division of Workforce Services, Arkansas Economic Development Commission, NWA Arkansas Council, U.S. Bureau of Labor Statistics

Data Limitations

- Due to lack of access to student-level data, this analysis relies on aggregate data which limits the ability to fully investigate the outcomes of CTE students.
- Concentration data may be inflated due to current business rules for counting. Until 2022-23, all students who took a level 1 course and any other level 2 or 3 course would be counted as a concentrator, even if those courses were not in the same program of study. Therefore, this analysis focuses on completer/completion data to more accurately understand student outcomes related to CTE programs of study.
- Industry certification data do not specify which certifications or how many certifications a student earned. These data are also only available for the 2021 and 2022 school years.
- Postsecondary matriculation data were only available for the 2020 and 2021 school years.
- The state's current structure for organizing programs of study does not allow for easy analysis of directional alignment with H³ occupations. Therefore, this analysis focuses on program of study completion.

Terms and Definitions

Program of Study	<i>A coordinated, non-duplicative sequence of academic and technical content at the secondary and postsecondary level that meets requirements outlined in Perkins V.</i>	Earned Industry Certification	<i>Graduates who were reported to have earned an industry-recognized credential prior to graduating high school.</i>
Completers	<i>Students who have completed three (3) courses within a career cluster program of study.</i>	Earned Early Postsecondary Credits	<i>Graduates who earned any Advanced Placement, International Baccalaureate, dual concurrent credit prior to graduating high school.</i>
Concentrators	<i>Students who enroll in a minimum of two (2) units of credit in a CTE program area.</i>	Postsecondary Matriculation	<i>Graduates who were reported to be enrolled in a postsecondary placement by DIS and ARData.</i>
High-Quality Indicators	<i>1) Earned industry-recognized credential or certification, 2) earned early postsecondary credits, and 3) postsecondary matriculation.</i>	H³	<i>High demand, high-skill, and higher-wage occupations.</i>

Districts/Schools in Northwest Arkansas

Benton & Washington County	2019-2020	2020-2021	2021-2022	3 Years Total
HS Enrollment	30,318	33,498	34,750	98,566
CTE Completions	10,050	9,272	10,471	29,793
WBL Completions	598	2	50	650

The school districts included in the NWA region (by county) are:

- **Benton:**

- Arkansas Arts Academy
- Arkansas Connections Academy
- Bentonville School District
- Decatur School District
- Founders Classical Academies Of Arkansas
- Gentry School District
- Gravette School District
- Haas Hall Academy
- Pea Ridge School District
- Rogers School District
- Siloam Springs School District

- **Washington:**

- Elkins School District
- Farmington School District
- Fayetteville School District
- Greenland School District
- Lincoln School District
- Prairie Grove School District
- Responsive Ed Solutions Premier High School Of Springdale
- Springdale School District
- West Fork School District