



**Arkansas Department of Education
Division of Career and Technical Education**

Ross White, Director



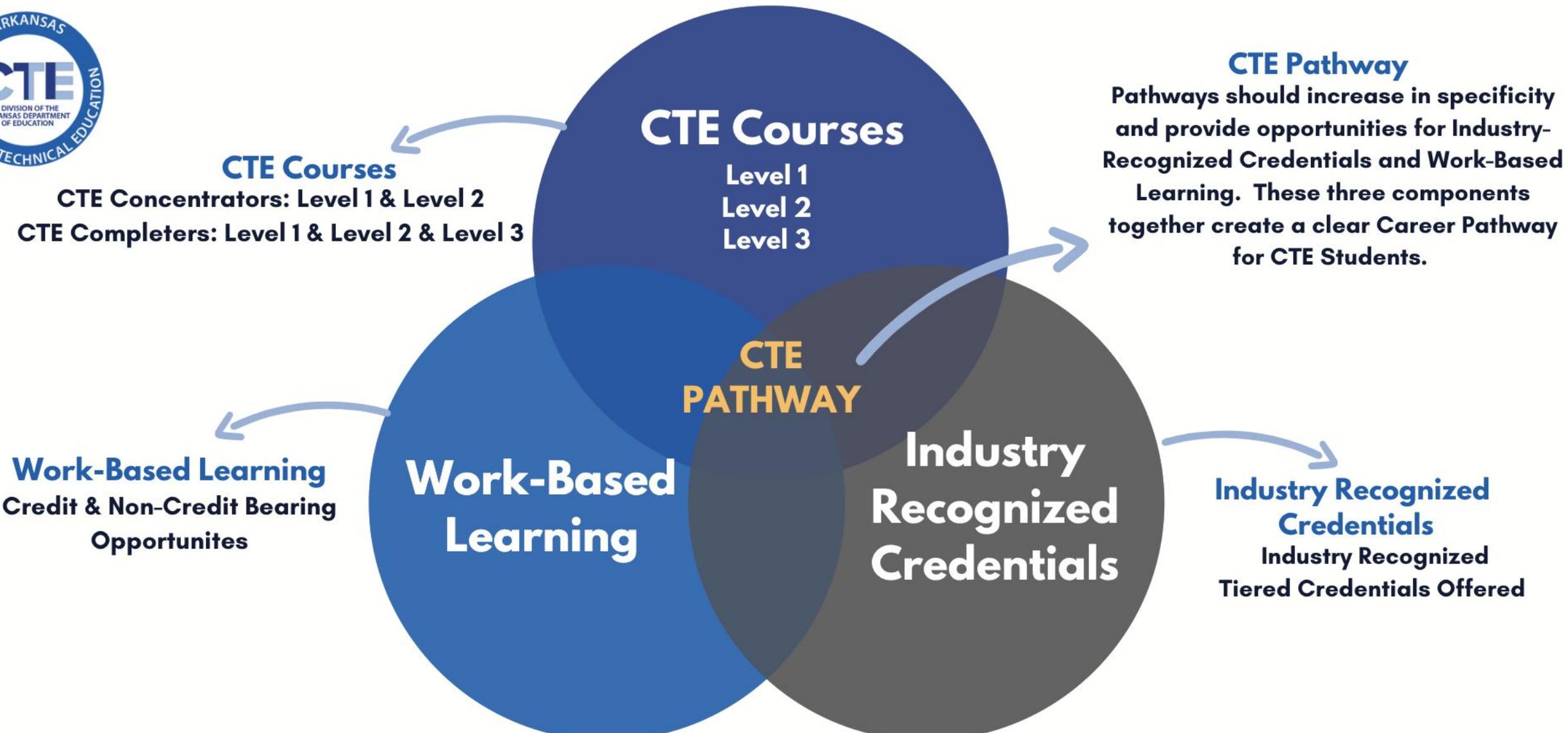
L E A R N S

Roughly six in 10 jobs in Arkansas require **advanced credentials** beyond a high school diploma, but less than half of the state's workers meet these requirements.

Every Arkansas student deserves opportunities to graduate on a path toward prosperity.

READINESS

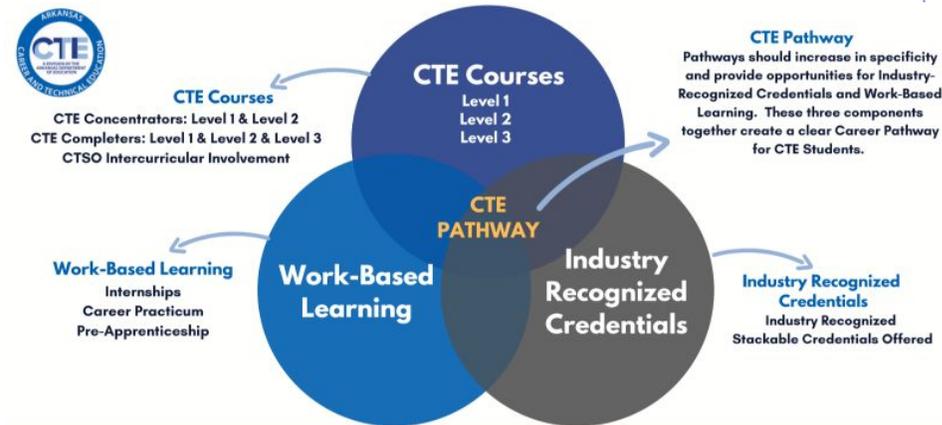
CTE Pathways



Work-Based Learning
Credit & Non-Credit Bearing
Opportunities

Industry Recognized Credentials
Industry Recognized
Tiered Credentials Offered

CTE Pathways



- ▶ 63 Pathways
- ▶ 16 career clusters
- ▶ 256 different courses

Career and Technical Education (CTE) Pathways

Cluster: Agriculture, Food & Natural Resources

Career Pathways:
 Agribusiness Systems
 Agriculture Power, Structural & Technical Systems
 Animal Systems
 Food Products & Processing Systems
 Natural Resources/Environmental Services Systems
 Plant Systems

Cluster: Architecture & Construction

Career Pathways:
 Architectural CAD
 Construction

Cluster: Arts, A/V Technology & Communications

Career Pathways:
 A/V Technology & Film
 Advertising & Graphic Design Technology
 Commercial Photography - Visual Arts
 Digital Cinema Productions - Journalism & Broadcasting
 Fashion & Design - Visual Arts
 Radio Broadcasting Technology - Journalism & Broadcasting

Cluster: Business Management & Administration

Career Pathways:
 Management
 Medical Office Administration
 Office Administration

Cluster: Education & Training

Career Pathways:
 Teaching & Training

Cluster: Finance

Career Pathways:
 Accounting
 Banking
 Business Finance

Cluster: Government & Public Administration

Career Pathways:
 Air Force JROTC - National Security
 Army JROTC - National Security
 Marine JROTC - National Security
 Navy JROTC - National Security

Cluster: Health Science

Career Pathways:
 Biomedical Sciences
 Medical Skills & Services - Therapeutic Services
 Nursing Services - Therapeutic Services
 Pharmacy Technician - Therapeutic Services
 Sports Medicine - Therapeutic Services

Cluster: Hospitality & Tourism

Career Pathways:
 Food Production - Restaurant, Food & Beverage Services
 Hospitality & Tourism
 Culinary Arts - Restaurant, Food & Beverage Services

Cluster: Human Services

Career Pathways:
 Consumer Services
 Family & Community Services
 Nutrition Science

Cluster: Information Technology

Career Pathways:
 Computer Science

Cluster: Law, Public Safety, Corrections & Security

Career Pathways:
 Emergency Services - Emergency & Fire Management Services
 Firefighting - Emergency & Fire Management Services
 Criminal Justice - Law Enforcement Services

Cluster: Manufacturing

Career Pathways:
 Advanced Manufacturing - Maintenance, Installation, & Repair or Production
 Welding - Manufacturing Production

Cluster: Marketing

Career Pathways:
 Digital Marketing - Marketing Research
 Marketing Business Enterprise - Marketing Management
 Retail Management - Merchandising
 SBE Manual

Cluster: Science, Technology, Engineering & Mathematics

Career Pathways:
 Engineering CAD
 Automation & Robotics Technology
 Pre-Engineering

Cluster: Transportation, Distribution, & Logistics

Career Pathways:
 Automotive Collision Repair
 Automotive Service Technology
 Aviation Technology
 Medium/Heavy Truck Technology
 Power Equipment Technology
 Supply Chain & Logistics
 Unmanned Aerial Systems (UAS)

JAG: Jobs for Arkansas Graduates

JAG Manual



CTE Courses



Arkansas Career and Technical Education
 Career Pathway Chart
 2023-2024 School Year



Automation & Robotics Technology
 CAREER PATHWAY

STEM
 CAREER CLUSTER

Career Cluster: STEM

Career Pathway: Automation & Robotics Technology

JUNIOR HIGH / MIDDLE SCHOOL	
Automation and Robotics (AR)	Design and Modeling (DM)
Energy and the Environment (EE)	Flight and Space (FS)
Green Architecture (GA)	The Magic of Electrons (ME)
The Science of Technology (ST)	Career Medical Detectives (MD)
Engineering Technology Education I	Engineering Technology Education II
HIGH SCHOOL	
FOUNDATIONAL COURSES: Choose one or more of the following courses.	
Automation & Robotics Technology	
CONCENTRATOR COURSES: To be a concentrator you must pass one of the following courses AND one foundational course	
Automation & Robotics Technology II	
COMPLETER COURSES: To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.	
Automation & Robotics Technology III	
Career Practicum	
SUPPORTING COURSES: Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)	
Calculus	Art I
Physics	Any Foundational Computer Science Course

POST-SECONDARY OPTIONS			
	1-2 Year Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
	> Maintenance Engineer	> Robotics Technician > Computer Systems Analyst > Mechanical Engineering Technician	> Software Quality Assurance Analyst > Commercial & Industrial Designer



Industry Recognized Credentials

- ▶ Credentials can be earned by students enrolled in a CTE Pathway.
- ▶ The 2023-2024 school year all recognized credentials will be tiered.

Tier 1: Highly Valuable

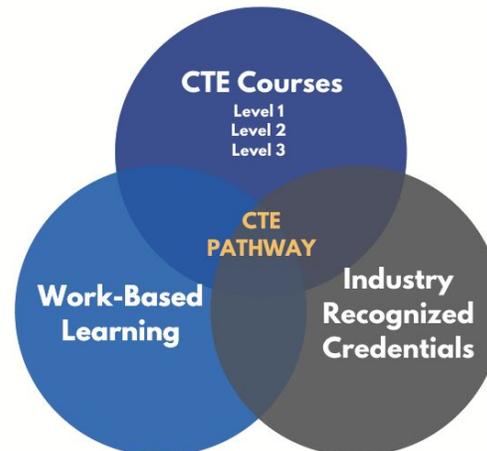
This credential is recognized statewide and is a credential of value and leads to high skill, high wage, high demand careers.

Tier 2: Moderately Valuable

This credential is recognized and the credential provides some high skill, high wage, high demand careers.

Tier 3: Valued

This credential has some recognition and provides little to no connection to a high skills, high wage, high demand career.



Work Based Learning (WBL)



- ▶ **What is Work Based Learning (WBL)?**
Activities that collaboratively engage employers and schools in providing structured learning experiences for students. There are many different types of WBL experiences from
 - ▶ Internship
 - ▶ Career practicum
 - ▶ Pre-apprenticeship

 - ▶ Guest speakers (non-credit)
 - ▶ Job shadowing (non-credit)



Analysis of Arkansas's Career and Technical Education (CTE) Programs

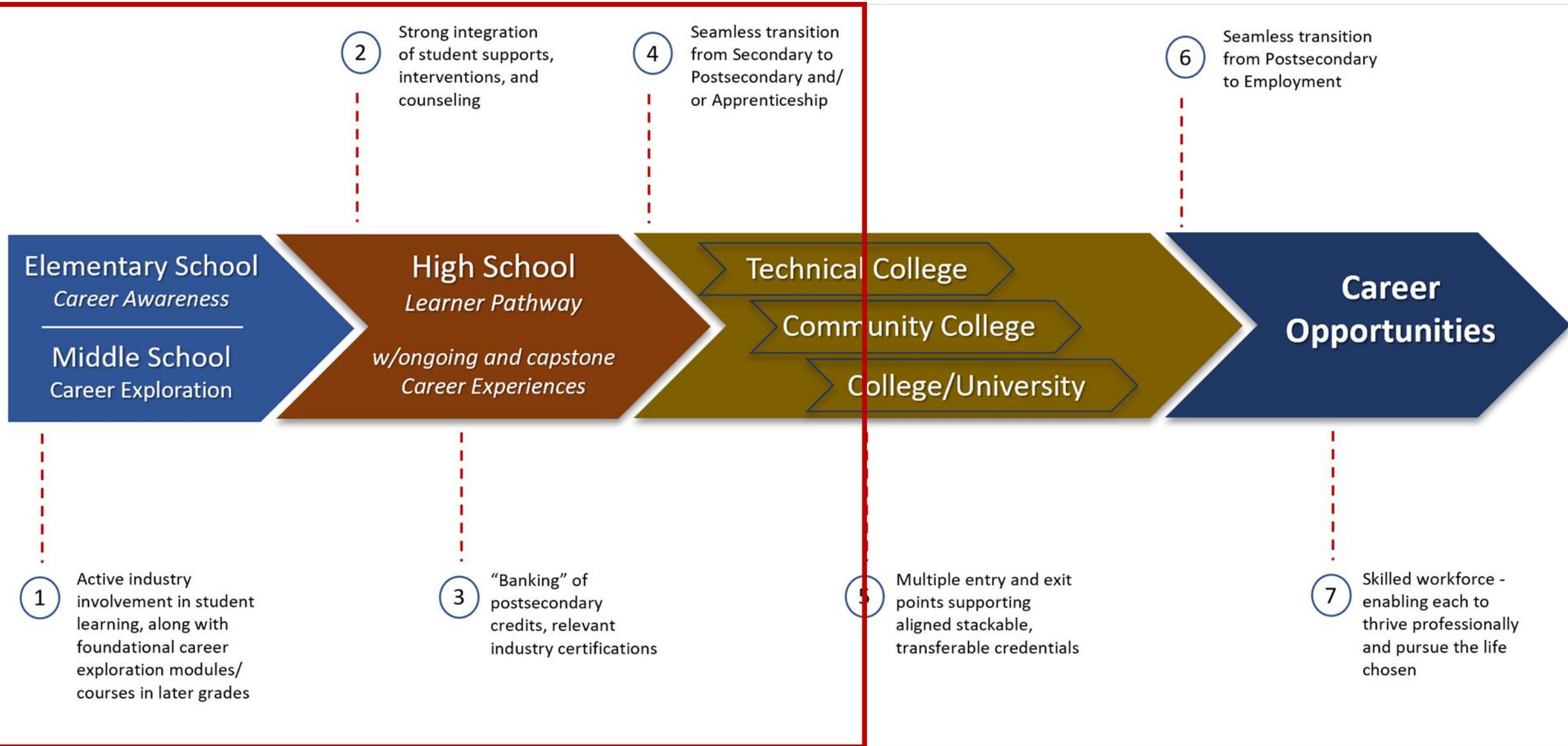
[Office for Education Policy](#)
[Department of Education Reform](#)

University of Arkansas
and
Insightful Education Solutions

July 2023



Our analysis focuses on K-12 CTE pathways.



Findings & Recommendations: CTE Program Quality

- **Finding:** CTE completers have low rates of early postsecondary credit and industry credential attainment and postsecondary matriculation, suggesting that too many CTE pathways are “dead ends” and do not articulate or transition seamlessly to postsecondary credential programs.
 - ◆ **Recommendation:** Ensure that every CTE program of study articulates to a postsecondary credential CTE program. All students enrolled in CTE programs of study should have access to early postsecondary credit offerings aligned to a postsecondary credential.
 - ◆ **Recommendation:** Establish statewide articulation agreements across 2-year and 4-year colleges and universities to ensure college credits earned in K–12 or at one institution transfer and count toward a degree at another. Include technical credit (CTE) and valued industry credentials under the agreements to help students earn more quickly a postsecondary credential.

Postsecondary Articulation in Leading States

Both **Colorado** and **Florida** have established robust statewide articulation agreements across their community and technical colleges and 4-year universities. As part of its agreement, **Florida** offers college credit for valued industry credentials earned by students. **Colorado's** agreement ensures that dual and concurrent enrollment credit can be applied to a CTE program or are transferable via “guaranteed transfer pathways.”

Next Steps



Realignment Arkansas Department of Education

- ▶ Moved Division of Career and Technical Education under direction of Division of Higher Education.
- ▶ Updating Federal Perkins V State Plan to include secondary and post-secondary alignment with goals and measures.
- ▶ Partnering work of secondary and post-secondary CTE programs across the state.

Alignment of Secondary and Post-Secondary CTE Programs

- ▶ Align CIP (Classification of Instructional Program) Codes in secondary and post-secondary programs.
- ▶ Align SOC (Standard Occupational Classification) Codes in secondary and post-secondary programs.
- ▶ Develop a common course numbering system in post-secondary for secondary programs.
- ▶ Develop a common transfer system for CTE courses completed in secondary.



Findings & Recommendations: CTE Program Alignment

- **Finding:** There is significant directional misalignment between the most completed programs of study and high demand, high skill, higher wage occupations or industry sectors.
 - ◆ **Recommendation:** Strengthen alignment between programs of study and H3 occupations. This may include making changes to existing programs of study, creating new programs of study to address gaps between labor market needs and offerings, or phasing out legacy programs that are not projected to grow or meet H3 occupation expectations.
 - ◆ **Recommendation:** Consider ways to support school and district transitions to higher value programs through financial incentives or grants. Incentives should be aligned with those programs of study that provide the greatest ROI for students, communities and state/regional economies.

CTE Program Alignment in Leading States

Indiana prioritizes state and regional labor market data to develop and update CTE pathways offerings. It takes its lead from the Governor's Workforce Cabinet, which includes statewide and regional employers and business associations as key members. The Cabinet recently spearheaded efforts to design the state's "Next Level" CTE programs of study that are aligned to both occupational demand and postsecondary credential programs.

Next Steps

High Demand, High Wage, High Skill

- ▶ Establishing a state-wide accepted definition of high demand, high wage, high skill (H3).
- ▶ Placing priority on H3 programs in secondary and postsecondary CTE programs.
- ▶ Reviewing and Realigning CTE Courses not meeting H3.

Career Diploma & Accountability

- ▶ The AR Career Diploma will be a **plus option** for AR students.
- ▶ Students will complete additional graduation requirement beyond the standard graduation requirement focused on a career pathway.
- ▶ Will be part of the updated school accountability system placing emphasis and value on the career focused pathway.
- ▶ Is appropriate avenue for ALL students.

Questions

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