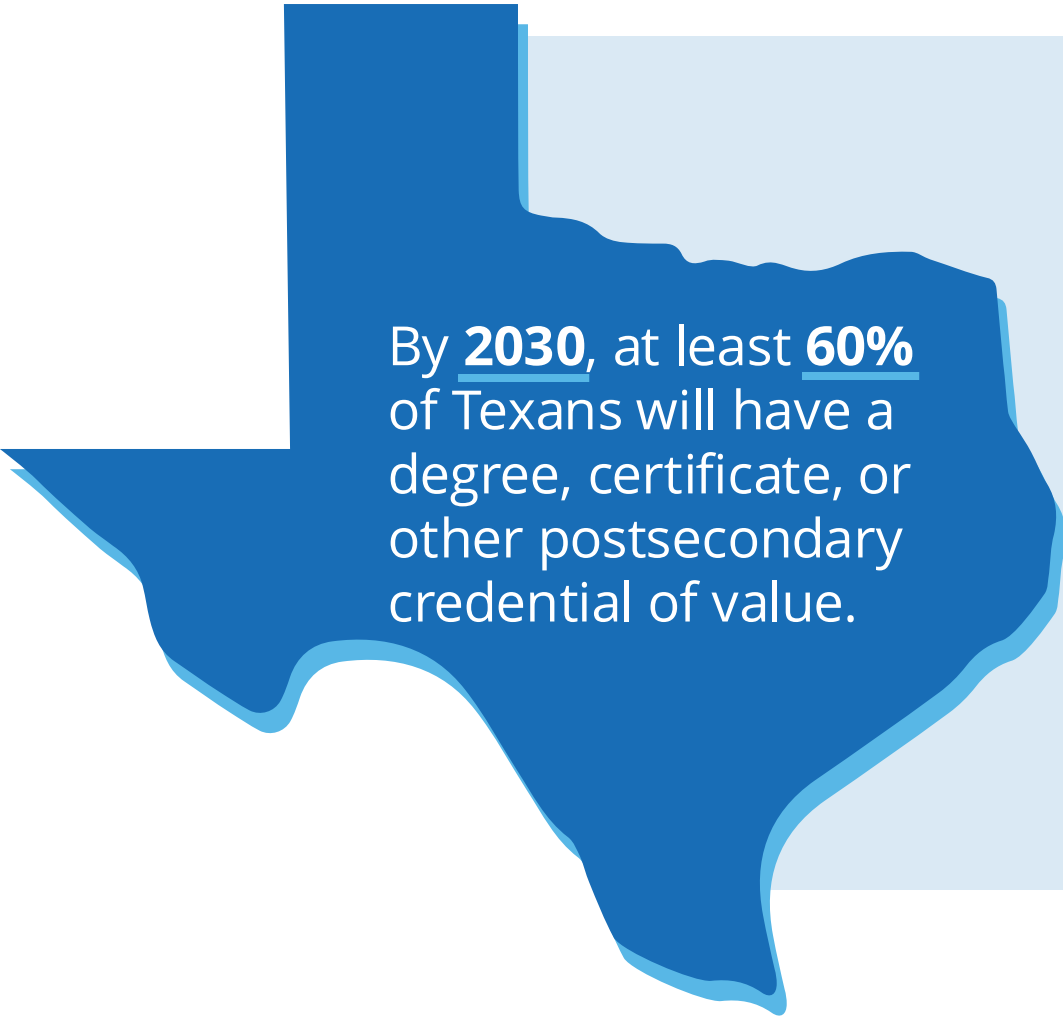




Region 4 Superintendent Meeting

January 9, 2024

Pursuing our vision for Texas students



By **2030**, at least **60%** of Texans will have a degree, certificate, or other postsecondary credential of value.

**At K-12
Graduation**

**Every Child, Prepared
for Success in College, a
Career, or the Military**

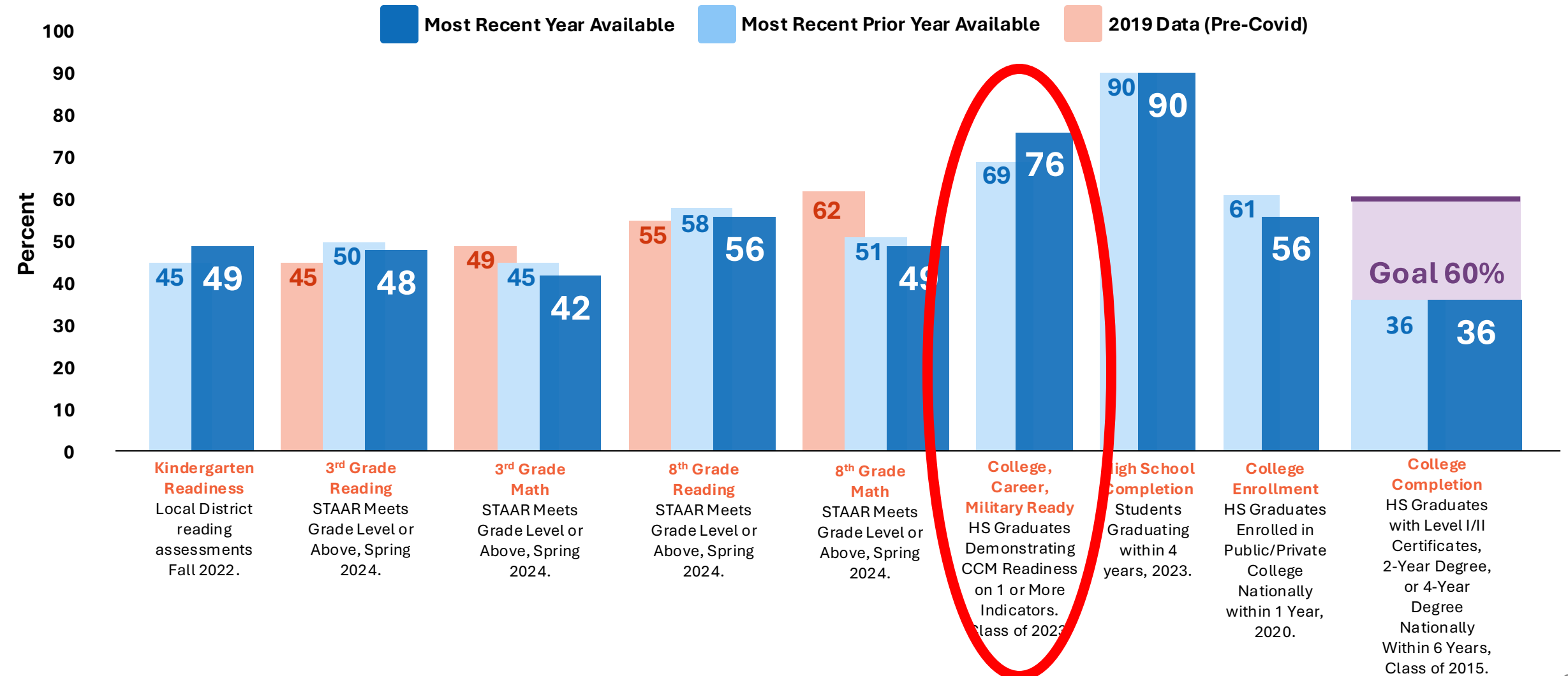
**Post-
Secondary
Attainment**

Goal: 60%

High school graduates have enlisted in the military, earned an industry certification, 2-year degree, or 4-yr degree from any institution nationally within 6 years of graduation.

Current Statewide K-12 Outcomes

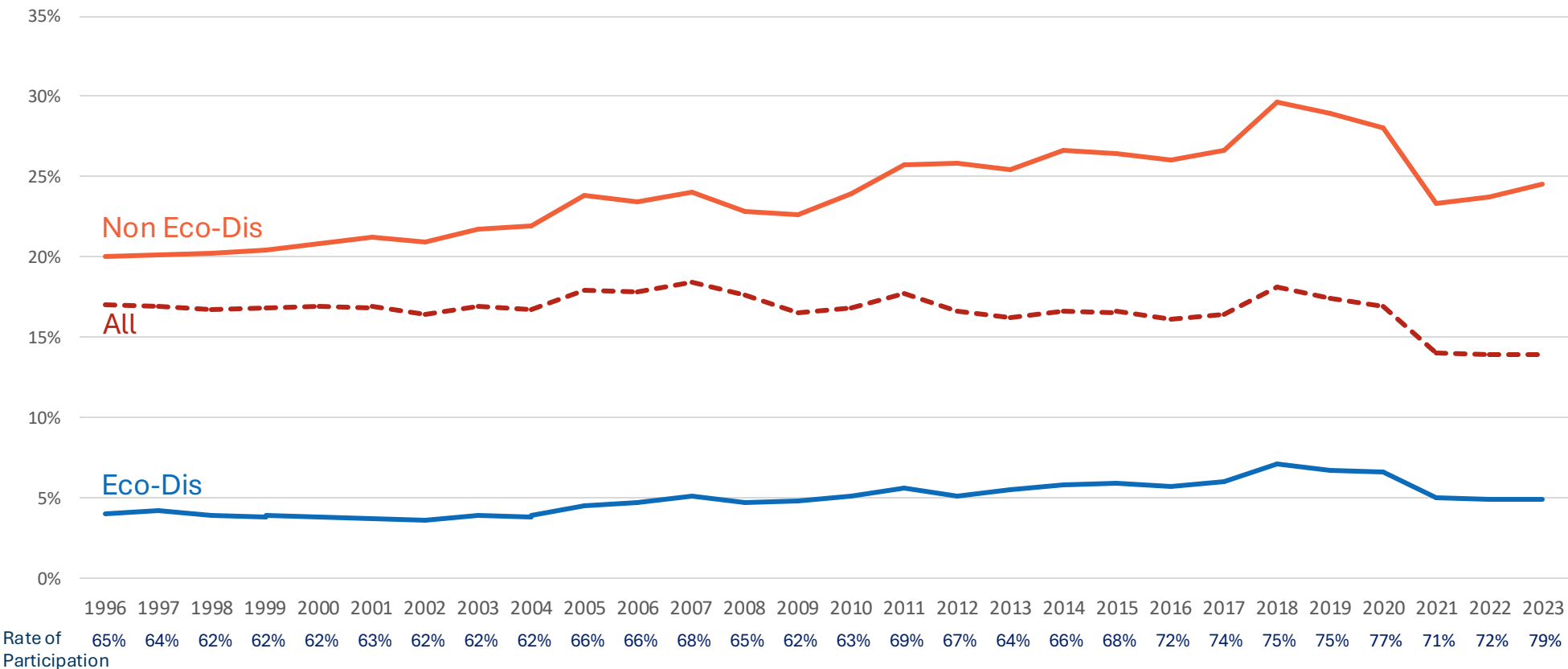
YEAR-OVER-YEAR STUDENT OUTCOMES



Historic Trends in One Measure of College Readiness

This graph shows the percent of graduating students who earned an SAT/ACT score above a level that has historically demonstrated students have a 75% chance of succeeding in freshmen college courses. For the SAT, this is an 1180*; for ACT, this is 24. The college readiness benchmarks used for A-F accountability are lower than these levels.

% Above "Passing" on SAT/ACT

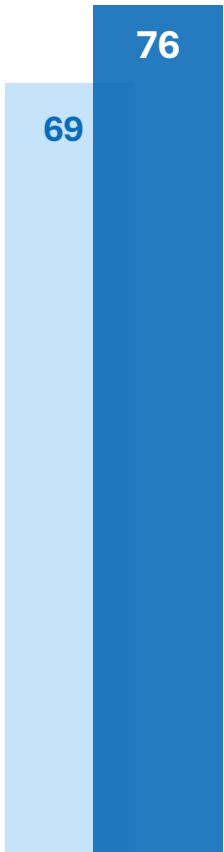


In Texas, high school students can demonstrate college readiness by:

- Obtaining a college-ready score on the SAT or ACT
- Obtaining a college-ready score on the TSIA
- Obtaining a college-ready score on an AP/IB exam
- Successfully completing sufficient Dual Credit or onRamp courses, including earning an Associates Degree
- Demonstrating readiness from a validated College-Prep class
- For students in special education, graduating under the Advanced Diploma plan

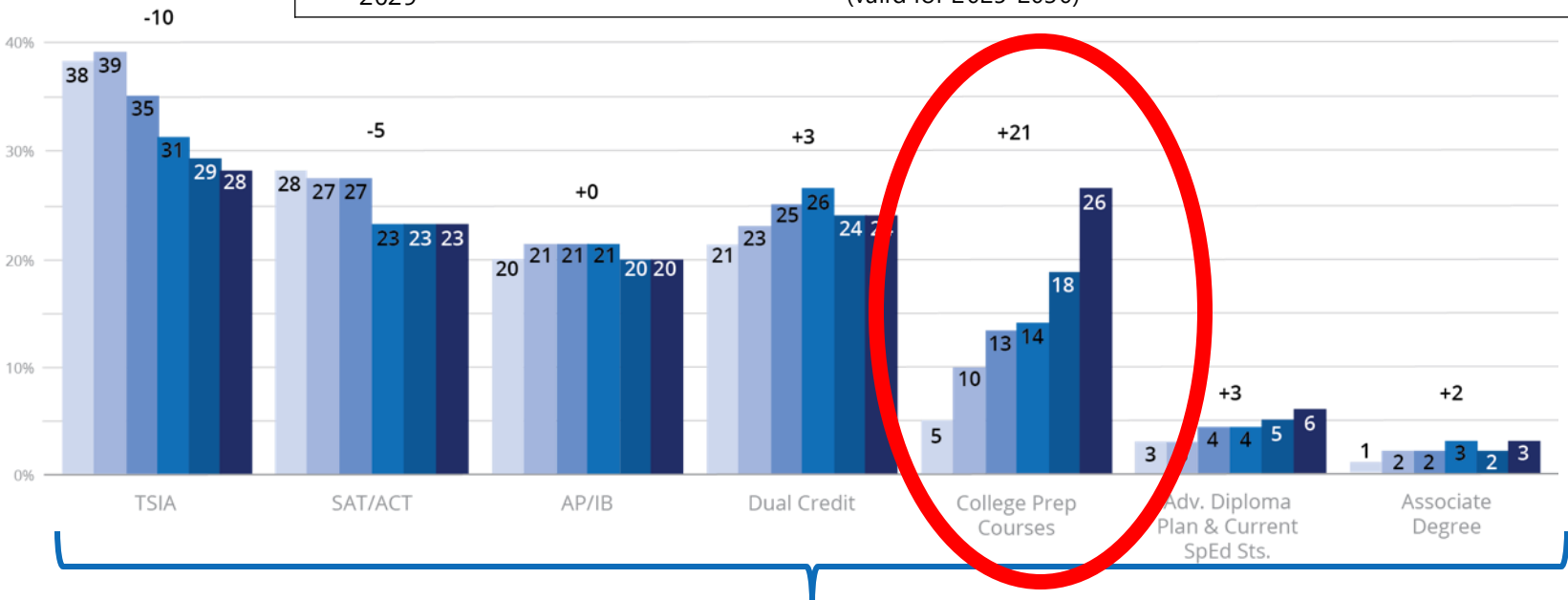
* Prior to the redesign of the SAT in 2016, this threshold was 1110

College Readiness: Multiple Indicators



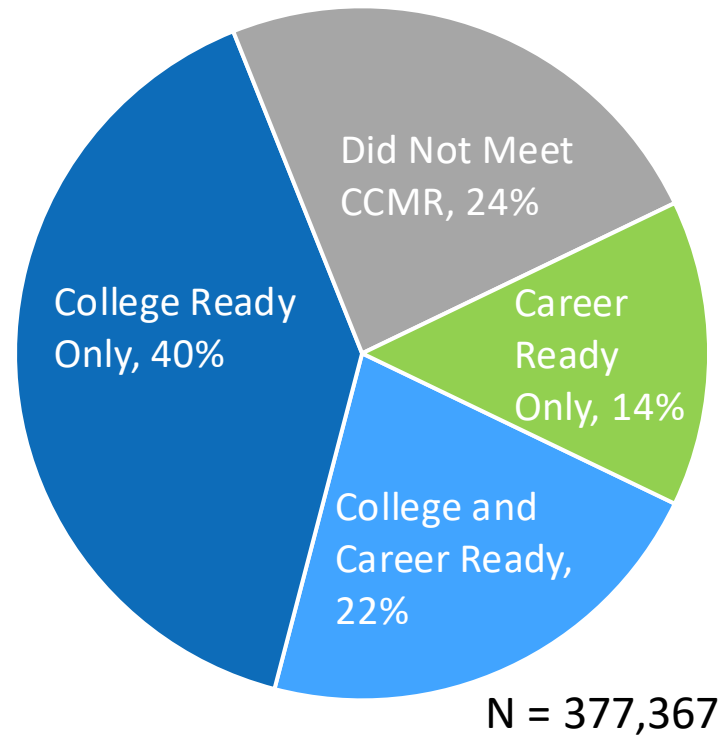
College, Career, Military Ready
HS Graduates Demonstrating CCM Readiness on 1 or More Indicators. Class of 2023.

Annual Graduates	Accountability Year	College Preparatory Course List	Application and Approval Schedule	Grade Level of Course Completion
Class of 2025	2026	-	Application Cycle 1 Open 11/2024 – 3/2025	11th and 12th Graders
Class of 2026	2027	Application Cycle 1 List (valid for 2025-2030)	Application Cycle 2 Open 9/2025 – 3/2026	12th Graders
Class of 2027	2028	Application Cycles 1 & 2 Lists (valid for 2025-2030)	Application Cycle 3 Open 9/2026 – 3/2027	12th Graders
Class of 2028	2029	Application Cycles 1, 2, and 3 Lists (valid for 2025-2030)		12th Graders
Class of 2029	2030	Application Cycles 1, 2, and 3 Lists (valid for 2025-2030)		12th Graders



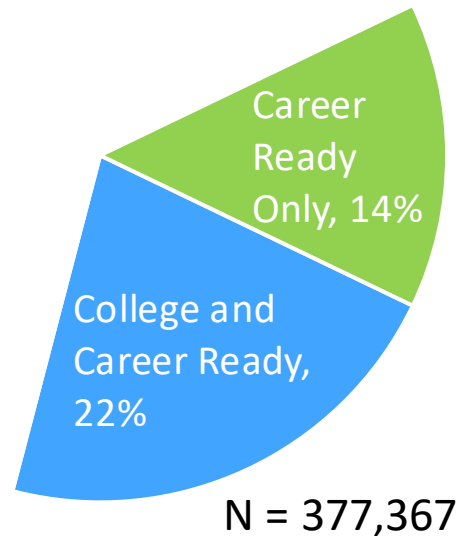
College Readiness Indicators in CCMR

2023 Graduates by Demonstration of CCM Readiness



Sources. College, Career and Military Readiness Indicators, 2024. PEIMS. Graduates 2023. Div. 213

2023 Graduates: Career Readiness



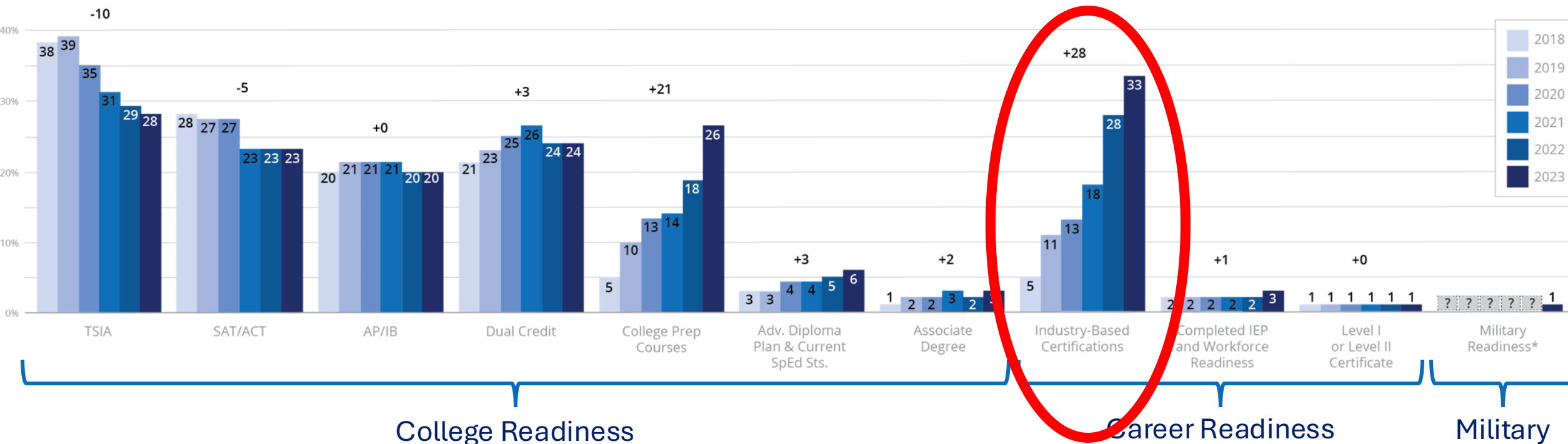
In Texas, high school students can demonstrate career readiness by:

- Enlisting in the US Military or TX National Guard
- Obtaining and Level I/II Certificate in any workforce education area from an IHE
- Earning an Industry Based Certification after completing a Program of Study
- For certain students in special education, successfully completing the IEP to reach full-time employment or demonstrate mastery in employability & self-help skills

College and Career Readiness Levels

High schools in Texas work to prepare students not only for college, but also for careers. Students can demonstrate readiness in a number of ways.

STUDENTS GRADUATING READY FOR COLLEGE, CAREER, AND THE MILITARY

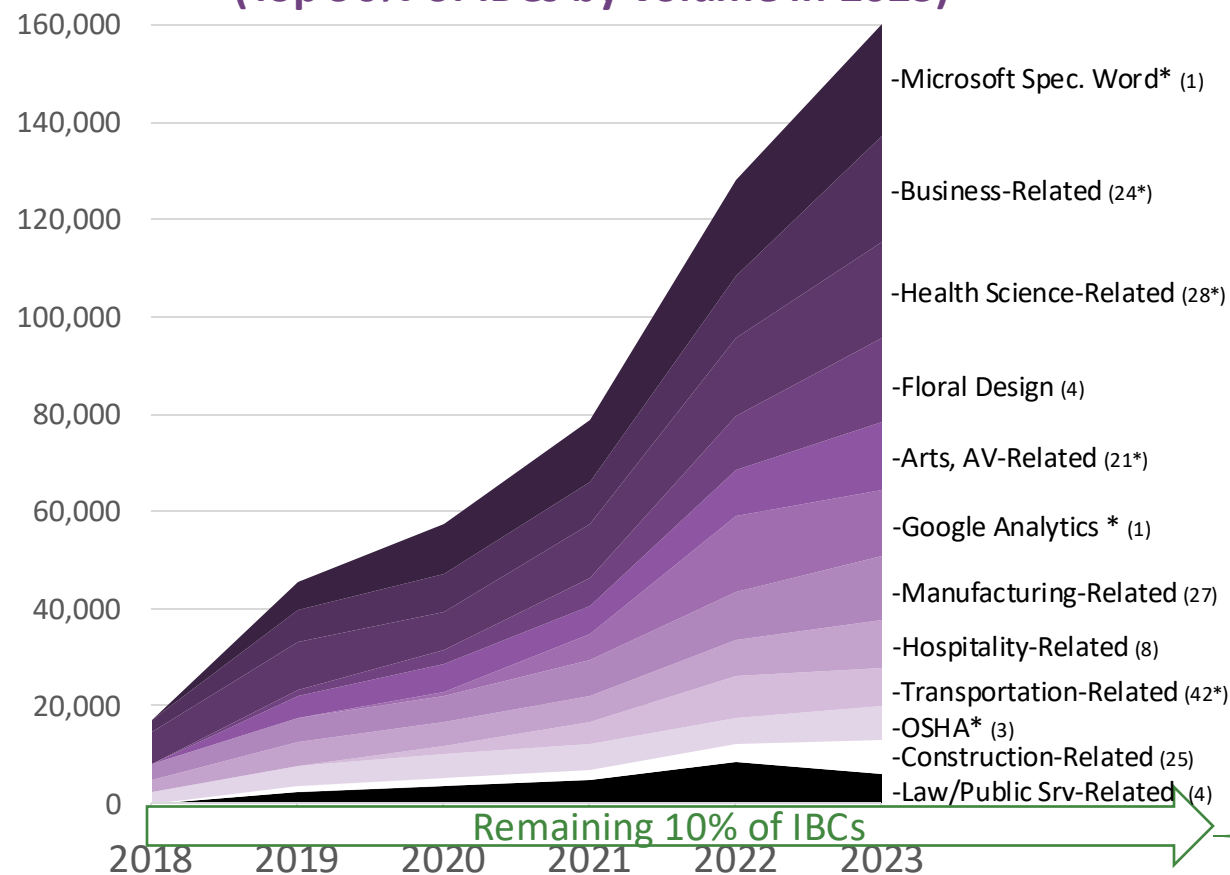


While there has been major growth in IBCs awarded, not all IBCs issued are tied to high wage, high demand industries

Asterisk indicates one or more IBC that is sunsetting

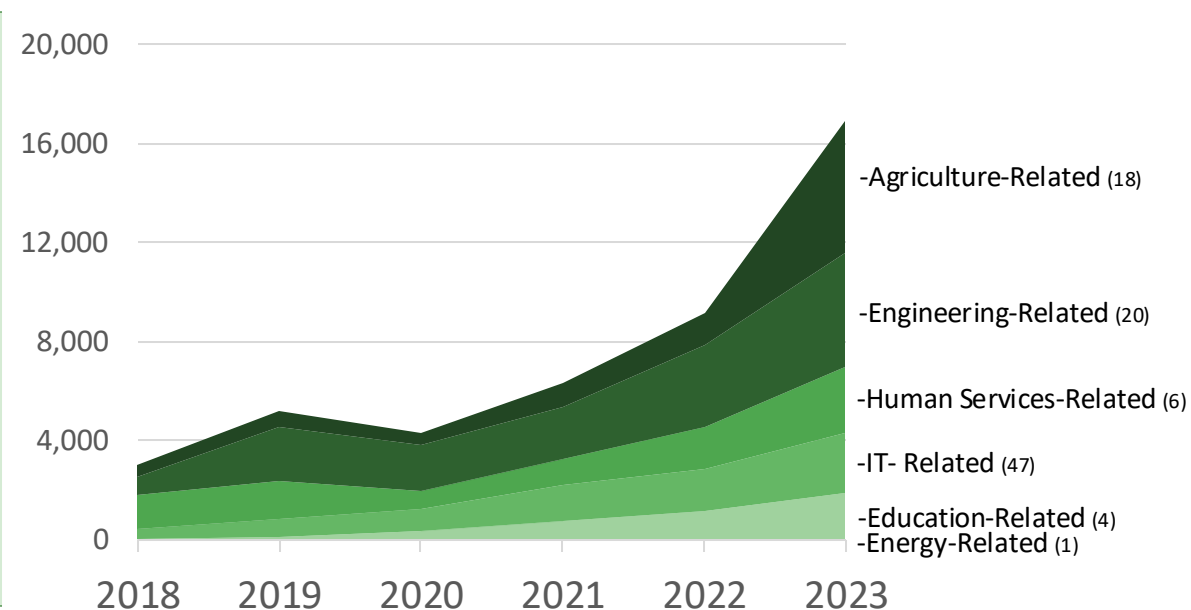
POPULAR INDUSTRY-BASED CERTIFICATIONS

(Top 90% of IBCs by volume in 2023)



OTHER INDUSTRY-BASED CERTIFICATIONS

(Lowest 10% of IBCs by volume in 2023)



Source: PEIMS Graduates, 2018 – 2023; Post-Secondary Certifications, 2018 – 2023. Div. 213

Note: All IBCs reported are represented in charts. Number of IBCs represented in a group is in the parentheses.

2023 Graduates: Improving Career Readiness Quality for Students

Not Just IBCs, but also Programs of Study: Transition Plan to Improved Career Preparation

We are here



Annual Graduates	Accountability Year	IBC List	Program of Study
Class of 2022	2023	2019-2022 list with sunseting limit	--
Class of 2023	2024	2019-2022 and 2022-2025 lists with sunseting limit	--
Class of 2024	2025	2019-2022 and 2022-2025 lists with sunseting limit	1 course in aligned program of study ¹
Class of 2025	2026	2022-2025 list	Concentrator in aligned program of study ²
Class of 2026	2027	2022-2025 and 2025-2030 list with sunseting limit	Completer in aligned program of study ³
Class of 2027	2028	2025-2030 list	Completer in aligned program of study

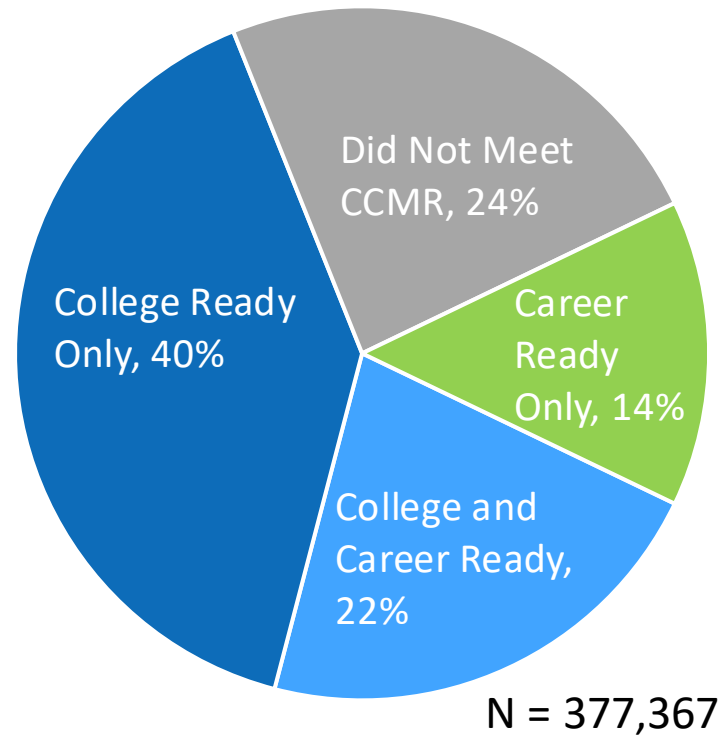
¹ One course that is level two or higher (excludes Career Prep I, Extended Career Prep I, Project Based Research, and/or Scientific Research and Design)

² Two or more courses for at least two credits in the same program of study

³ Three or more courses for four or more credits, including one level three or level four course in the same program of study

*The programs of study were refreshed for implementation in the 2024-2025 school year. Updated April 29, 2024. Changes were additive and should not negatively impact students who have already started a program of study.

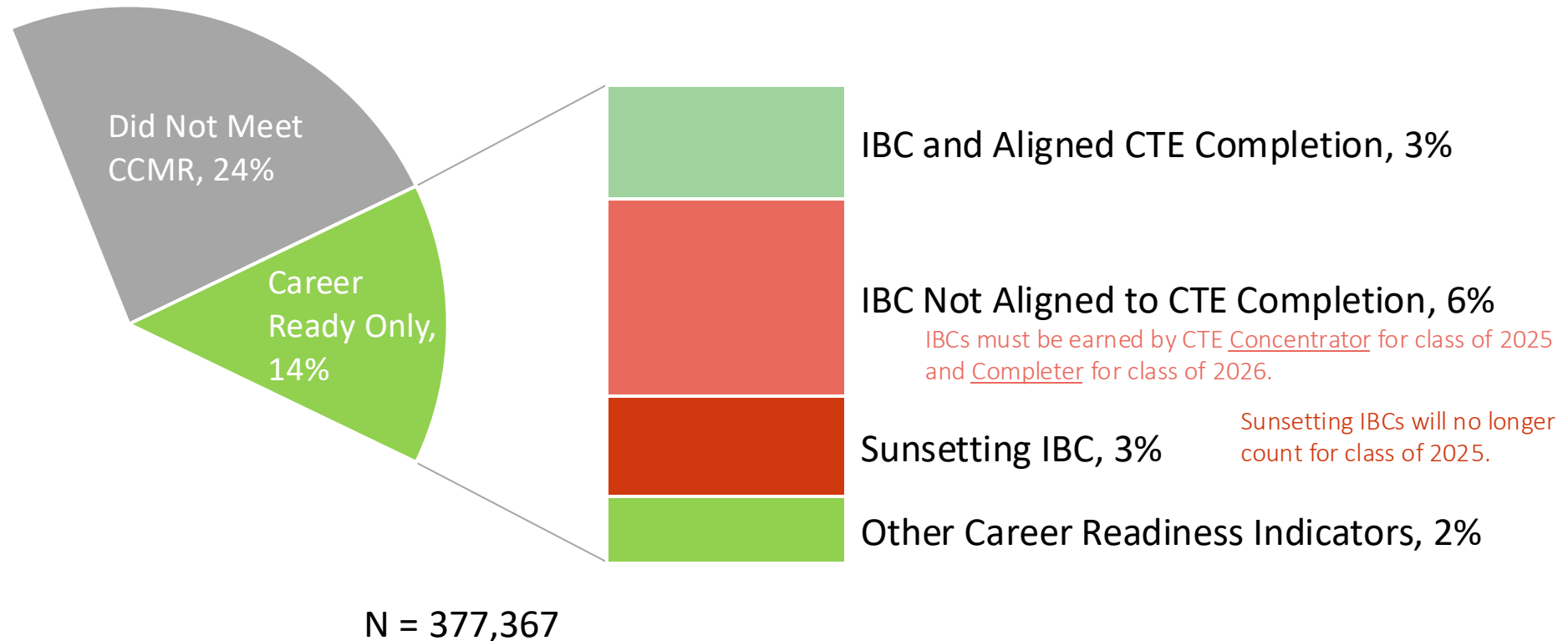
2023 Graduates: Improving Career Readiness Quality for Students



Sources. College, Career and Military Readiness Indicators, 2024. PEIMS. Graduates 2023. Div. 213

2023 Graduates: Improving Career Readiness Quality for Students

There is a need to improve existing career preparation practices

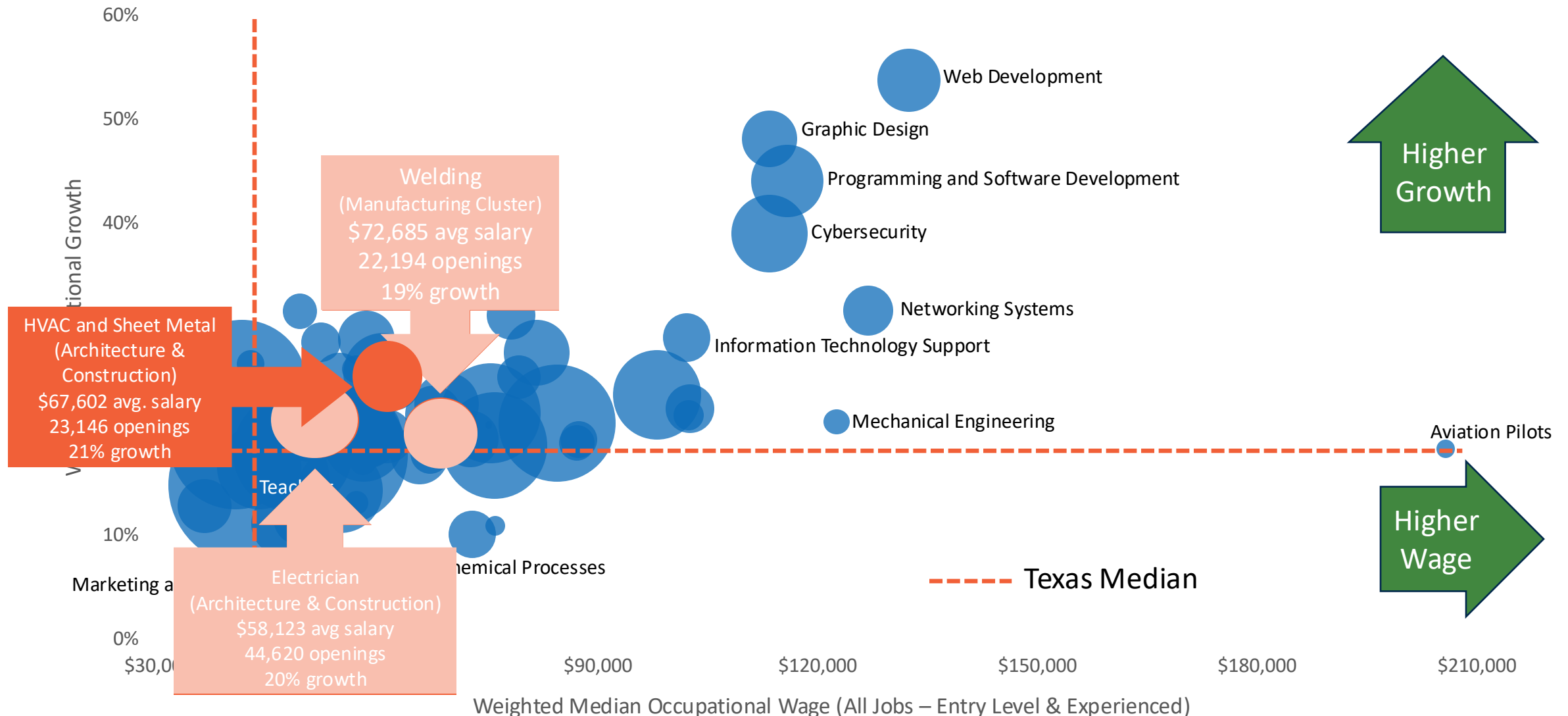


For planning: another option to remember is Level I / II certification, in partnership with an IHE

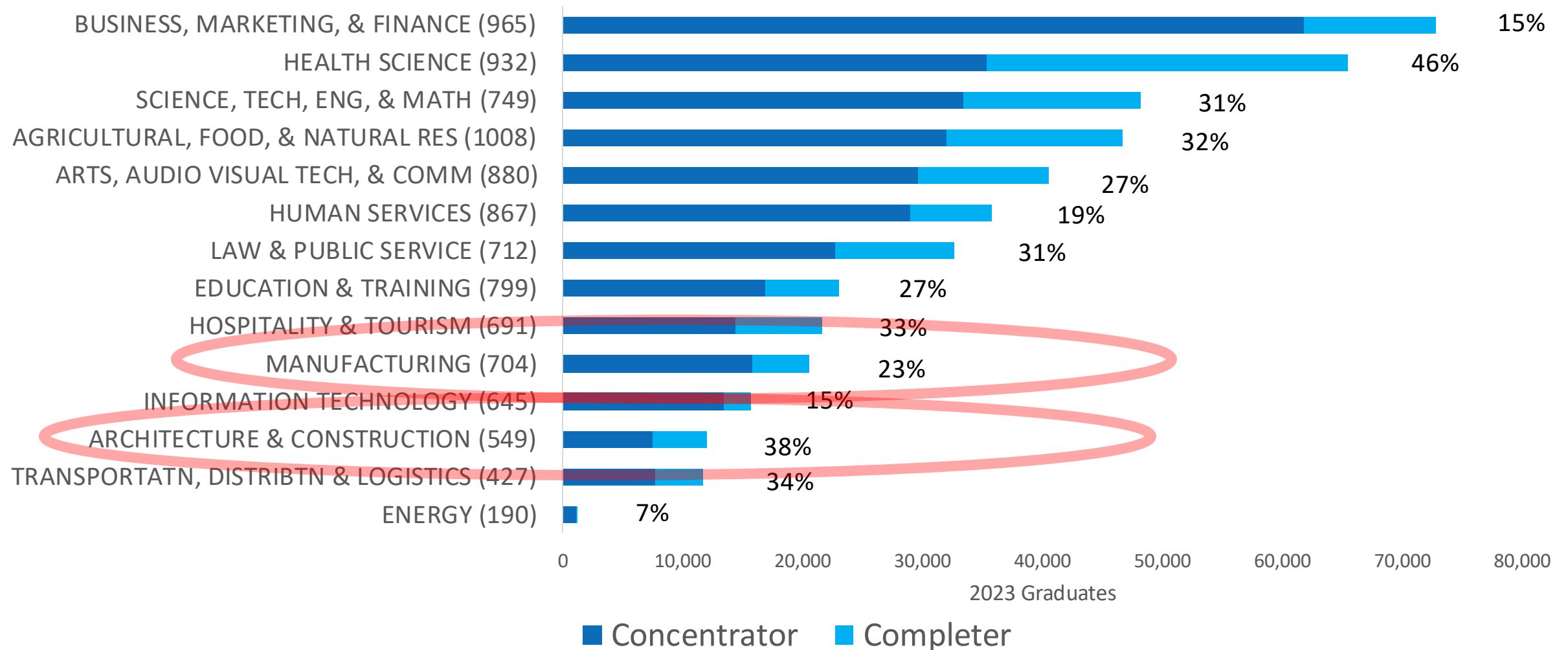
Sources. College, Career and Military Readiness Indicators, 2024. PEIMS. Graduates 2023. Div. 213
Other Career Readiness includes graduates earning a Level I or II certificate, enlisted in the military, received special education services and were workforce ready on individualized education program, or multiple. Graduates who received special education services and graduated with an advanced high school diploma were included in "college readiness" above.

State labor market information shows a need for middle skills jobs that don't also require college readiness

Texas Job Openings, Wages, and Growth



Texas class of 2023 had relatively few concentrators and completers in career clusters related to high demand occupations.

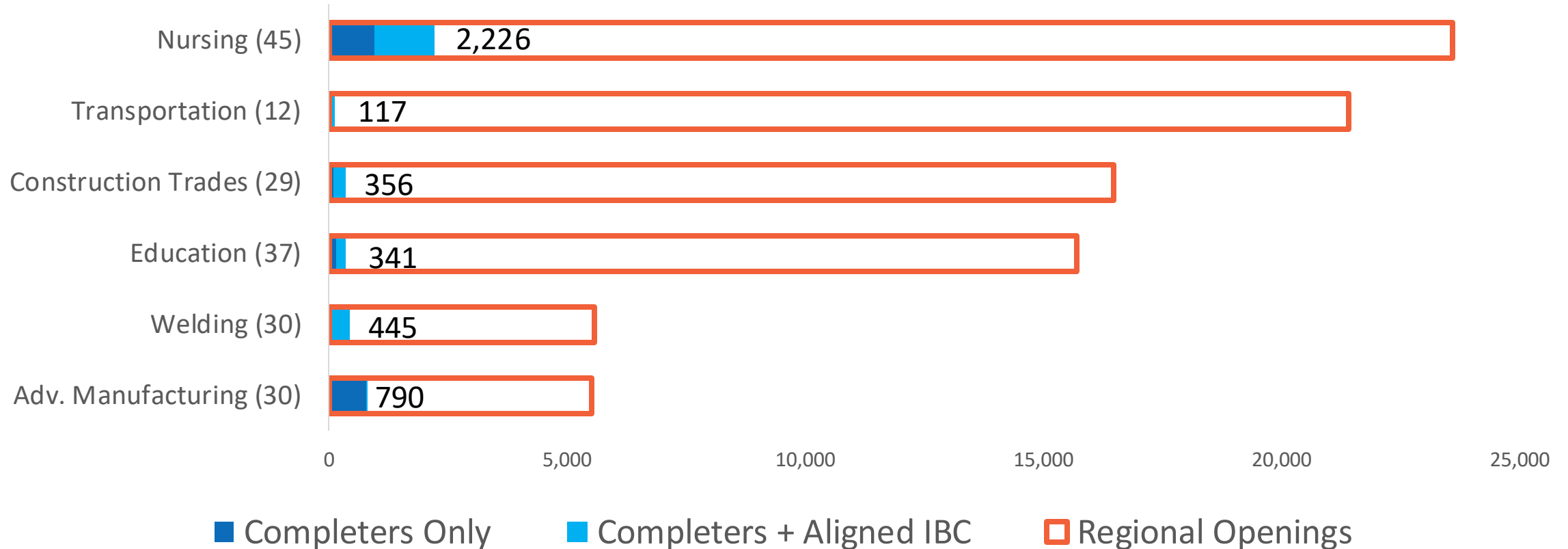


Source. PEIMS. Graduates 2023. Div. 213

Notes. Number of districts represented in parentheses. Science, Tech, Engineering, and Math is no longer a state career cluster in SY 2024-25. Completion rates provided at end of bar.

Few Region 4 graduates are completing critical need programs.

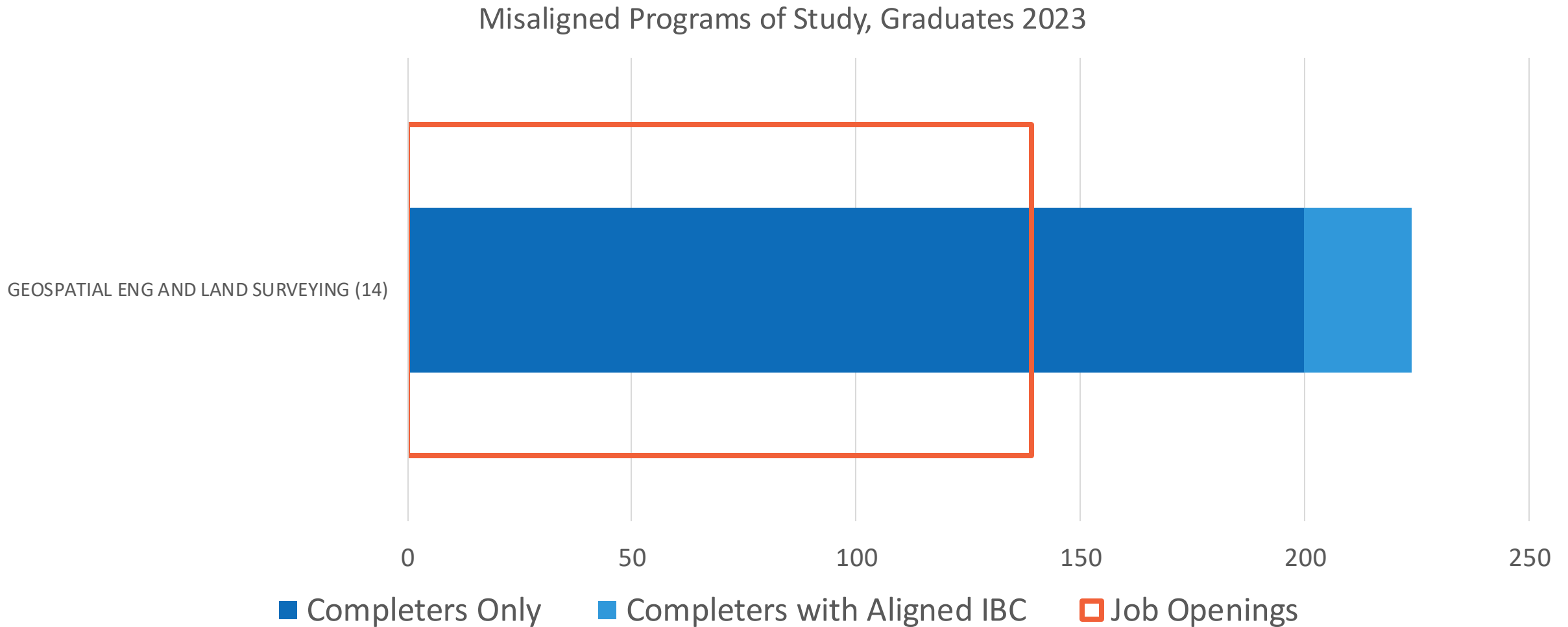
Critical Need Programs, Graduates 2023



Source. PEIMS Graduates, 2023; 2024 Lightcast®. Div. 213

Note. Number of districts with completer are in parentheses. Transportation includes Diesel and Commercial Drivers and Aviation. Construction Trades includes Carpentry, Electrical, HVAC, Masonry, and Plumbing/Pipefitting.

Region 4 had a few programs that graduated more students than had job openings in the labor market for the region.

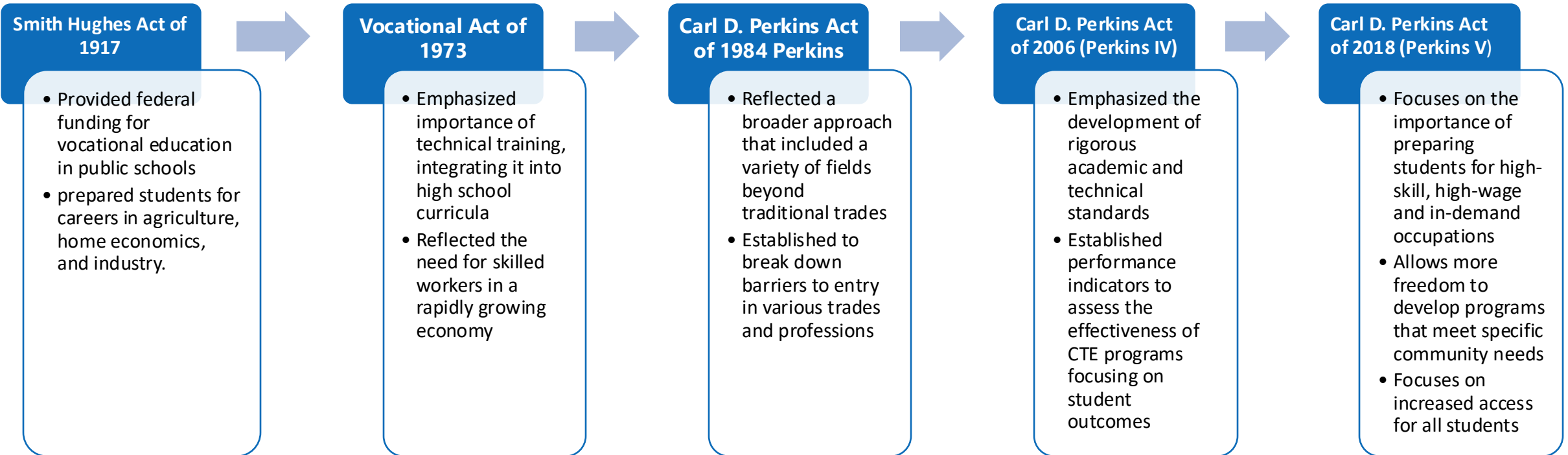


Source. PEIMS Graduates, 2023; 2024 Lightcast©. Div. 213



Planning to Improve Career Preparation Program Offerings

Career preparation has evolved from vocational education to rigorous academic and technical education



2017 – In Texas, HB 22 establishes the CCMR concept, with career readiness measures adopted as part of the Texas policy framework

Today's Texas Career Preparation Policy Framework

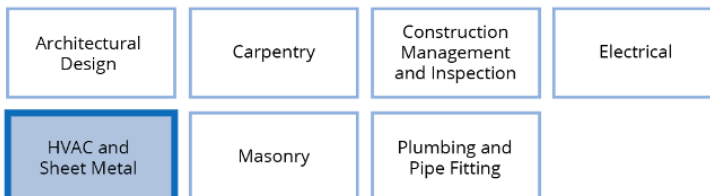
CAREER CLUSTERS



PROGRAMS OF STUDY



Architecture and Construction



HIGH SCHOOL COURSE SEQUENCE EXAMPLE



Work-Based Learning Opportunities



Intern with a company that installs/repairs HVAC and/or sheet metal

NCCER HVAC, Level 1
OSHA 30 Hour Construction
etc...

Jobs

HVAC and Refrigeration Mechanics and Installers

Median Wage: \$47,230
Annual Openings: 3,627
2030 Jobs Projection: 36,263

Cost Estimators

Median Wage: \$65,531
Annual Openings: 1,680
2030 Jobs Projection: 17,669

Sheet Metal Workers

Median Wage: \$45,025
Annual Openings: 1,191
2030 Jobs Projection: 12,155

Professional Growth

Associate's Degree

- Business Administration and Management
- Mechanical Engineering
- HVAC and Refrigeration Engineering Technology
- Business Communication

Bachelor's Degree

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering and Management
- Commerce

Advanced Degrees

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering and Management
- Commerce

In recent years, Texas has taken significant steps to align career preparation pathways in K-12 in partnership with higher education & business.

This includes:

- A-F CCMR Indicators
- College, Career, Military Readiness (CCMR) Outcomes bonuses
- CTE advanced course funding incentives
- P-TECH formula funds
- P-TECH/ECHS grant funds
- R-PEP Funds
- JET grant funds
- Regional Pathway Planning organizations

Programs of Study in Texas align to high-skill, high-wage, in-demand occupations

57 Statewide Programs of Study and 8 Regional Programs of Study



Programs of Study Framework Documents



Architecture and Construction Career Cluster

The Architecture and Construction career cluster focuses on designing, planning, managing, building, and maintaining the built environment. This career cluster includes occupations ranging from architect, carpenter, and construction manager to electrician, plumber and heating, air conditioning and refrigeration technician.

Statewide Program of Study: Electrical

The Electrical program of study focuses on occupational and educational opportunities associated with installing, maintaining, and repairing electrical wiring, equipment, and fixtures. The program of study also addresses installing and repairing telecommunications cable including fiber optics.

Secondary Courses for High School Credit

Level 1

- Principles of Architecture
- Principles of Construction

Level 2

- Electrical Technology I
- Entrepreneurship I

Level 3

- Electrical Technology II

Level 4

- Practicum in Entrepreneurship
- Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship
- Practicum in Construction Technology
- Practicum in Construction Technology + Extended Practicum in Construction Technology
- Career Preparation for Programs of Study
- Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

Dual Credit Dual credit offerings will vary by local education agency.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Participate in an internship with an electrical company to develop installation skills.
- Join a pre-apprenticeship program that is determining if electrical wiring is up to code.
- Interview an electrician about their training and education.

Expanded Learning Opportunities

- Participate in SkillsUSA
- Participate in trade competitions

Aligned Industry-Based Certifications

- C-200 Certified Industry 4.0 Automation Systems Specialist I—201 Electrical Systems 1
- Electrical Apprenticeship Certificate Level 1
- HBI Pre-Apprenticeship Certificate Training (PACT), Basic Electrical
- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- NCCER Commercial Electrician
- NCCER Construction Technology
- Certification Level I
- NCCER Core
- NCCER Electrical Level I
- NCCER Electrical Level II
- NCCER Electronic System Technology
- TRO Electrical Pre-Apprenticeship Certification
- Industrial Technology Maintenance Electrical Systems

Successful completion of the Electrical program of study will fulfill requirements of the Business and Industry endorsement.

TEA



Manufacturing Career Cluster

The Manufacturing career cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and process engineering. This career cluster includes occupations ranging from welder and machinist to industrial engineering technician and semi-conductor processing technician.

Statewide Program of Study: Welding

The Welding Program of Study focuses on the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. CTE learners will learn how to modify parts to make or repair machine tools or maintain individual machines and how to use hand welding or flame-cutting equipment.

Secondary Courses for High School Credit

Level 1

- Principles of Manufacturing
- Introduction to Welding

Level 2

- Introduction to Film Interpretation of Weldments
- Welding I
- Occupational Safety and Environmental Technology I
- Entrepreneurship I

Level 3

- Welding II
- Welding II + Welding II Lab

Level 4

- Practicum in Manufacturing
- Practicum in Manufacturing + Extended Practicum in Manufacturing
- Practicum in Entrepreneurship
- Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship
- Career Preparation for Programs of Study
- Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

Dual Credit Dual credit offerings will vary by local education agency.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Job shadow a welder
- Intern for a local welding company

Expanded Learning Opportunities

- Tour a welding shop
- Participate in SkillsUSA or TSA
- Participate in a welding project that benefits the community

Aligned Industry-Based Certifications

- API 1104 Welding Pipelines and Related Facilities
- AWS Certified Welder
- AWS D1.1 Structural Steel
- AWS D9.1 Sheet Metal Welding
- AWS SENSE Level I: Entry Welder
- Industrial Technology Maintenance (ITM)
- Maintenance Welding
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Welding Level I
- Welding - Job Ready

Successful completion of the Welding program of study will fulfill requirements of the Business and Industry endorsement.

TEA

Example Postsecondary Opportunities

Apprenticeships

- Welding

Associate Degrees

- Welding Technology
- Building/Construction Site Management
- Operations Management and Supervision

Bachelor's Degrees

- Welding Technology
- Construction Management
- Project Management
- Building/Construction Site Management

Master's, Doctoral, and Professional Degrees

- Engineering
- Engineering/Industrial Management
- Manufacturing Engineering
- Construction Engineering

Example Aligned Occupations

Welders, Cutters, Solderers, and Brazers

Median Wage: \$48,177
Annual Openings: 6,792
10-Year Growth: 23%

First-Line Supervisors of Production and Operating Workers

Median Wage: \$62,584
Annual Openings: 5,926
10-Year Growth: 17%

Industrial Production Managers

Median Wage: \$119,691
Annual Openings: 1,296
10-Year Growth: 19%

Welding



Secondary Courses for High School Credit

Level 1

- Principles of Manufacturing
- Introduction to Welding

Level 2

- Introduction to Film Interpretation of Weldments
- Welding I
- Occupational Safety and Environmental Technology I
- Entrepreneurship I

Level 3

- Welding II
- Welding II + Welding II Lab

Level 4

- Practicum in Manufacturing
- Practicum in Manufacturing + Extended Practicum in Manufacturing
- Practicum in Entrepreneurship
- Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship
- Career Preparation for Programs of Study
- Career Preparation for Programs of Study + Extended Career Preparation

Aligned Industry-Based Certifications

- API 1104 Welding Pipelines and Related Facilities
- AWS Certified Welder
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- AWS SENSE Level I: Entry Welder
- Industrial Technology Maintenance (ITM)
- Maintenance Welding
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Welding Level I
- Welding - Job Ready

As you determine Courses and IBCs, there are many considerations.

Consider this example in Welding:

Level 1	2023-24 Statewide Enrollment	Level 2	2023-24 Statewide Enrollment	Level 3	2023-24 Statewide Enrollment	Level 4	2023-24 Statewide Enrollment	Possible IBCs	Count of Class of 2023 Graduates with the IBC
Principles of Manufacturing	7,563	Introduction to Film Interpretation of Weldments	200	Welding II	4,901	Practicum in Manufacturing	1,941	API 1104 Welding Pipelines and Related Facilities	131
Introduction to Welding	14,666	Welding I	9,635	Welding II + Welding II Lab	181	Practicum in Manufacturing + Extended Practicum in Manufacturing	83	AWS D1.1 Structural Steel	5,077
		Occupational Safety and Environmental Technology I	618			Practicum in Entrepreneurship	2,251	AWS D9.1 Sheet Metal Welding	6,236
		Entrepreneurship I	26,280			Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship	N/A	AWS Certified Welder	328
						Career Preparation for Programs of Study	N/A	AWS SENSE Level 1: Entry Welder	512
						Career Preparation for Programs of Study + Extended Career Preparation	N/A	Industrial Technology Maintenance (ITM) - Maintenance Welding	0
								NCCER Welding Level I	317
								Welding - Job Ready	20
								NCCER Construction Technology Certification Level I	32
								NCCER Core	5,377

There are two introductory course options:

- One that is broader, supporting flexibility
- One that is more specific

There are four Level 2 course options:

- Two that provide flexibility
- Two that are more occupation specific

There are six Level 4 course options including:

- Occupation-specific practicum courses
- More general career preparation (can be included in any program of study)

There are 10 aligned IBCs to select from:

- Not all IBC are equal in the eyes of employers
- Some are stackable
- Reimbursements are timebound; be cognizant of more expensive aligned IBCs a student may take prior to graduation
- Some require multiple steps to earn certification or license

Not All IBCs are Equal: Consult with Industry Partners to Pick Highest Value Options for Students

Narrow welding skill



AWS D1.1 Structural Steel

Student will demonstrate ability to weld carbon and low-alloy metals

(Core skill: Straight Line Weld)

Broad-based welding skills



AWS Certified Welder

Includes performing welding procedures such as fit-up, assembly and positioning; following safety protocols; identifying proper welding materials; and discerning the right welding position.

Not all Programs of Study are Equal: Consider Career Opportunities for Students Who Might Not Also Pursue College

Top 10 IBCs, Earned by Career-Ready Only Graduates



There were 397 job openings in floral design statewide in 2023, including entry level and non-entry level positions.

Average wage was \$31,075.

Note: 28% of these students also have an IBC in another industry. But 4202 (72%) only have floral design.

There were 6,521 job openings in welding statewide in 2023, including entry level and non-entry level positions.

Average wage was \$48,547.

Sources. College, Career and Military Readiness Indicators, 2024. PEIMS. Graduates 2023. 2024 Lightcast©, 2022-2032 Projections Div. 213

Note. Career Readiness includes graduates earning a Level I or II certificate, an industry-recognized certification, enlisted in the military, and received special education services and were workforce ready on individualized education program.

* Sunsetting IBCs.

Not all Programs of Study and not all IBCs are equal:

We must ensure we are supporting more students to reach the highest value career preparation

For the upcoming A-F refresh, we are exploring differential weighting for pathways, based on these three possible criteria:

In-Demand

- Greater than statewide median growth (17%) or greater than 10k jobs
- More than 500 annual openings

High-Wage

- Greater than median annual salary (\$46,909)

High-Skill

- Bachelor's degree or industry core certification

For the upcoming A-F refresh, we are exploring differential weighting for IBCs, based on their usefulness in industry. An example:

Narrow welding skill



AWS D1.1 Structural Steel
Student will demonstrate ability to weld carbon and low-alloy metals

(Core skill: Straight Line Weld)

Broad-based welding skills



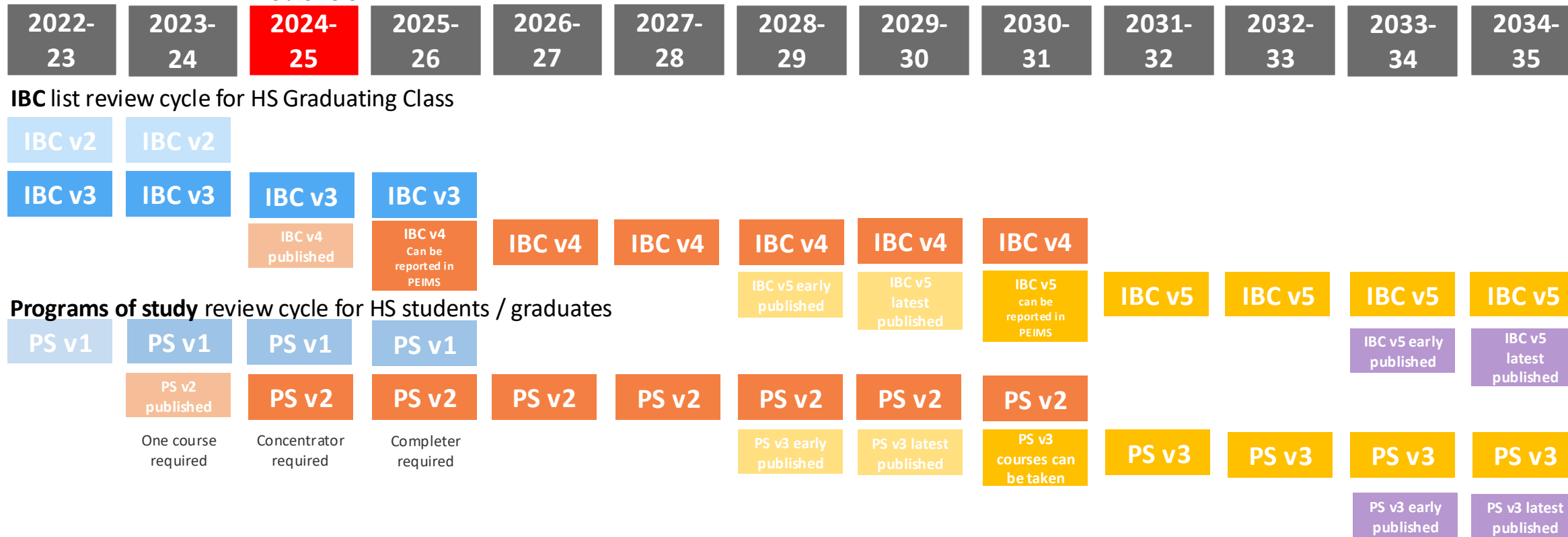
AWS Certified Welder

Includes performing welding procedures such as fit-up, assembly and positioning; following safety protocols; identifying proper welding materials; and discerning the right welding position.

Based on feedback from school systems, we are improving A-F, IBC, and programs of study refresh cycle coordination and advanced notice

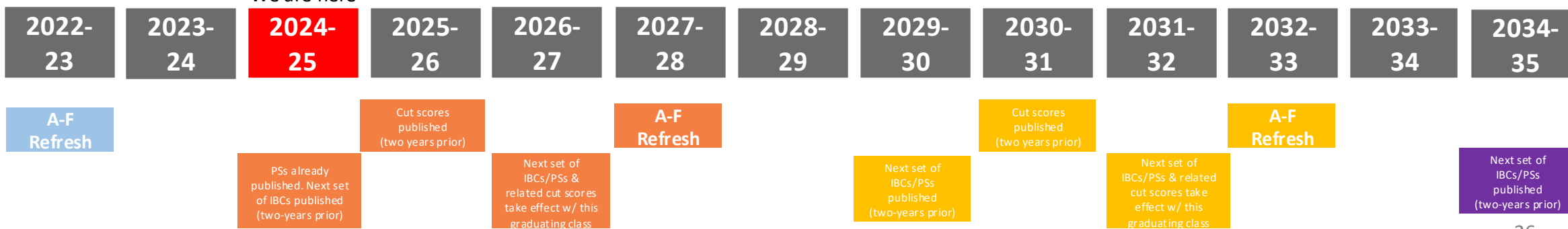
HS Graduating Class

We are here



Accountability Year

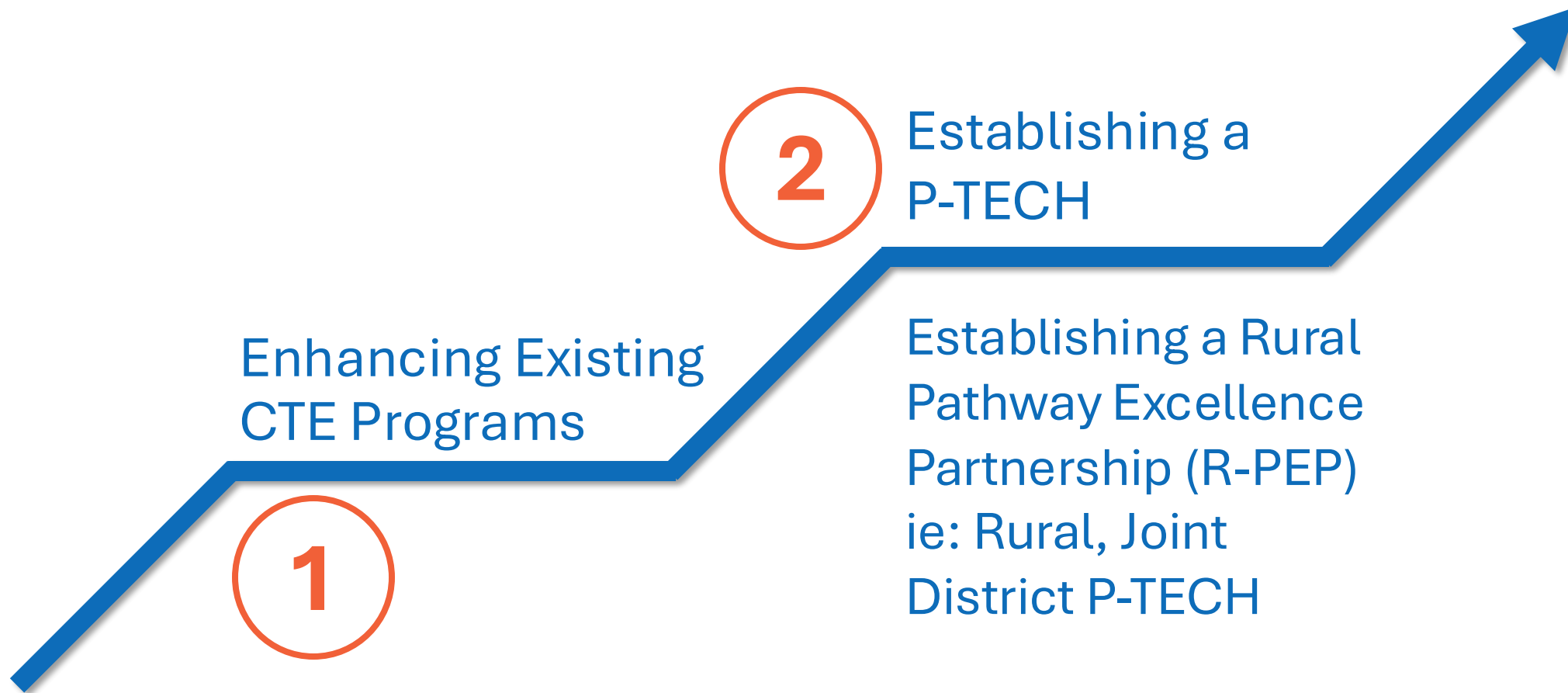
We are here





Enhance CTE Programming at the Local Level

Strong career preparation pathways in K-12 can be established in a few ways:



Enhancing CTE Programming is a Multi-Step Process

- 1) Use labor market information, TEA resources, and district CLNA to decide what Programs of Study and courses to offer
- 2) Decide which aligned IBC(s) to offer or ensure Level I/II certificate opportunities
- 3) Identify the equipment and supplies that will be needed
- 4) Identify funding sources to support equipment and supplies acquisition
- 5) Select classroom instructional materials
- 6) Select and hire qualified instructors (teaching certifications, occupational experience)
- 7) Consider partnerships with Institutions of Higher Education (IHE), especially for Level I/II certificates
- 8) Finalize industry partnerships to implement work-based learning opportunities
- 9) Identify technical assistance needs for additional support
- 10) Identify operational funding sources
- 11) Generate student interest

1) Perform Comprehensive Local Needs Assessment Outcomes to Select Best Fit Programs of Study

The CLNA helps:

- Improve the quality of CTE programs
- Support data-driven decision making
- Align programs with local workforce needs
- Identify and address gaps
- Determine resource allocation
- Identify opportunities for continuous improvement
- Plan for stakeholder engagement

Part 4: Programs of Study/Size, Scope, and Quality (continued)

Evaluate the core elements required for a state-approved program of study as well as meet the state's definition of size, scope and quality.

2. Describe the involvement of the required advisory committee members in the growth and improvement, implementation, and phasing out/closure of CTE programs of study. Provide explanation for required representatives that are not included.

☐ **CTE Teachers**
List remaining career guidance and academic counselors, principals and other school leaders, administrators, and specialized instructional support personnel and paraprofessionals, career and technical education programs at postsecondary educational institutions, including faculty and administrators, the local workforce development boards and a range of local or regional businesses or industries, parents and students, representatives of special populations, representatives of regional or local agencies serving out-of-school youth, homeless children and youth, and at-risk youth, representatives of Indian Tribes and Tribal organizations in the state, where applicable)

TEA Use Only CTE Review: ☐ Accept ☐ Decline Pending Edits

3. Identify any gap areas between opportunities for CTE Learners to participate in work-based learning and complete advanced academic courses compared to non-CTE learners (participant, explorer).

TEA Use Only CTE Review: ☐ Accept ☐ Decline Pending Edits

4. Explain how the LEA will work with employers to develop or expand work-based learning opportunities for CTE students.

<Schedule Name>

Part 5: Recruitment, Retention, and Training of CTE Educators

Assess and develop plans to improve the quality of CTE faculty.

1. Describe professional development opportunities for faculty, staff, counselors, and administrators, specifically providing high quality CTE instruction to CTE students. Include examples of the effectiveness of these experiences at improving CTE student outcomes.

TEA Use Only CTE Review: ☐ Accept ☐ Decline Pending Edits

2. Identify the processes that are in place to recruit, induct, and retain CTE educators. Evaluate these processes for effectiveness with an emphasis on individuals coming from industry.

TEA Use Only CTE Review: ☐ Accept ☐ Decline Pending Edits


3. Evaluate faculty in CTE programs for aligned CTE course credentials with related workplace experience in the program area.

TEA Use Only CTE Review: ☐ Accept ☐ Decline Pending Edits

4. Provide a description of how the LEA will coordinate with organizations and institutions of higher education to support the recruitment, preparation, retention, training, and professional development of teachers, instructional support personnel, school counselors, administrators, including individuals from groups underrepresented in the teaching profession.

TEA Use Only CTE Review: ☐ Accept ☐ Decline Pending Edits

2) Select Aligned IBCs or L1 and L2 Certificates and Pick Courses



Energy Career Cluster

Revised-Oct 2024

The Energy career cluster prepares individuals for careers in the designing, processing, planning, maintaining, generating, transmission, and distribution of traditional and alternative energy. This career cluster includes occupations ranging from petroleum engineers, rotary drill operators, chemical technicians, and power plant operators to solar photovoltaic installers and wind turbine service technicians.

Statewide Program of Study: Renewable Energy

The Renewable Energy program of study focuses on occupational and educational opportunities associated with assembling, inspecting, maintaining, and repairing different equipment required for renewable energy. This program of study includes exploration of solar photovoltaic equipment and wind turbines and the systems and processes used to maintain and manage these types of equipment.

Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none">Foundations of EnergyPrinciples of Applied Engineering
Level 2	<ul style="list-style-type: none">Electrical Technology IAC/DC Electronics
Level 3	<ul style="list-style-type: none">Energy and Natural Resources TechnologySolid State ElectronicsDigital ElectronicsEnvironmental Sustainability (PLTW)Electrical Technology II
Level 4	<ul style="list-style-type: none">Engineering Design and Problem SolvingApplied Mathematics for Technical ProfessionalsCareer and Technical Education Project-Based CapstonePracticum in EnergyPracticum in Science, Technology, Engineering, and MathematicsPracticum in Science, Technology, Engineering, and Mathematics + Extended Practicum in Science, Technology, Engineering, and MathematicsCareer Preparation for Programs of StudyCareer Preparation for Programs of Study + Extended Career PreparationScientific Research and Design

Aligned Advanced Academic Courses

AP or IB	<ul style="list-style-type: none">AP Physics 1IB Physics SLIB Physics HL
Dual Credit	Dual credit offerings will vary by local education agency.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none">Shadow a wind turbine service technician at a wind farm to learn about maintaining wind turbine equipmentIntern at a solar power company and engage in planning for a solar roof installation in your community
Expanded Learning Opportunities	<ul style="list-style-type: none">Tour a wind turbine or solar farmParticipate in SkillsUSA

Aligned Industry-Based Certifications

<ul style="list-style-type: none">C-200 Certified Industry 4.0 Automation Systems Specialist I - 201 Electrical Systems 1Industrial Technology Maintenance (ITM) - Electrical SystemsNCCER CoreNCCER Electronic System Technician Level INCCER Electronic System Technician Level IIElectrical Apprenticeship Certificate Level INCCER Electrical Level I	<ul style="list-style-type: none">NCCER Electrical Level IIHBI Pre-Apprenticeship Certificate Training (PACT), CoreHBI Pre-Apprenticeship Certificate Training (PACT), Basic ElectricalTRIO Electrical Pre-Apprenticeship (EPP) CertificationIndustrial Technology Maintenance (ITM) - Process Control Systems
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Example Postsecondary Opportunities

Associate Degrees

- Electrical, Electronic, and Communications Engineering Technology/Technician
- Instrumentation Technology/Technician
- Energy Systems Technology/Technician
- Solar Energy Technology/Technician

Bachelor's Degrees

- Electrical and Electronics Engineering
- Energy Systems Technology/Technician
- Mechanical/Mechanical Engineering Technology/Technician
- Electromechanical/Electromechanical Engineering Technology/Technician

Master's, Doctoral, and Professional Degrees

- Electrical and Electronics Engineering
- Construction Engineering
- Construction Management, General

Example Aligned Occupations

Electric and Electronic Engineering Technologists and Technicians Median Wage: \$62,968 Annual Openings: 1,156 10-Year Growth: 14%	Wind Turbine Service Technicians Median Wage: \$56,641 Annual Openings: 397 10-Year Growth: 102%
Electrical Engineers Median Wage: \$102,534 Annual Openings: 1,271 10-Year Growth: 21%	

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit:
<https://tea.texas.gov/academics/college-career-and-military/career-and-technical-education/programs-of-study/additional-resources>

Successful completion of the Renewable Energy program of study will fulfill requirements of the STEM endorsement if the math and science requirements are met or the Business and Industry endorsement.

Renewable Energy

- Use framework documents to identify options
- Work with local IHEs to identify aligned Level 1 and Level 2 certificate programs offered
- Collaborate with local industry partners to select specific IBCs to offer



3) Identify Equipment and Supplies Needed

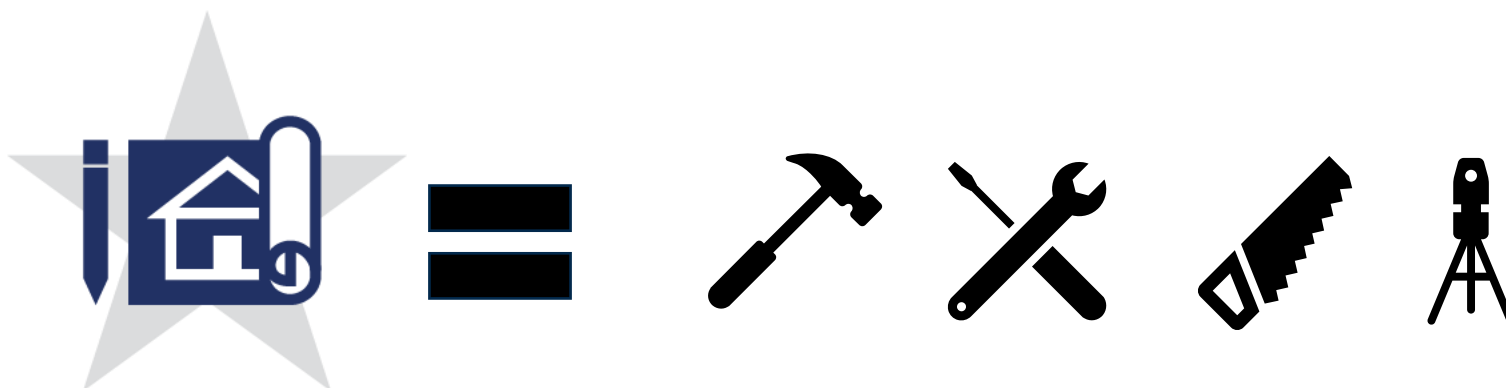


The Career and Technical Education (CTE) Department, within the Division of College, Career, and Military Preparation (CCMP) presents:

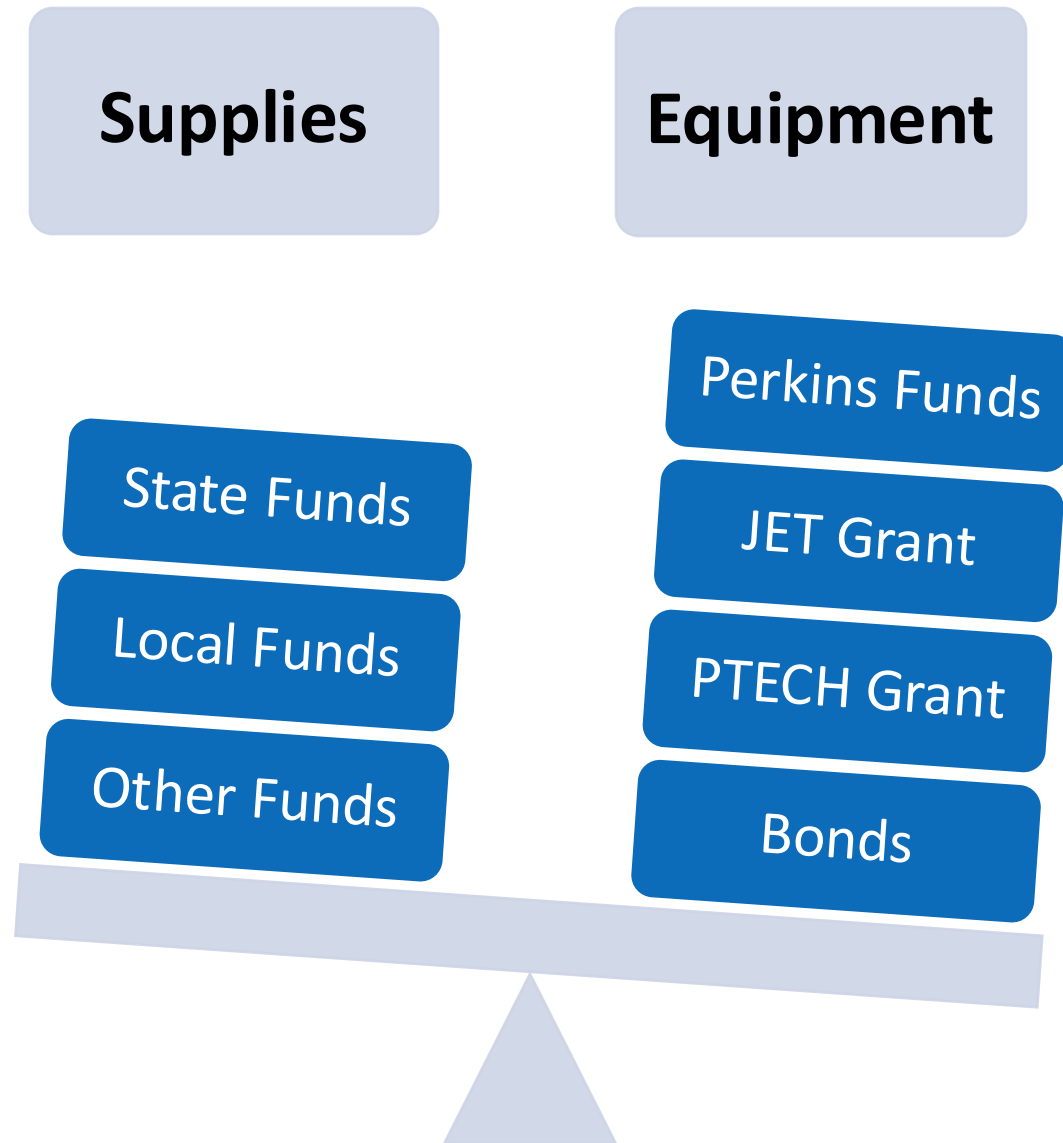
PROGRAM OF STUDY MAPPING APPLICATION



- Identify LEAs that currently offer the program of study
- Identify IHEs that offer aligned programs
- Identify business and industry experts in aligned industry



4) Identify Equipment and Supplies Funding Sources



Facilities

- Bond Funds
- NIFA

Equipment

- Perkins Funds
- JET Grant
- P-TECH Grant
- M&O Funds

Materials and Supplies

- Perkins Funds
- M&O Funds

JET grants support the purchase of equipment connected to new or expanding CTE programs which:

- Prepare students for employment in local high-demand occupations;
 - Lead to a license, certificate, or postsecondary degree; and
 - Are provided in school districts in cooperation with other public junior, technical or state colleges
- All eligible entities (public junior, state, or technical colleges; ISDs, and open-enrollment charter schools entered into a partnership with a public junior, state, or technical college; and the Windham School District) are permitted to submit one application for this RFA period.
 - For the 2024 cycle, applicants were permitted to request between \$40,000-\$350,000
 - The application deadline is typically in the spring (March/April) of each year.

5) Select Classroom Instructional Materials



Instructional Materials
Available

Percentage of TEKS
Covered / Industry
Recognition

Intended Outcome

- What Instructional materials are available?
- Are the materials available on EMAT?
- Are they digital, in print or both?
- What percentage of the TEKS do they cover?
- Are they at the rigor needed for the level of the course?
- Are the materials based on industry standards?
- Are the materials aligned to an industry-based certification?

6) Select and Hire Qualified Instructors

CTE courses require a certified instructor.

- Most CTE courses require an instructor to have a bachelor's degree.
- Instructors in Marketing, Health Science, and Trade and Industrial related courses are also required to have work experience.

School districts can use either of the following two options to hire CTE instructors who are **not certified** including part-time instructors with practical work experience.

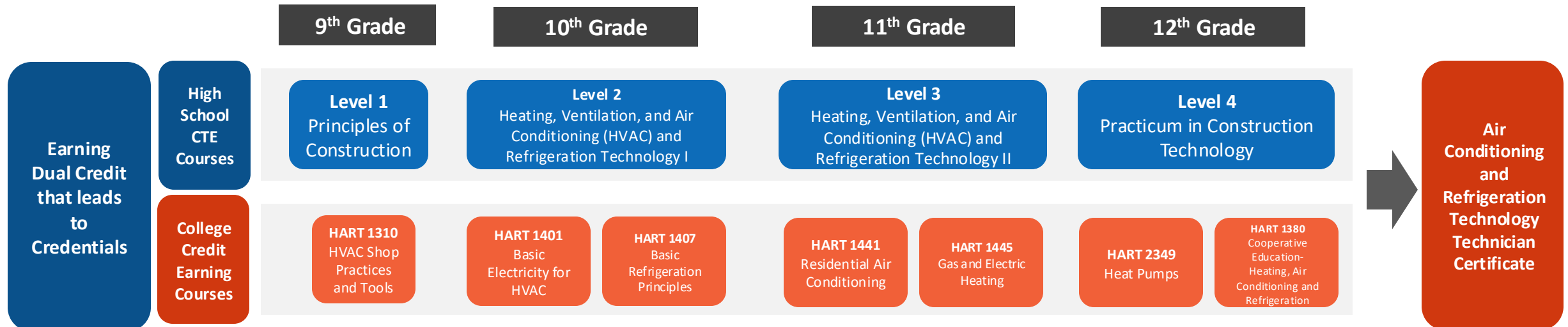
1. District of Innovation (DOI) - A district with an approved DOI plan that includes an exemption from certification requirements may employ CTE professionals in teaching assignments as the district deems appropriate.
2. School District Teaching Permit (STDP) - A district may choose to use School District Teaching Permits (SDTP). Each individual placed on a school district teaching permit must be approved by the local board of trustees and notification must be provided to the commissioner of education.
 - Individuals do not need a bachelor's degree to teach CTE courses unless they satisfy a foundation subject graduation requirement.
 - SDTPs are district-specific and valid for life (unless revoked for cause by the district) and cannot be issued to certified educators.

Courses with an instructor who falls under one of these two alternatives to teacher certification are funded in the same way as certified CTE instructors.

7) Consider IHE Partnerships

- **Maintain an up-to-date Memorandum of Understanding (MOU)**
- **Facilitate regular conversations with your IHE Liaison and District Team about:**
 - *Course Sequencing and Master Scheduling*
 - What are the college credits students attain? How do these courses apply to a degree or a credential? Are there course conflicts? Are there enough students to enroll in college credit courses?

Example of Earning Dual Credit through HVAC and Sheet Metal

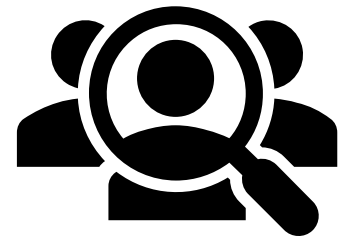


8) Form Business and Industry Partnerships

- Identify local businesses that align with the program of study
- Build relationships with industry leaders, chambers of commerce, and trade associations
- Establish an industry advisory board
- Collaborate on establishing work-based learning opportunities for students



U.S. Chamber of Commerce



9) Identify Technical Assistance Providers

1)



Partner with your Texas Regional Pathways Network (TRPN) for comprehensive supports

2)



Work with Region Education Service Center CTE specialist for localized support

If TRPN supports aren't available in your area, forming a strong CTE advisory committee can be an important support:

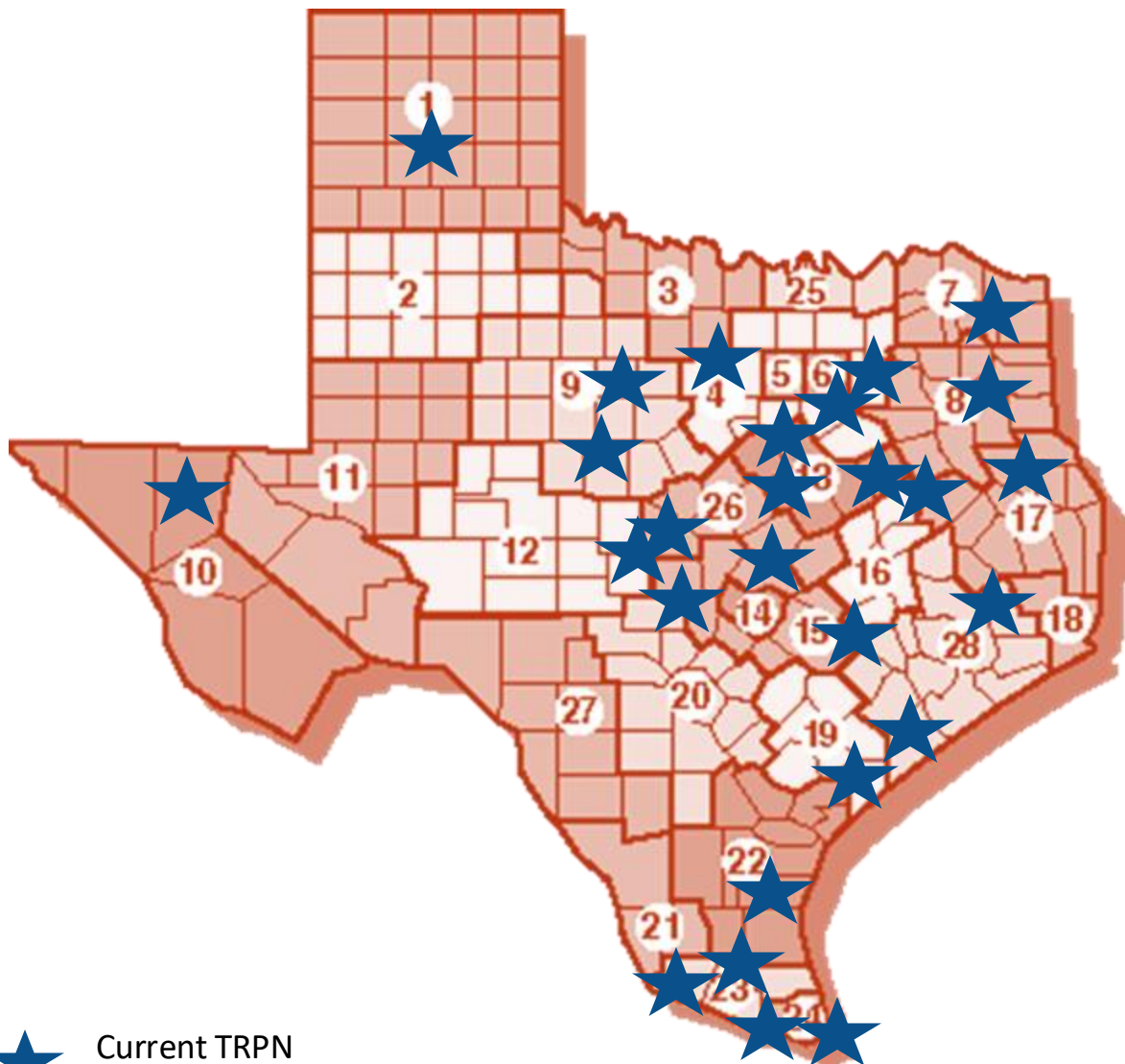
- Collaborate with local chamber of commerce
- Collaborate local work force boards
- Invite representatives of CTE Professional Organizations
- Invite local employers

3)



Work with TEA CTE team for general assistance

Texas Regional Pathways Network (TRPN)



Texas Regional Pathways Network (TRPN) brings together:

1. Local K-12 school systems
2. Local institutions of higher education
3. Local employers

For the purpose of helping identify, launch, operate, and improve career preparation pathways in K-12 schools

<https://tea.texas.gov/academics/college-career-and-military-prep/texas-regional-pathways-network>



Current TRPN
Regional Conveners

10) Identify Operational Funding Sources

State Funding

The Texas Education Agency's State Funding Division is responsible for administering the Foundation School Program (FSP) and wealth equalization provisions of the Texas Education Code. The FSP determines the amount of state and local funding due to school districts under Texas school finance law and provides the state share of this funding to districts. The State Funding Division also produces reports and other data related to school finance. The division is a part of the Department of School Finance.



Reports and Data

- School District State Aid Reports incl/ SOFs
- Summary of Finance (SOF) Information
- PEIMS Financial Standard Reports
- PEIMS Financial Data Downloads
- Financial Information Tool (FIT)
- State Aid and Student Count Data
- Submit a Public Information Request (PIR)

Manuals and Presentations

- School Finance Manuals
- Texas Public School Finance Overview
- Texas Public School Finance Presentation
- School Finance Topics: One-Page Briefs
- Options and Procedures for Local Revenue in Excess of Entitlement
- Transportation Manual
- School Finance PowerPoint Presentations

Foundation School Program

- Transportation Funding
- Optional Flexible School Day Program
- Optional Flexible Year Program
- Additional State Aid for Ad Valorem Tax Credits: Chapter 313
- Tax Increment Reinvestment Zones (TIRZ)
- Career & Technology Education Allotment
- State Compensatory Education
- Staff Salary (repealed)
- High School Allotment (repealed)

Excess Local Revenue

Charter School Finance

District & Charter Planning Tools

- State Funding Calendar
- SY2024-2025 Fast-Growth Allotment
- SY2024-2025 Tax Rate and MCR Template
- SY2024-2025 (Tax Year 2024) Final MCRs
- Tier One & Maximum Compressed Tax Rates for SB 12 (87-2)
- 2021-2022 SOF Run ID 42316 Data
- 2022-2023 SOF Run ID 42258 Data
- 2023-2024 SOF Run ID 44136 NF Data
- SOF Data Dictionary
- 2019 Census Block Group Mapping for 2022 State Funding
- TP4R for SY2021-2022 Operational Minutes
- Adjustments
- Charter Estimate of State Aid Template 2024-2025
- State Funding Worksheets (ESC XIII)
- Schedule of FSP Payments
- FSP Training System

Facilities Funding and Standards

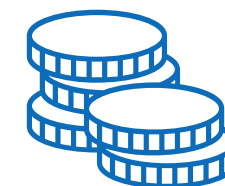
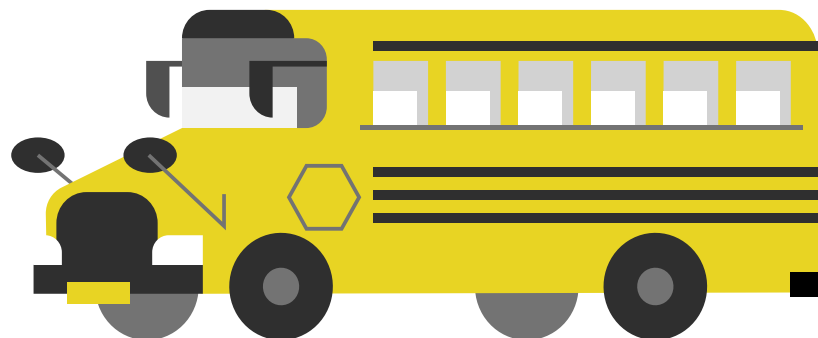
- Bond Guarantee Program (BGP)
- Instructional Facilities Allotment (IFA)
- Existing Detox Allotment (EDA)
- New Instructional Facility Allotment (NIFA)
- Qualified School Construction Bonds (QSCB)
- Qualified Zone Academy Bonds (QZAB)

Additional Resources

- Average Daily Attendance & Weighted ADA
- School District Property Values & Tax Rates
- Attendance (Pupil) Projections
- Per Capita Rates
- Foreign Student Tuition
- School District Consolidations & Annexations
- Texas Commission on Public School Finance
- Texas Commission on Special Education Fund

Potential funding sources include:

- CTE Weighted Funding
- IBC Reimbursements
- CCMR Outcomes Bonus
- CTE Transportation Allotment
- Dual Credit Offset from HB 8
- Perkins



11) Generate Student Interest

Elementary School:

- Introduce career exploration in a variety of career fields early
- Use CTE student ambassadors to participate in campus events

Middle School:

- Administer career interest assessments and personal interest inventories and talk with students about results
- Leverage advising presentations and services to better inform students about options in high school
- Have high school CTE student ambassadors share CTE program information

Middle School to High School Transition:

- Leverage summer CTE grant programs to bridge the gap from middle to high school
- Establish middle school CTSOs and have high school CTSO officers lead the groups

High School:

- Highlight wage earning potential, long-term job stability, and options for innovation and creativity in in-demand career fields students might not otherwise consider
- Leverage social media, digital content, and print media with custom CTE marketing materials that highlight professionals who mirror the demographics of student populations
- Invite industry/community members who work in chosen occupations to share their work experiences with students as guest speakers

Community and Parental Engagement:

- Host parent nights and community events highlighting CTE programs and benefits of certain in-demand jobs such as lifetime wage earning potential and long-term job stability
- Leverage social media and print media (in English and Spanish) on CTE programs and non-traditional career pathways



Establishing a P-TECH program

Pathways in Technology Early College High School (P-TECH)

High School Experiences



Offer accelerated courses and rigorous instruction



Provides 60 hours, tuition free college courses

Degree and Credential Attainment



Partners with regional Institutions of Higher Education and businesses



Provides a post-secondary certificate or industry certification

Work Experiences



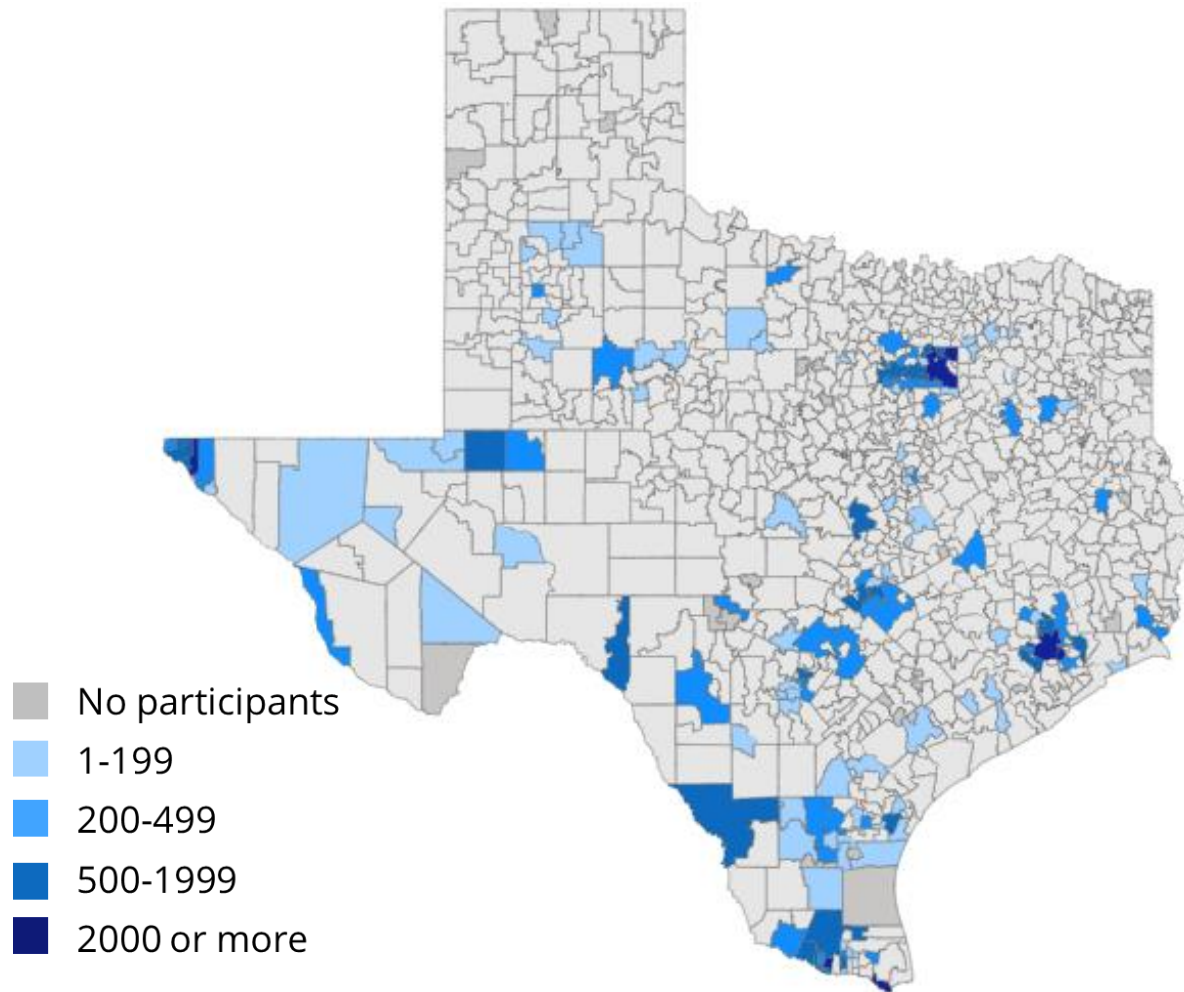
Align to regional workforce needs



Includes work-based learning experiences

Early College High School (ECHS)

5% of grade 9-12 students served at instructional campuses participated in a P-TECH/ECHS in SY 2022-23



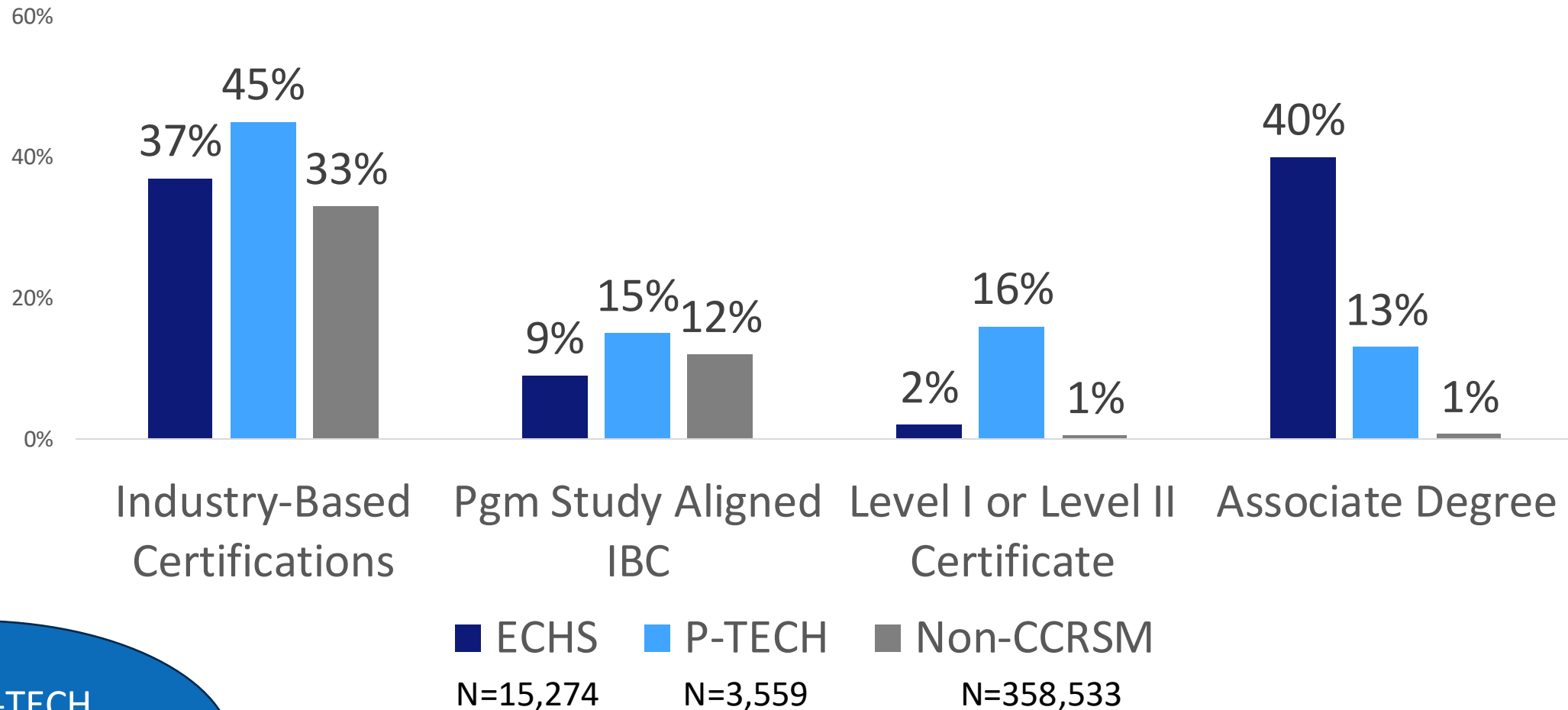
18%

Of 1700+ Texas high schools have a P-TECH or ECHS model

22%

Of ~375,000 high schoolers within those campuses participated in P-TECH or ECHS

Class of '23 College & Career Readiness School Models (CCRSM) Graduates Earned Credentials at Higher Rates



94% of P-TECH
graduates
demonstrate CCMR

Factors to Consider when Establishing a P-TECH

P-TECHs are required to provide students the opportunity to earn a high school diploma in addition to industry-based certifications, Level 1 or 2 certificates, and/or an associate degree while engaging in work-based learning in every grade.

Factors to Consider Prior to Applying

- **Districts should have school board approval prior to applying**
- **Partnership building with Institutions of Higher Education (IHE)**
 - IHE partnership approval
 - Student attainment of dual credit, Level I or II certificates and/or associate degrees requires:
 - Memorandums of Understanding (MOUs)
 - High School to College Course Alignment and Master Scheduling
 - Student Advising
- **Partnership building and approval with Business/Industry Partner**

Systems to Establish During the Planning Year

- **Recruitment policies** that ensure PTECH serves target population, is open-enrollment, and no cost to students
- **IHE partnership expectations codified in an MOU** that address:
 - **Academic Infrastructure** that leads to Industry-Based Certifications or postsecondary credentials aligned to regional needs
 - Staffing, transportation, and funding
 - Student **academic interventions**, such as advising, and **wrap-around supports**
- **Work-based learning plan** with Business/Industry Partner for students to engage in at every grade level

CCRSM Campus and District benefits include technical assistance customized to the campus's need at no cost to the district.

CCRSM campuses are required to work with the TEA Technical Assistance provider and participate in services such as

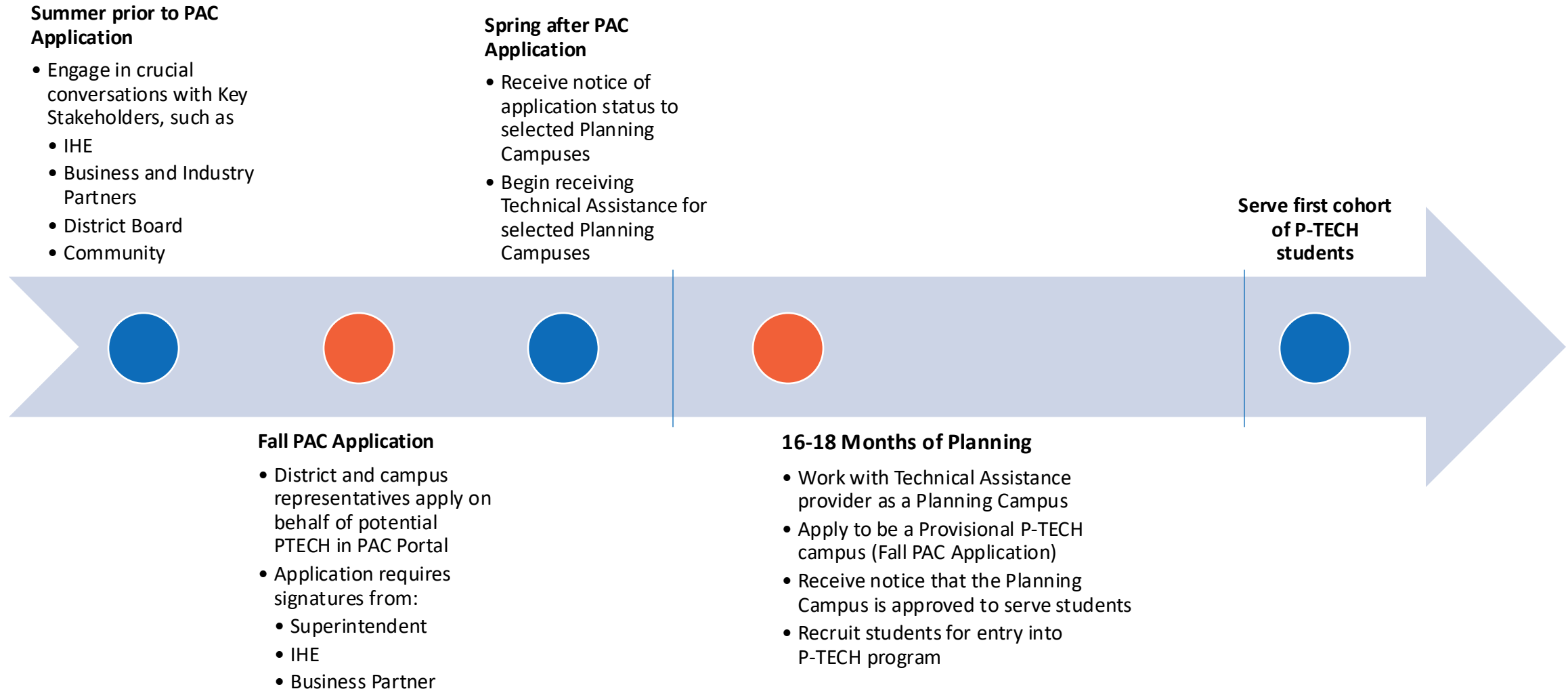
- Coaching and Consulting
- Peer to Peer Collaboration
- Professional Development convenings and meetings
- Site Visits
- Feedback and Support

CCRSM Campus and District Professional Development

- **New Campus Onboarding:** Summer
- **Regional Convenings:** Fall & Spring
 - CCRSM Updates, Best Practices, Problems of Practice
- **Collectives:** Fall & Spring
 - Small-scale, Rural, Regional Problem Solving
- **IHE Partners Connect:** Spring
 - Statewide Conference with IHE CCRSM Partners
- **CCRSM Leadership Summit:** Summer
 - Statewide Conference of CCRSM Practitioners

Timeline to Become a P-TECH Campus

To establish a P-TECH, a district must apply through TEA's Program Application Cycle (PAC) in the fall. The timeline from PAC application to serving the first cohort of P-TECH students is two years.



Life Cycle of P-TECH Expenses

Planning Year

Not serving students

Facilities Purchase, Construction and Retrofits: \$500,000+
Capital Outlay is incredibly limited in what costs can cover purchasing, construction or building retrofits.

Specialized Equipment and Supplies: \$100,000

Staffing Costs and Planning: 10+ FTEs
(i.e. Building leader, Counselor, teacher stipend)

Curriculum Mapping: <\$5,000

Educator Professional Development: <\$8,000

Community and Student Outreach; <\$5,000

Scaling Grade Levels Year Over Year

Serving students and adding new grade levels every year

Textbooks

Year 1 - \$25,000

Year 2 - \$50,000

Year 3 - \$75,000

Year 4 - \$100,000

Extra Duty Pay

Year 1 - \$10,000

Year 2 - \$20,000

Year 3 - \$30,000

Year 4 - \$40,000

Transportation

Year 1 - \$5,000

Year 2 - \$10,000

Year 3 - \$15,000

Year 4 - \$20,000

Tuition and Fees (Example)

Year 1 - \$5,000

Year 2 - \$10,000

Year 3 - \$15,000

Year 4 - \$20,000

Technology and Computers

Year 1 - \$10,000

Year 2 - \$10,000

Year 3 - \$10,000

Year 4 - \$10,000

College Preparation Assessment

Year 1 - \$2,000

Year 2 - \$4,000

Year 3 - \$8,000

Year 4 - \$8,000

Designated

Serving all grade levels of students

Textbooks - \$100,000 yearly
School districts provide textbooks for each registered student, equipment, and supplemental materials at varying levels of renewal (i.e. yearly, every two years, every three years, etc.) dependent on IHE department chair and faculty review with reasonable justification.

Transportation - \$20,000 yearly
School districts provide transportation to dual credit students in accordance with State law and School District rules and procedures..

General Campus Costs - \$150,000

Additional Need

Dual Credit Faculty Credentialing
Goal to increase the number of high school educators credentialed to teach dual credit courses. Preparation for increase in dual credit offered to high school students in both academic and career technical dual credit in accordance with faculty requirements (i.e. Master's Degree in subject area or Master's Degree with 18 graduate hours in the subject area).

P-TECH expenditures

	CCRSM Areas of Need	Cost to District	Competitive Grants (2 years)		TEA Allotments		TEA Incentive
			TEA CCRSM Grants (\$100,000)	JET Grants (TWC)	Foundation School Program	IMA – Instructional Materials	CCMR Outcomes Bonus
Planning Year (Year 0)	Facilities: Purchasing, Construction and Building Retrofits	\$500,000 or more					
	Specialized Equipment	Up to \$100,000	•	•	•		
	Consumable Supplies and Materials	Up to \$100,000	•	•	•		
	Staffing Costs and Planning	10 FTEs or more	•		•		
	Curriculum Mapping	\$2,000 - \$5,000	•		•		
	Educator Professional Development	\$5,000 - \$8,000	•		•		
	Community and Student Outreach	\$2,000 - \$5,000	•		•		
Implementation (Years 1+)	Dual Credit Faculty Credentialing	Up to \$25,000 per teacher	•				
	College Textbooks	Up to \$100,000 a year	•		•	•	•
	Extra Duty Pay	\$40,000 a year	•		•		•
	Transportation	\$20,000 a year	•		•		•
	Tuition and Fees	\$20,000 a year or more	•		•		•
	Technology and Computers	\$10,000 a year	•		•		•
	Consumable Supplies and Materials	Up to \$10,000 a year	•		•		•
	Staffing Costs	10 FTEs or more a year	•		•		•
	Educator Professional Development	\$5,000 - \$8,000 a year	•		•		•
	College Preparation Assessments	\$8,000 a year	•		•		•

Available Funding Sources through TEA's LASO 3.0

LASO is a consolidated grant application to support key learning acceleration strategies, including P-TECH.

Pathways in Technology Early College High Schools (PTECH)

The PTECH program provides historically underserved students the opportunity to earn industry-based certifications and postsecondary credentials, while engaging in work-based learning opportunities.

Best Fit for LEAs looking for opportunities to:

- Implement P-TECH and have not received any prior PTECH grants.
- Deepen partnerships with local business and an IHE to develop rigorous programs of study that prepare students for successful entry into high-demand, high-wage careers.

Estimated Total Funding Available for P-TECH	\$1 Million
Estimated Range of Award	Up to \$100,000 per campus
Estimated Award Numbers	10 LEAs
Estimated Timeline	Planning SY 25-26 Implementation SY 26-27



R-PEP: Rural Pathway Excellence Partnerships Program (Rural P-TECH)

Rural Pathway Excellence Partnerships (R-PEP) Program

Background: The Rural Pathway Excellence Partnerships program (HB 2209) was signed into law on June 2, 2023, with the goal of **increasing access to high-quality post-secondary pathways for rural students** through the replication of the successful Rural School Innovation Zone (RSIZ) model in South Texas.

R-PEP statute created two supports:

Additional Allotment

R-PEP Designated Districts earn **additional ADA Allotment** for each student in a postsecondary pathway **& an Outcomes Bonus** for each student that earns a postsecondary credential of value up to 5 years after graduation.

Startup Grant Program

TEA supports new R-PEP Collaboratives through a **grant** that provides district funding and technical assistance for **planning and implementation**.

R-PEP formula funding allotment is very significant:

- A typical high school student participating in one of these pathways would generate extra funding for a district on average **\$2,928 per ADA** if low income, and **\$2,546 per ADA** if not.
- CCMR Outcomes bonuses are also increased.

Even when accounting for the fact that R-PEP funds only apply to participating high school students, the funding infusion for a typical small district represents an overall increase of **9% in total ISD M&O**

Elements of an R-PEP

Collaborative of districts
with fewer than 1,600 students and a willingness to think creatively

College and Career Pathways
open to all eligible students

Coordinating Entity
with capacity to operate pathways

Performance Agreement
outlining CE and LEA roles, responsibilities, and metrics for success

The key change that occurs because of R-PEP partnerships:

- Unique college/career pathways are stood up in each neighboring small district
- Students at any participating district can attend any college/career pathways offered even if it is at a high school in a neighboring district

R-PEP Example: Rural Schools Innovation Zone

1. Districts with fewer than 1,600 students opt in



2. Select a partner and Boards approve a performance agreement with a 3rd party intermediary

3. Intermediary operates pathway programs (CTE, PTECH, or ECHS) aligned with high-wage, high-demand career open to all students in the partnership



Grow Your Own Educator Academy
at Premont High School



Citizen's Battalion Naval JROTC Academy
at Falfurrias High School



Ignite Technical Institute Career and Technical Academy
at Falfurrias High School



Next Generation Medical Academy
at Freer High School



STEM Discovery Zone STEM Academy
at Premont Collegiate High School

4. Districts pool resources and invest in the continued excellence of pathways

R-PEP Example: Freer ISD Student Outcomes

Background:

- Freer ISD joined the Rural Schools Innovation Zone (RSIZ) in 2019.
- Freer ISD hosts the Next Generation Medical Academy.

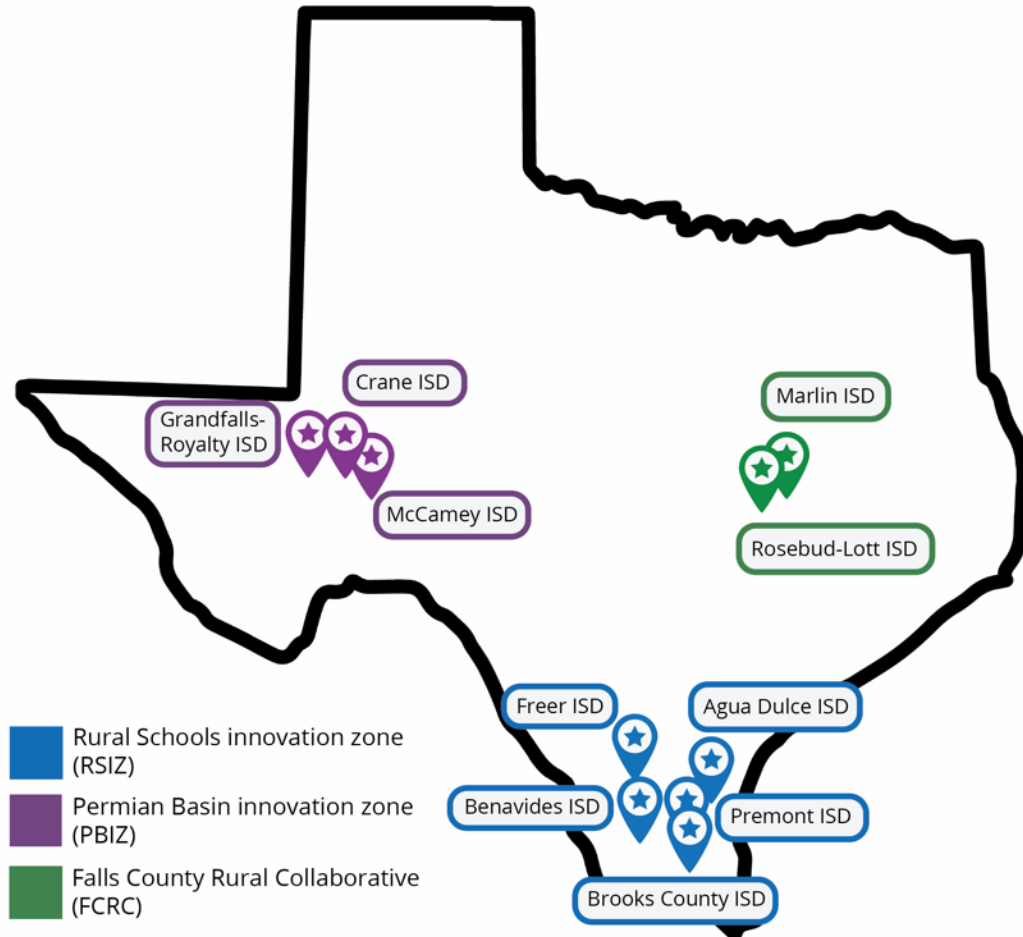
Impact:

- In 2023-2024, nearly 80 Freer ISD students attend an R-PEP pathway in one of the partner districts
- Dramatically increased post-secondary readiness outcomes

	2018	2023	
College Ready Graduates	19.3%	83.1%	+63.8pts
College, Career, Military Readiness	38.6%	91.5%	+52.9pts
Industry-Based Credentials	1.8%	49.3%	+47.5pts
Career/ Military Readiness	24.6%	69.6%	+45pts
Graduation Rate	86.9%	95.5%	+8.6pts
Dual Credit Participation	n/a	60%	+60pts
Dropout Rate	2.2%	0.9%	-1.3pts

Data Source: TAPR

Current R-PEP Landscape: 3 Partnerships, 10 LEAs, 9 IHEs, 18 Pathways, 450+ impacted students (50%+ eco-dis)



RSIZ

- Diagnostic & Therapeutic Services
- Nursing Science
- Teaching & Training
- Early Learning
- Welding
- Electrical
- HVAC & Sheet Metal
- Drone (Unmanned Vehicle)
- Cybersecurity
- Early College High School

Stage of Development (Fall 2024)

- RSIZ: 6th Year of Implementation
- PBIZ: 2nd Year of Implementation
- FCRC: 1st Year of Implementation

PBIZ

- Teaching & Training
- Diagnostic & Therapeutic Services
- Welding
- Oil & Gas Exploration
- Renewable Energy

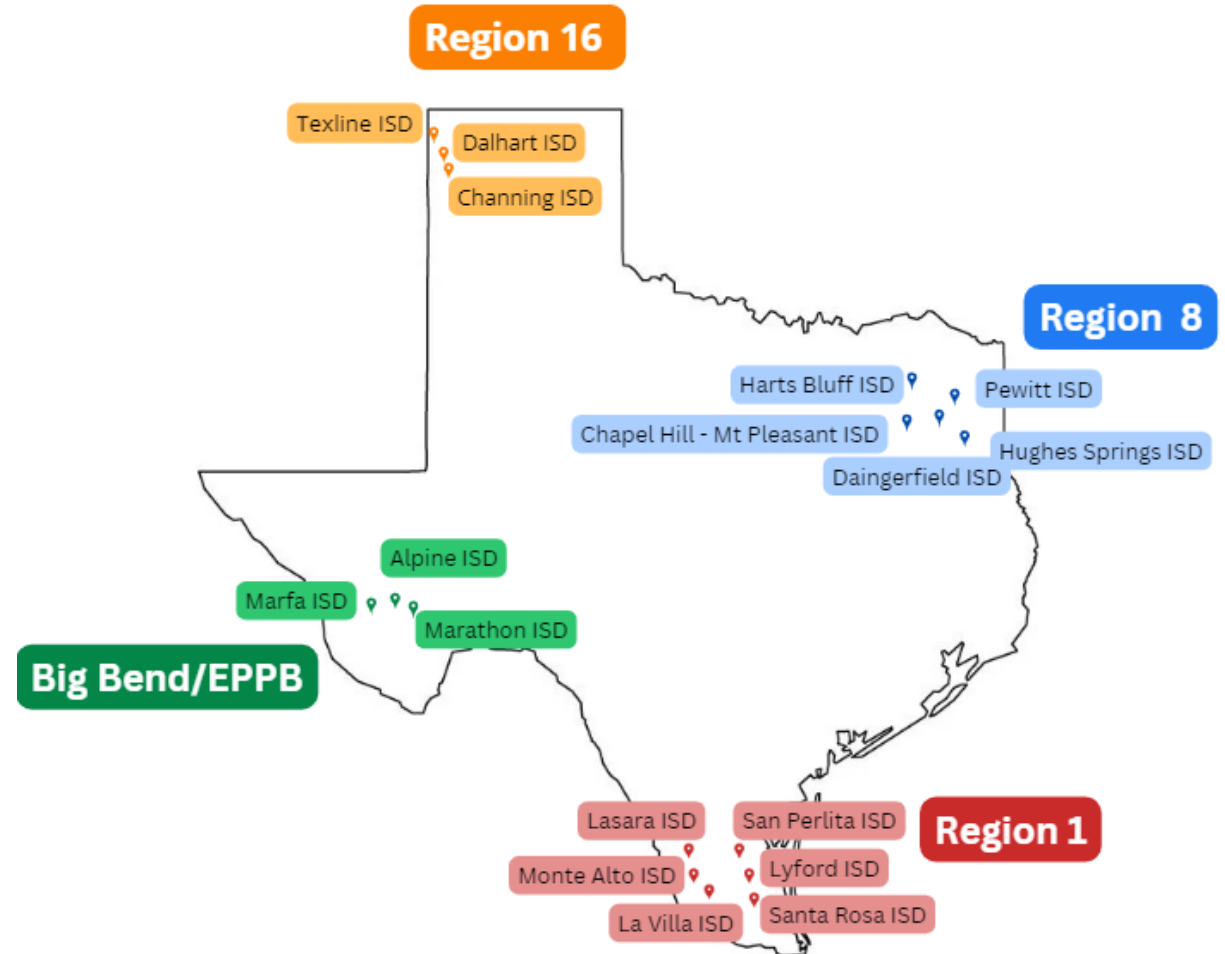
FCRC

- Robotics & Automation Technology
- Exercise Science, Wellness, & Restoration
- Marketing & Sales

R-PEP Pipeline Development for SY24-25

Four new Partnerships will engage in planning work starting Fall 2024 funded through independent philanthropy:

- 17 districts
- 3 ESCs and EPPB (current coordinating entity of PBIZ)
- ~2,000 high school students



How to become an R-PEP

Fall 2024:

- Attend optional trainings for Coordinating Entities and LEAs provided by TEA

Spring 2025:

- Proposed Coordinating Entity submits an R-PEP Application to TEA

Fall 2025:

- Designated R-PEP officially launches and additional allotment goes into effect

Winter/Spring 2025:

- Proposed Coordinating Entity submits a Letter of Intent to apply (required)

Spring 2025:

- TEA notifies applicants of designation within 60 days

Summer 2026:

- Designated R-PEP submits PEIMS data collection to calculate R-PEP allotment

Contact Christopher.DeWitt@TEA.Texas.gov with any questions.

Thank You