



Programs of Study Refresh

- Programs of study are coherent sequences of CTE courses within a career cluster that increase in rigor from Level 1 to Level 4; when completed, programs of study improve the level of preparation a student has to work in targeted occupations.
- Programs of study were first established in Texas in 2019, as a result of the federal reauthorization of the Perkins Strengthening Career and Technical Education for the 21st Century Act; implementation was first required in the 2020-21 school year.
- In 2019, Texas identified 14 career clusters and, within them, a total of 53 statewide programs of study.
- Texas adopted a plan under Perkins to update its programs of study once every four years.
- That update has taken place, and updated Programs of Study list is available for school districts to use starting with the 2024-25 school year.

Programs of Study Implementation Support Timelines

October 2023:

- ✓ Announced that updates to the programs of study were complete
- ✓ Published a change crosswalk to support planning

December 2023:

- ✓ Published updated program of study alignment reports in the CTER application in TEAL

January – March 2024:

- Conduct regional tour to field questions and inform resource development
- Publish updated framework documents

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Spring – Summer 2024:

- Publish additional implementation resources and tools

Summary of Programs of Study Refresh Changes

- ✓ Established a common Level 1 course across all programs of study in each career clusters
- ✓ Combined a few similar programs of study in Health Science career cluster
- ✓ Added new program of study to Business, Marketing and Finance
 - Real Estate
- ✓ Transitioned 2 regional programs of study to statewide
 - Industrial Maintenance
 - Pilots and Aviation
- ✓ Renamed STEM career cluster to Engineering
- ✓ Moved certain programs of study from the former STEM career cluster to more appropriate career cluster
 - Biomedical Science -> Health Science
 - Cybersecurity -> Information Technology
 - Programming and Software Development -> Information Technology
 - Renewable Energy -> Energy
- ✓ Adjusted & added new programs of study to Engineering career cluster
 - Engineering Foundations (Renamed)
 - Mechanical and Aerospace Engineering (New)
 - Electrical Engineering (New)
 - Civil Engineering (New)

*Regional program of study

Changes to programs of study are **additive** and should not negatively impact students who have already started a program of study.

- No programs or courses were eliminated through the refresh although some programs were combined or renamed.
- Changes will **not** affect the completer status of students who started a program of study prior to the refresh.
- All new programs of study will have at least one approved course at every level beginning in 2024-25.
- There are no changes to current teacher assignment rules because of the refresh.

Refreshed Program of Study Frameworks are now published on the TEA website

2024-2025 CTE Programs of Study

NEW Refreshed programs of study will be implemented beginning with the 2024-2025 school year. Changes to programs of study are additive and should not negatively impact students who have already started a program of study.

Framework documents for each refreshed statewide and regional program of study are posted below. They include comprehensive information about approved courses and aligned industry-based certifications. In addition, they provide examples of work-based learning opportunities, postsecondary training opportunities, and occupations aligned to the program of study. Frameworks related to the 2023-2024 school year can be found [here](#).

<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/2024-2025-cte-programs-of-study>



Agriculture, Food, and Natural Resources

- Agribusiness, Leadership, and Communications
- Animal Science
- Agricultural Technology and Mechanical Systems
- Environmental and Natural Resources
- Food Science and Technology
- Plant Science



Architecture and Construction

- Architectural Drafting and Design
- Carpentry
- Construction Management and Inspection
- Electrical
- HVAC and Sheet Metal
- Masonry
- Plumbing and Pipefitting



Arts, Audio/Video Technology, and Communications

- Graphic Design and Interactive Media
- Digital Communications
- Printing and Imaging (Regional Program of Study)



Business, Marketing, and Finance

- Accounting and Financial Services
- Business Management
- Entrepreneurship
- Marketing and Sales
- Real Estate **NEW**
- Retail Management (Regional Program of Study)

Program of Study framework documents published on the TEA website include comprehensive lists of options

Primary Framework Information

- Career Cluster Description
- Program of Study Description
- Secondary Courses by Level
- Work-Based Learning and Expanded Learning Opportunities
- Aligned Industry-Based Certifications and licenses attainable by high school students
- Postsecondary Opportunities
- Aligned Occupations
- Detailed Course Information

Education and Training Career Cluster

The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training Career Cluster.

Statewide Program of Study: Early Learning

The Early Learning Program of Study focuses on early childhood education, which consists of instructing and supporting preschool and early elementary school students in activities that promote social, physical, and intellectual growth as well as in basic elements of science, art, music, and literature. This Program of Study introduces CTE learners to tasks necessary for planning, directing, and coordinating activities for young children.

Secondary Courses for High School Credit

Level 1	<ul style="list-style-type: none"> Principles of Education and Training Principles of Human Services
Level 2	<ul style="list-style-type: none"> Child Development Child Development Associate (CDA) Foundations Speech and Language Development
Level 3	<ul style="list-style-type: none"> Child Guidance Speech and Communication Disorders
Level 4	<ul style="list-style-type: none"> Practicum in Early Learning Practicum in Early Learning/Extended Practicum in Early Learning Career Preparation for Programs of Study Career Preparation for Programs of Study/Extended Career Preparation for Programs of Study Career and Technical Education Project-Based Capstone

Aligned Advanced Academic Courses

Dual Credit	Dual credit offerings will vary by Local Educational Agency.
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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"> Teach a community education class Volunteer as a teaching assistant
Expanded Learning Opportunities	<ul style="list-style-type: none"> Participate in Family, Career and Community Leaders of America (FCCCLA) Participate in Texas Association of Future Educators (TAFE)

Aligned Industry-Based Certifications

<ul style="list-style-type: none"> Child Development Associate (CDA) Early Childhood Education and Care – Advanced Early Childhood Education and Care – Basic 	<ul style="list-style-type: none"> Educational Aide I Pre-Professional Certification in Early Childhood Education
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Example Postsecondary Opportunities

Apprenticeships

- Teacher Apprentice

Associate Degrees

- Teacher Education, Multiple Levels
- Child Care Provider/Assistant

Bachelor's Degrees

- Elementary Education and Teaching
- Early Childhood and Family Studies

Master's, Doctoral, and Professional Degrees

- Educational Leadership and Administration, General
- Education, General

Additional Stackable IBCs/Licensures

- Generalist, Grades EC-4

Example Aligned Occupations

Childcare Workers

Median Wage: \$22,002
Annual Openings: 21,177
10-Year Growth: 5%

Preschool Teachers, Except Special Education

Median Wage: \$28,920
Annual Openings: 5,995
10-Year Growth: 23%

Elementary School Teachers, Except Special Education

Median Wage: \$60,851
Annual Openings: 12,940
10-Year Growth: 15%

Data Source: Lightcast™, (2022), Occupation Table. Retrieved 9/27/2022.

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

Education and Training Career Cluster

Statewide Program of Study: Early Learning

Course Information

	Course	Prerequisites Corequisites	Career Clusters
Level 1	Principles of Education and Training* 13014200 (1 credit)	Prerequisites: None Corequisites: None	
	Principles of Human Services 13024200 (1 credit)	Prerequisites: None Corequisites: None	
Level 2	Child Development 13024700 (1 credit)	Prerequisites: None Corequisites: None	
	Child Development Associate (CDA) Foundations N1300500 (1 credit)	Prerequisites: None Corequisites: None	
	Speech and Language Development N1302098 (1 credit)	Prerequisites: None Corequisites: None	
Level 3	Child Guidance 13024800 (2 credits)	Prerequisites: None Corequisites: None	
	Speech and Communication Disorders N1302099 (1 credit)	Prerequisites: None Corequisites: None	

* Indicates course is included in more than one Program of Study.

For additional information on the Education and Training Career Cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>

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Resources to Support Programs of Study Implementation

2024-25 Programs of Study Change Crosswalk

In October 2023, TEA released a change crosswalk to serve districts in program planning for the refreshed programs of study.

Use the crosswalk to:

- Find courses for new programs of study
- Find name changes for programs of study
- Find new courses within a program of study
- Identify TBD courses in programs of study
- Find information on new career clusters
- Find course IDs and credit information

2020-2021 through 2023-2024 Program of Study Title	2024-2025 Program of Study Title	2024-2025 Program of Study Status
Accounting and Financial Services	Accounting and Financial Services	No Name Change
Advanced Manufacturing and Machinery Mechanics	Robotics and Automation Technology	Name Change in 2024-2025
Agribusiness	Agriculture Business, Leadership, and Communications	Name Change in 2024-2025
Animal Science	Animal Science	No Name Change
Applied Agricultural Engineering	Agricultural Technology and Mechanical Systems	Name Change in 2024-2025
Architectural Design	Architectural Drafting and Design	Name Change in 2024-2025
Automotive	Automotive and Collision Repair	Name Change in 2024-2025
Aviation Maintenance	Aviation Maintenance	No Name Change
Bio-Medical Science	Bio-Medical Science	No Name Change
Business Management	Business Management	No Name Change
Carpentry	Carpentry	No Name Change
Cosmetology and Personal Care Services	Cosmetology and Personal Care Services	No Name Change
Culinary Arts	Culinary Arts	No Name Change
Cybersecurity	Cybersecurity	No Name Change
Diesel and Heavy Equipment	Diesel and Heavy Equipment Maintenance and Commercial Drivers	Name Change in 2024-2025
Digital Communications	Digital Communications	No Name Change
Distribution and Logistics	Distribution, Logistics, and Warehousing	Name Change in 2024-2025
Early Learning	Early Learning	No Name Change
Electrical	Electrical	No Name Change
Emergency Services	Fire Science	Name Change in 2024-2025
Engineering	Engineering Foundations	Name Change in 2024-2025

[2024-2025 Programs of Study Change Crosswalk](#)

Labor Market Information (LMI) Reports

In December 2023, TEA published updated LMI reports for each Workforce Development Area in the state.

Panhandle Workforce Development Area (1) Labor Market Information, 2021 - 2031

State Career Cluster	Program of Study	SO	Occupational Title	Growth Rate	Median Annual Wage	Growth Wage Category	Annual Average Employment 2021	Annual Average Employment 2031	Total Annual Opening	Competitive Education Requirement
Arts, Audio Visual Technology and Communication	Digital Communications	27-3011	Broadcast Announcers and Radio Disc Jockeys	115%	\$74,910	ABOVE/ABOVE	45	96	14	Bachelor's degree
Arts, Audio Visual Technology and Communication	Graphic Design and Interactive Media	27-1014	Special Effects Artists and Animators	92%	\$77,686	ABOVE/ABOVE	55	106	16	Bachelor's degree
Arts, Audio Visual Technology and Communication	Graphic Design and Interactive Media	27-1022	Fashion Designers	65%	\$58,983	ABOVE/ABOVE	13	22	3	Bachelor's degree
Arts, Audio Visual Technology and Communication	Graphic Design and Interactive Media	15-1252	Software Developers	45%	\$102,062	ABOVE/ABOVE	413	600	53	Associate degree
Arts, Audio Visual Technology and Communication	Graphic Design and Interactive Media	27-1024	Graphic Designers	39%	\$41,459	ABOVE/ABOVE	161	225	25	Bachelor's degree

[LWDA Labor Market Information and Resources](#)

Use these reports to:

- Determine if programs of study you currently offer are high-wage, high-growth and in-demand in your region.
- Assess whether you should offer different and/or additional programs of study to meet regional labor market needs.

More Resources Coming Soon

- Apprenticeship Opportunities (where applicable)
- Related Military Occupations
- Texas Postsecondary Opportunities
- Editable Framework Templates (to help advertise options to families in your schools)
- Updated IBC -> Programs of Study Crosswalk
- Program-specific Implementation Support Docs

Shifts in Programs of Study and IBC Timelines



Current requirements for meeting CCMR have multiple variables by graduating class

IBCs & Programs of Study work together to ensure strong career preparation and reinforces an alignment of programs and credentials to labor market needs.

Class of 2024 (2025 accountability) will receive CCMR credit for earning (not failed, not passed) an IBC and at least one level 2 course in the career and technical education program of study aligned with that IBC.

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

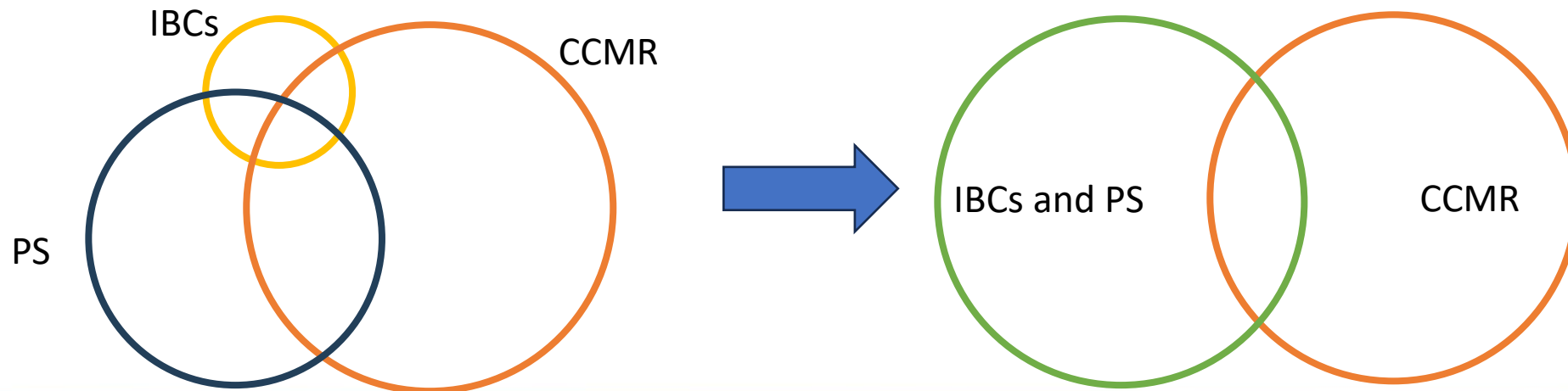
We are looking to improve cyclical components of CCMR.

Three important cycles interact in CCMR:

1. The industry-based certification list is currently updated every two years
2. The programs of study are currently updated every four years
3. The accountability system is refreshed every five years

For future cycles we intend to adjust these timelines to enable a more coherent planning and implementation cycle for LEAs

- Move to 5-year cycle for both IBCs and Programs of Study
- Offset with CCMR's 5-year cycle.



Previously, the IBC list was scheduled to change every two years and new programs of study lists would update every four years.

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Previous IBC list review cycle



Previous programs of study review cycle



Under the updated timeline, updates would be aligned every year beginning in 2029-2030.

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There will not be a new IBC list for the 2024-25 school year. IBC list version 3 will remain in place for an additional year.

Updated IBC list review cycle



Version 4 of the IBC list will be in place for four years

Version 5 of the IBC list and programs of study v3 will be in place for five years.

Updated programs of study review cycle



The refreshed programs of study (version 2) will be in place for five years instead of four



Updated IBC and programs of study review cycle aligns with accountability

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2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
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IBC list review cycle

IBC v3	IBC v3	IBC v3										
		IBC v4 published	IBC v4	IBC v4	IBC v4	IBC v4						

Programs of study review cycle

PS v1	PS v1											
	PS v2 published	PS v2	PS v2	PS v2	PS v2	PS v2						

Very little change from PS v1 to v2. Mostly additions

Tentative IBC and Programs of Study for Accountability

2023 Rating Class of 2022	2024 Rating Class of 2023	2025 Rating Class of 2024	2026 Rating Class of 2025	2027 Rating Class of 2026	2028 Rating Class of 2027	2029 Rating Class of 2028	2030 Rating Class of 2029	2031 Rating Class of 2030	2032 Rating Class of 2031	2033 Rating Class of 2032	2034 Rating Class of 2033	2035 Rating Class of 2034
IBC v2	IBC v2 sunset	IBC v2 sunset	IBC v3	IBC v3 possible sunset	IBC v4	IBC v4	IBC v4	IBC v4 possible sunset	IBC v5	IBC v5	IBC v5	IBC v5
	IBC v3	IBC v3	IBC v4	IBC v4			IBC v5	IBC v5				IBC v6
		PS v2 1 course	PS v2 Concentr.	PS v2 Completer	PS v2	PS v2	PS v2	PS v2 possible sunset	PS v3	PS v3	PS v3	PS v3
A-F Refresh					A-F Refresh		PS v3	PS v3		A-F Refresh		PS v4

Sunsetting transition from IBC v3 to v4 may be impacted by the amount of change

Sunsetting transition to IBC v5 and PS v3 may be impacted by the amount of change

CCMR Implications for Students who Change Programs of Study

CCMR calculations & Helping students prepare for careers of interest

- Being career ready means completing a significant study of the knowledge and skills required to work in a career, doing some work in the career, and obtaining an industry-based certification.
- Some students remain focused on a specific career path from an early age and go fully through a single path to obtain readiness.
- But many students refine or revise their career goals as they acquire knowledge and experiences. This is a good thing. Learning more about other career options and ruling out career options can often be just as important as obtaining readiness for a single career. But it isn't the same as obtaining readiness in a career.
- Programs of study have been designed to allow for career exploration. For example, Level 1 principles classes now work for all programs of study across a career cluster.
- Additionally, school system practices can help. For example, principles courses are often taught in grade 8 to help students with career exploration. Note: LEAs receive weighted CTE funding for students who complete a high school CTE course in grade 8.
- The following slides offer some illustration of how this can work.

District A offers 26 courses in six programs of study

Health Science

	Diagnostic and Therapeutic Services	Health Informatics	Nursing Science
Level 1	Principles of Health Science	Principles of Health Science	Principles of Health Science
Level 2	Medical Terminology	Medical Terminology	Medical Terminology
Level 2	Pharmacy I		Science of Nursing
Level 3	Pharmacy II	Health Informatics	
Level 3	Health Science Theory + Health Science Clinical	Health Science Theory + Health Science Clinical	Health Science Theory + Health Science Clinical
Level 3	Medical Microbiology		Medical Microbiology
Level 4	Career Prep for Programs of Study	Career Prep for Programs of Study	Career Prep for Programs of Study
Level 4	Pathophysiology	Medical Billing and Coding	Pathophysiology
Level 4	Anatomy and Physiology		Anatomy and Physiology
Level 4	Pharmacology		Pharmacology
Level 4			Practicum in Nursing

Some career clusters offer considerable flexibility across programs of study.

Agriculture, Food, and Natural Resources

	Animal Science	Environmental and Natural Resources	Plant Science
Level 1	Principles of Agriculture, Food and Natural Resources	Principles of Agriculture, Food and Natural Resources	Principles of Agriculture, Food and Natural Resources
Level 2	Equine Science	Wildlife, Fisheries, and Ecology Management	Landscape Design and Management
Level 3	Livestock Production	Range Ecology and Management	Viticulture
Level 4	Advanced Animal Science	Advanced Energy and Natural Resource Technology	Advanced Plant and Soil Science
Level 4	Career Prep for Programs of Study	Career Prep for Programs of Study	Career Prep for Programs of Study
Level 4	Scientific Research and Design	Scientific Research and Design	Scientific Research and Design

Other career clusters require more linear course sequences to ensure proper skill development and students benefit.

Common Course Key

Level 1

Level 2

Level 3

Level 4

Example of a Student Changing Career Clusters

9th Grade AFNR to 10th Grade Health Science

A student takes Principles of AFNR in grade 9* with plans to complete the Animal Science program of study. In grade 10, the student decides to pursue the Diagnostic and Therapeutic Services program of study. The student can still easily demonstrate CCMR by completing the new program of study:

Grade 10: Pharmacy I (one credit)

Grade 11: Pharmacy II (one credit)

Grade 12: Health Science Theory + Health Science Clinical (two credits) and

Earn the pharmacy technician IBC to meet CCMR

*Offering Principles courses in 8th grade offers additional flexibility for career exploration before committing to a program of study.

9th & 10th Grade AFNR to 11th Grade Health Science

The same student takes Principles of AFNR in grade 9, and Equine Management in grade 10. In grade 11, the student decides to pursue the Diagnostic and Therapeutic Services program of study in grade 11.

Option A: Meet CCMR by expediting the new program of study

Grade 11: Pharmacy I (one credit)

Grade 12: Pharmacy II (one credit) and Health Science Theory + Health Science Clinical (two credits) and

Earn the pharmacy technician IBC to meet CCMR

Option B: Pursue Concentrator status in CTE and meet CCMR through another indicator

Grade 11: Pharmacy I (one credit)

Grade 12: Pharmacy II (one credit) and

Meet TSIA, SAT, or ACT, dual credit, College Prep, or another requirement to meet CCMR