

The background of the slide is a photograph of a welder in a workshop. The welder is wearing a blue and black protective suit with intricate patterns on the chest and is wearing brown leather welding gloves. They are actively welding a metal piece, with bright blue and white sparks flying from the point of contact. The workshop environment is visible in the background, including a metal structure and a yellow sign.

# An Introduction to the Texas CTE Indicator Auto-Code Project

May 28, 2021

**Steven Smith**  
**Project Manager**  
**Pathways Support Team**  
**College, Career and Military Preparation Division**  
**Texas Education Agency**  
[ccmp@tea.texas.gov](mailto:ccmp@tea.texas.gov)



# Today's Topics

Why did TEA develop CTE indicator auto-coded data?

What are the benefits of using a rule-based data approach to CTE indicator coding?

What is the timeline for CTE indicator auto-code development?

What are the CTE indicator auto-code definitions?

Which resources are helpful for calculating CTE Indicators?

**The CTE Indicator Codes**

# Learning Objectives

1. Explain the added value of using a TSDS PEIMS data and rules-based approach to calculating CTE indicators.
2. Find and explain which reference look-up files are used in calculations.
3. Describe the different CTE indicator values and their definitions.
4. Explain how regional programs of study impact CTE indicator values in non-approved regions.



# Background and Context

# Why Did TEA Develop CTE Indicator Auto-coded Data?

- Inconsistencies resulting from legacy CTE indicator self-reported data
- The limitations of using legacy CTE indicator self-reported data
- Perkins V requirements

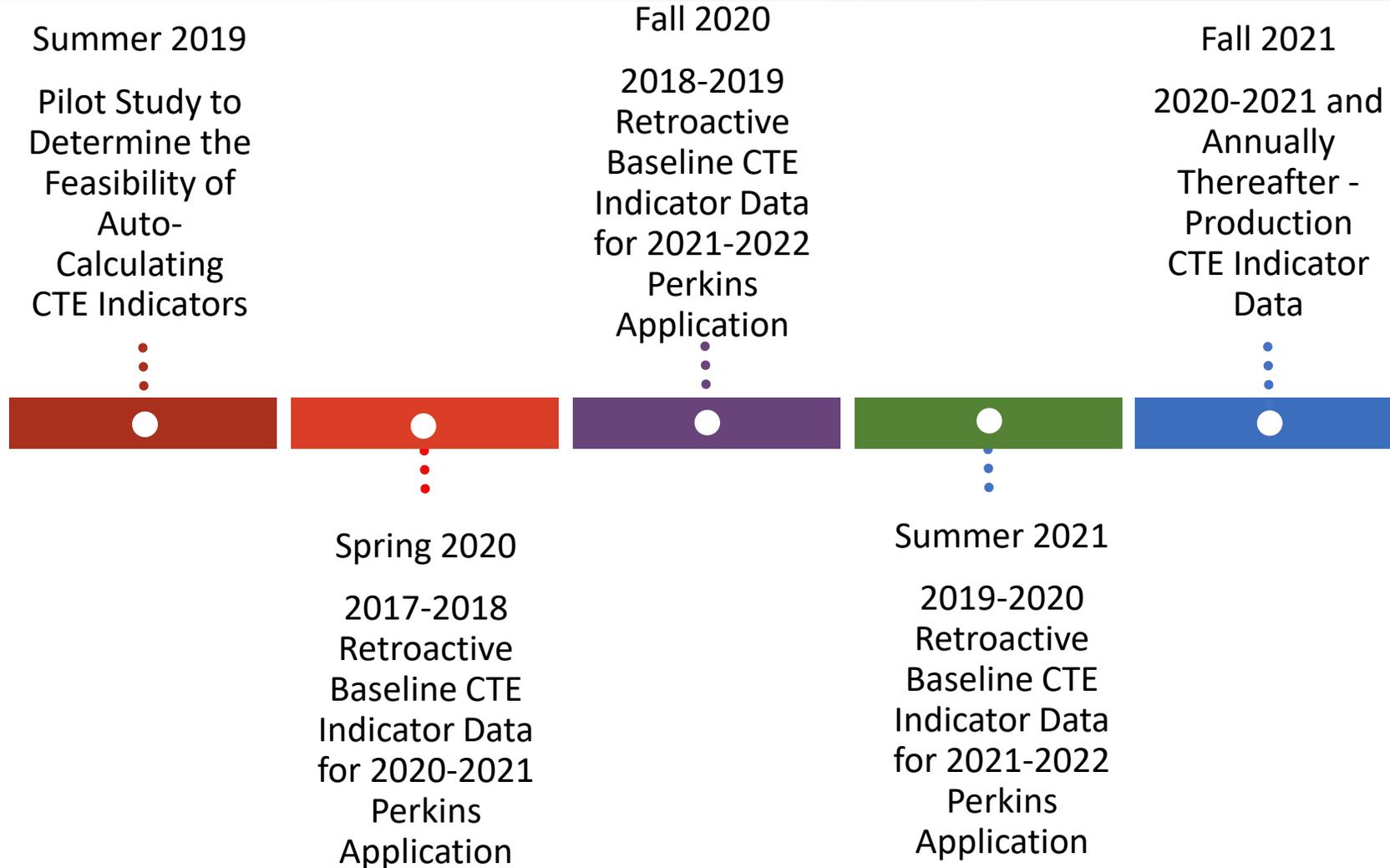


# What are the Benefits of Using a Rule-based Data Approach to CTE Indicator Coding?

- CTE indicator student coding not left up-to interpretation of the business rules
  - Accurate
  - Consistent
  - Equitable across LEAs
  - Codes follow students
- Locally repeatable
- District and charter school workload reduction



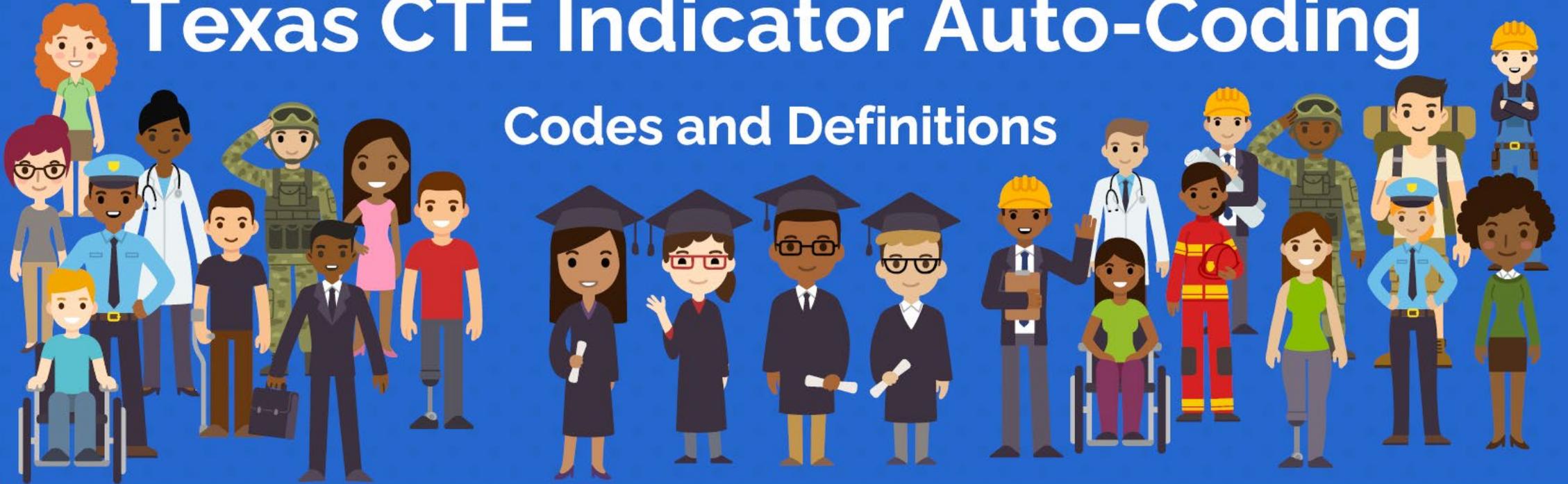
# What is the Timeline for CTE Indicator Auto-Code Development?



# What are the CTE Indicator Codes?

## Texas CTE Indicator Auto-Coding

### Codes and Definitions



# CTE Indicator Auto-code Definitions

 <p><b>Not CTE</b></p>	 <p><b>CTE Participants</b></p>	 <p><b>CTE Explorers</b></p>	 <p><b>CTE Concentrators</b></p>	 <p><b>CTE Completers</b></p>
<p><b>Code 4</b></p> <p>A student who never enrolled or who did not complete any high-school CTE Course</p>	<p><b>Code 5</b></p> <p>A student completing one or more courses for less than two credits*</p>	<p><b>Code E</b></p> <p>A student completing two or more high school CTE courses for a total of two or more credits defined by 19 TAC Chapter 126 (C), 127(B) or 130 and not a participant, concentrator or completer (the student does not have to pass or receive credit).*</p>	<p><b>Code 6</b></p> <p>A student completing and passing at least two or more 19 TAC Chapter 126 (C), 127 (B) or 130 CTE courses for a total of at least two credits within the same program of study and not a completer.</p>	<p><b>Code 7</b></p> <p>A student completing and passing three or more 19 TAC Chapter 126 (C), 127 (B) or 130 CTE courses for a total of four or more credits within a program of study, including one level three or level four course from within the same program of study.</p>

\* Participant and Explorer coded students do not have to pass high-school CTE courses or receive credit.

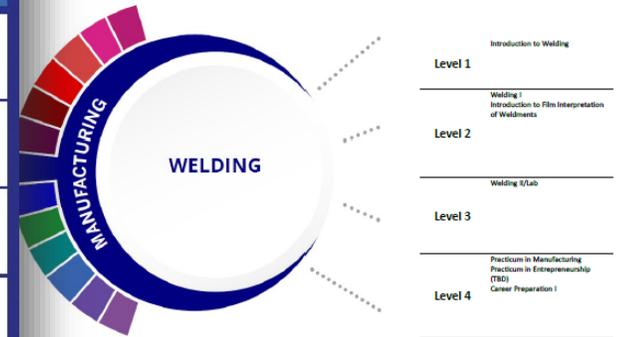
# Which Resources are Helpful to Calculate CTE Indicators?

- Definition One-pager
- Statewide and Regional Programs of Study Frameworks
- Look-up Tables
- Student Scenarios
- FAQs
- Technical Documentation

### Texas CTE Indicator Auto-Coding Codes and Definitions

Not CTE	<b>Code 4:</b> A student who never enrolled or who did not complete any high-school CTE course as defined by 19 TAC Chapter 126 (C), 127 (B) or 130.
CTE Participants	<b>Code 5:</b> A student completing one or more courses for less than two credits, defined by 19 TAC Chapter 126 (C), Chapter 127 (B) or 130 (the student does not have to pass or receive credit).
CTE Explorers	<b>Code E:</b> A student completing two or more high school CTE courses for two or more credits defined by 19 TAC Chapter 126 (C), 127 (B) or 130 and not a participant, concentrator or completer (the student does not have to pass or receive credit).
Regional Explorers	<b>Code E:</b> A student completing enough credits within a program of study coherent sequence of courses in a regional program of study, but completes the school year in a district and region where the regional program is not approved. The code 6 or 7 is changed to a code E.
CTE Concentrators	<b>Code 6:</b> A student completing and passing two or more chapter 126 (C), 127 (B) or 130 CTE courses for at least two credits within the same program of study and not a Completer in the same program of study.
CTE Completers	<b>Code 7:</b> A student completing and passing three or more chapter 126 (C), 127 (B) or 130 CTE courses for four or more credits, including one level 3 or level 4 course, within the same program of study.

Regional programs of study are approved in education service center regions where there is specialized regional labor market demand for specific occupations. Students completing coherent regional course sequences outside of approved regions are assigned a code E (Explorer).



SCHOOL/ DISTRICT	CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTERS/ DOCTORAL PROFESSIONAL
Welding	Certified Welder or Welder Inspector	Associate Welding	Bachelor's Welding Engineering Technology/Technician	Master's Welding Engineering Technology/Technician
Welding	Certified Welding Level 1 - CNC Milling/ Programming Setup & Operations	Associate Machine Shop Assistant	Bachelor's Biomedical Technology/Technician	Master's Occupational Health and Industrial Hygiene
Welding	Certified Welding	Operations Management and Supervision	Operations Management and Supervision	Operations Management and Supervision
Welding	Certified Welding Occupational Safety and Health Trainer	Occupational Safety and Health Technology/Technician	Environmental Health	Environmental Health

Occupations	Median Wage	Annual Openings	% Growth
Welders, Cutters, Solderers, and Brazers	\$41,350	6,171	9%
Welding, Soldering and Braiding Machine Setters, Operators and Tenders	\$40,040	280	9%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES	
<b>Exploration Activities:</b> Participate and compete in SkillsUSA Job shadow a machinist	<b>Work Based Learning Activities:</b> Apprenticeship at a local business or Industry American Welding Society

Additional industry-based certification information is available on the CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

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.

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 manufacturing/process engineering.

Successful completion of the Manufacturing Technology program of study will fulfill requirements of the Business and Industry Endorsement. Revised - July 2020

# Supporting Materials

## Definition One-pager

- A quick reference guide to the CTE indicator definitions.

## Statewide and Regional Program of Study Frameworks

- Provides a visual reference for the programs of study course sequences and course levels.

## Look-up Tables (Excel)

- The primary table (worksheet) maps the program of study codes to course sequences, levels and credits.

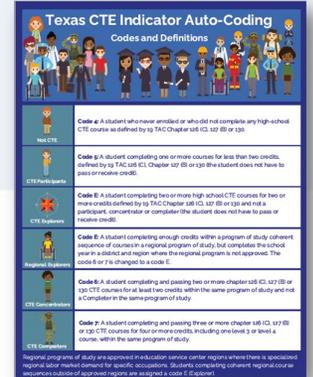
## Student Scenarios

- A set of student course completion patterns over time that illustrate CTE indicator coding each year of a student's educational career.

## Frequently Asked Questions

- Provides answers to common questions about CTE indicators.

# CTE Indicator One-Pager



Texas CTE Indicator Auto-Coding Codes and Definitions	
	<b>Code 4:</b> A student who never enrolled or who did not complete any high-school CTE course as defined by 19 TAC Chapter 126 (C), 127 (B) or 130.
	<b>Code 5:</b> A student completing one or more courses for less than two credits, defined by 19 TAC 126 (C), Chapter 127 (B) or 130 (the student does not have to pass or receive credit).
	<b>Code E:</b> A student completing two or more high school CTE courses for two or more credits defined by 19 TAC Chapter 126 (C), 127 (B) or 130 and not a participant, concentrator or completer (the student does not have to pass or receive credit).

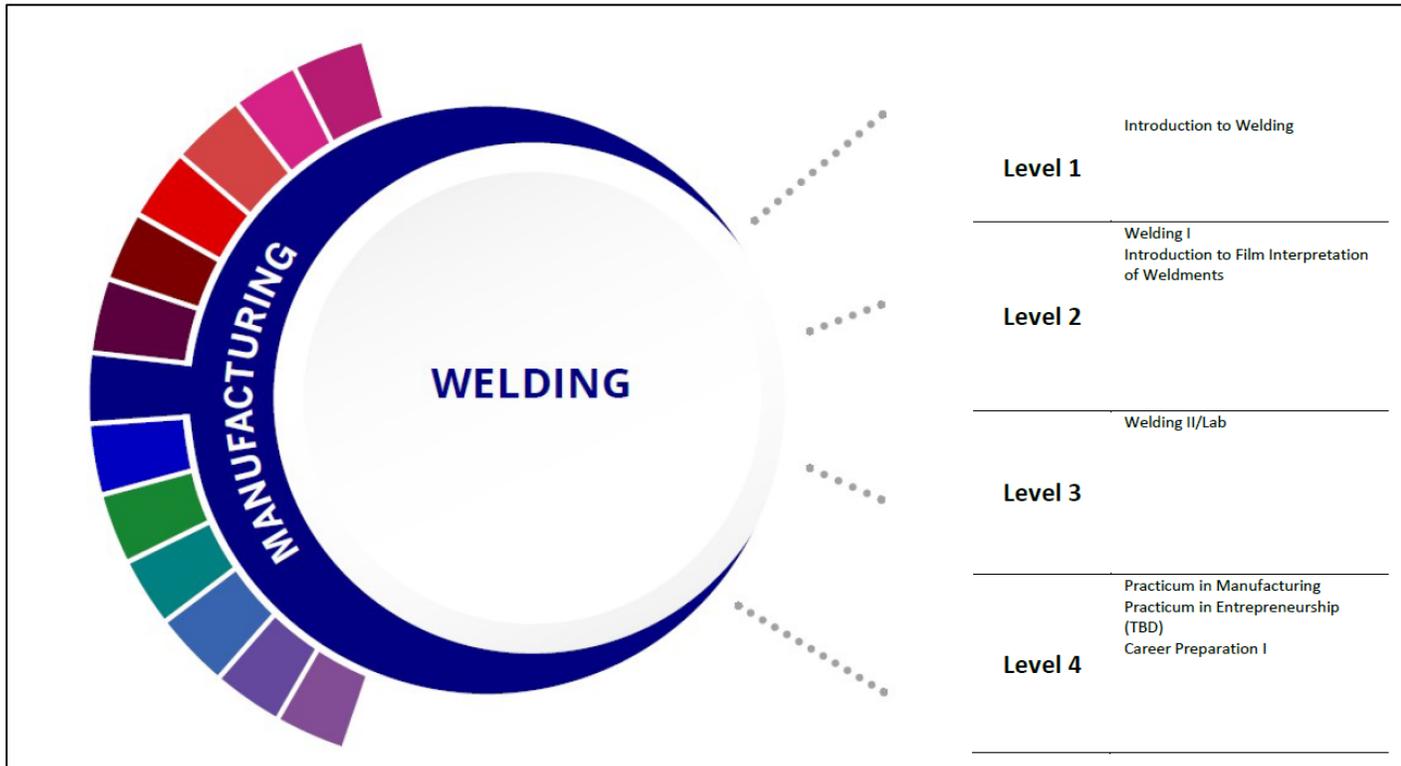
	<b>*Code E:</b> A student completing enough credits within a program of study coherent sequence of courses in a regional program of study, but completes the school year in a district and region where the regional program is not approved. The code 6 or 7 is changed to a code E.
	<b>Code 6:</b> A student completing and passing two or more chapter 126 (C), 127 (B) or 130 CTE courses for at least two credits within the same program of study and not a Completer in the same program of study.
	<b>Code 7:</b> A student completing and passing three or more chapter 126 (C), 127 (B) or 130 CTE courses for four or more credits, including one level 3 or level 4 course, within the same program of study.

\*Regional programs of study are approved in education service center regions where there is specialized regional labor market demand for specific occupations. Students concentrating and/or completing a coherent regional course sequence outside of approved regions are assigned a code E (Explorer).

# Programs of Study Frameworks



COURSE INFORMATION				
COURSE NAME	SERVICE ID	PREREQUISITS (PREQ)	COREQUISITES (CREQ)	Grade
Introduction to Welding	13032250 (1 credit)	None		9-12
Welding I	13032300 (2 credit)	None		10-12
Introduction to Film Interpretation of Weldments	N1303687 (1 credit)	None		10-12
Welding II/Lab	13032400 (2 credits) 13032410 (3 credits)	PREQ: Welding I		11-12
Practicum in Manufacturing	13033000 (2 credits) 13033005 (3 credits) 13033010 (2 credits) 13033015 (3 credits)	None		12
Practicum in Entrepreneurship	TBD	TBD		TBD
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None		11-12



COURSE INFORMATION				
COURSE NAME	SERVICE ID	PREREQUISITS (PREQ)	COREQUISITES (CREQ)	Grade
Introduction to Welding	13032250 (1 credit)	None		9-12
Welding I	13032300 (2 credit)	None		10-12
Introduction to Film Interpretation of Weldments	N1303687 (1 credit)	None		10-12
Welding II/Lab	13032400 (2 credits) 13032410 (3 credits)	PREQ: Welding I		11-12
Practicum in Manufacturing	13033000 (2 credits) 13033005 (3 credits) 13033010 (2 credits) 13033015 (3 credits)	None		12
Practicum in Entrepreneurship	TBD	TBD		TBD
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None		11-12

# CTE Indicator Look-up Tables

## 2020-2021 Look-up Tables Production CTE Indicator Data Project

September 2020 - August 2021

As of 10/23/20  
3.0  
College, Career and Military Preparation Division  
Texas Education Agency

Program of Study ID	Program of Study	Service ID	Course Title	Level	Tier	Credit	State Career Cluster	Federal Career Cluster
60	Welding	13032250	Introduction to Welding	1	1	1	S12	F14
60	Welding	13032300	Welding I	2	1	2	S12	F14
60	Welding	N1303687	Introduction to Film Interpretation of Weldments	2	1	1	S12	F14
60	Welding	13032400	Welding II	3	2	2	S12	F14
60	Welding	13032410	Welding II/Welding II Lab	3	2	3	S12	F14
60	Welding	12701300	Career Preparation I	4	2	2	S12	F14
60	Welding	12701305	Career Preparation I/Extended Career Preparation	4	2	3	S12	F14
60	Welding	13033000	Practicum in Manufacturing (First Time Taken)	4	2	2	S12	F14
60	Welding	13033005	Practicum in Manufacturing/Extended Practicum in Manufacturing (First Time Taken)	4	2	3	S12	F14
60	Welding	13033010	Practicum in Manufacturing (Second Time Taken)	4	2	2	S12	F14
60	Welding	13033015	Practicum in Manufacturing/Extended Practicum in Manufacturing (Second Time Taken)	4	2	3	S12	F14

# CTE Indicator Student Scenarios

## CTE Indicator Auto-Coding – Course Completion and Annual Coding Student Scenarios

**Code 4 (Not CTE)** A student who did not complete any high-school CTE course.  
**Code 5 (CTE Program Participant)** A student completing one or more high-school CTE courses for less than two credits (the student does not have to pass or receive credit).  
**Code E (CTE Program Explorer)** A student completing two or more high school CTE courses for two or more credits and not a participant, concentrator or completer (the student does not have to pass or receive credit).



**Natasha**

**Code 6 in two programs of study.**  
*Moves to Texas her Freshman year. Natasha moves to Texas her Freshman year; completes courses in multiple programs of study and is a code 6 in two of them.*



**Luke**

**Code 6 in one program of study.**  
*Moves out of state before graduating. Luke completes courses in one program of study and becomes a code 6; then moves out of state his senior year.*



**Carol**

**Code 6 in one program of study and code 7 in another.**  
*Carol dreams of flying and completes courses in two programs of study and is a code 6 in one and a code 7 in another.*



**Tony**

**Code 7 in one program of study.**  
*Tony completes courses in one program of study only. He is a code 7.*



**Nick**

**Code 6 in one program of study.**  
*Nick completes courses in one program of study, moves out of state for a year, returns, graduates. He is a code 6.*



**Bruce**

**Code 7 in one program of study.**  
*Bruce completes courses in one program of study and moves out of state before his junior year. He is a code 7.*

6 <sup>th</sup> Grade 2017-2018	Not in Texas	No CTE Courses <b>Code 4</b>	No CTE Courses <b>Code 4</b>	No CTE Courses <b>Code 4</b>	No CTE Courses <b>Code 4</b>	No CTE Courses <b>Code 4</b>
7 <sup>th</sup> Grade 2018-2019	Not in Texas	No CTE Courses <b>Code 4</b>	Investigating Careers <b>Code 4</b>	No CTE Courses <b>Code 4</b>	No CTE Courses <b>Code 4</b>	No CTE Courses <b>Code 4</b>
8 <sup>th</sup> Grade 2019-2020	Not in Texas	No CTE Courses <b>Code 4</b>	No CTE Courses <b>Code 4</b>	Principles of Manufacturing <b>Code 5</b>	Principles of GPA <b>Code 5</b>	Principles of Health Sci. <b>Code 5</b>
9 <sup>th</sup> Grade 2020-2021	Intro to American Law <b>Code 5</b>	Principles of Biosciences <b>Code 5</b>	Principles of Applied Engineering Introduction to Aircraft Technology <b>Code E</b>	Principles of Applied Engineering <b>Code 6 (Adv. Manuf. and Machinery Mechanics)</b>	Federal Law Enforcement and Protective Services <b>Code 6 (Government and Public Administration)</b> <i>Moves out of state in July</i>	Medical Terminology <b>Code 6 (Healthcare Diagnostics)</b>
10 <sup>th</sup> Grade 2021-2022	Criminal Investigation <b>Code 6 (Law Enforcement)</b>	Biotechnology I <b>Code 6 (Bio-Medical Science)</b>	Manufacturing Engineering Technology I <b>Code 6 (Engineering)</b> Occ. Safety & Env. Tech. I <b>Code 6 (Aviation Maintenance)</b>	Robotics I <b>Code 6 (Adv. Manuf. and Machinery Mechanics)</b>	<i>Lives out of state this year, then moves back to Texas in July 2022, enrolls in different district No CTE Indicator reported this year</i>	Health Science Theory/Health Science Clinical (2 credits) <b>Code 7 (Healthcare Diagnostics)</b> <i>Moves out of State in July</i>
11 <sup>th</sup> Grade 2022-2023	<b>Code 6 (Law Enforcement)</b> Foundations of Cybersecurity	Biotechnology II <b>Code 6 (Bio-Medical Science)</b> <i>Moves out of state in July</i>	<b>Code 6 (Aviation Maintenance)</b> Aerospace Engineering (PLTW) <b>Code 6 (Engineering)</b>	Robotics II <b>Code 7 (Adv. Manuf. and Machinery Mechanics)</b>	Dimensions of Diplomacy <b>Code 6 (Government and Public Administration)</b>	<i>Lives out of state this year No CTE Indicator reported this year</i>
12 <sup>th</sup> Grade 2023-2024	<b>Code 6 (Law Enforcement)</b> Computer Science I <b>Code 6 (Cybersecurity)</b>	<i>Lives out of state No CTE Indicator reported this year</i>	<b>Code 6 (Aviation Maintenance)</b> Scientific Research and Design <b>Code 7 (Engineering)</b>	Practicum in Entrepreneurship <b>Code 7 (Adv. Manuf. and Machinery Mechanics)</b>	No CTE Courses <b>Code 6 (Government and Public Administration)</b>	<i>Lives out of state this year No CTE Indicator reported this year</i>
Program of Study	36 – Law Enforcement 15 - Cybersecurity	9 - Bio-Medical Science	8 - Aviation Maintenance 22 - Engineering	2 - Adv. Manufacturing and Machinery Mechanics	28 - Government and Public Administration	32 - Healthcare Diagnostics
Federal Career Cluster	F13 - Law, Public Safety... F16 – STEM	F16 - STEM	F16 – STEM F17 – Trans. Dist. and Logistics	F14 - Manufacturing	F13 - Law, Public Safety...	F9 - Health Science

# CTE Indicator Technical Documentation

**CTE Indicator Auto-calculation**  
2022-2023

**Background**  
On July 12, 2022, the federal government passed the Public Law 115-224 known as Perkins V. This act requires CTE reporting to be "valid, and reliable, and comparable across the State." Moreover, the act requires the reporting to be "more detailed about the types and depth of a student's CTE coursework. In addition, TEA is required to report student CTE participation by "career clusters," to meet the federal reporting requirements.

In order to meet this legislative need for consistency, reliability, and comparability, TEA is implementing a CTE Indicator auto-calculation process that uses an efficient course completion data collected in the FIMS Lerner (LMS) Submission starting in the 2022-2023 school year to derive each CTE participant's classification. In 2022-2023, the automated process replaced the manual process that used to be the responsibility of the individual LEAs.

The purpose of this document is to provide LEAs and vendors with a summary of the logic that TEA uses to determine the CTE Indicator Code for students participating in Career and Technology programs.

**Legislation**  
The Strengthening Career and Technical Education for the 21st Century Act (Public Law 115-224) (Perkins V, the Act), or "Perkins V," which reauthorized and amended the Carl D. Perkins Career and Technical Education Act of 2006.

**Definitions, Acronyms, and Abbreviations**  
Note: The CTE indicators are defined in the "Data Values" section.

Career Cluster - a grouping of occupations and broad industries based on commonalities.

Credit Value - a value used to calculate the number of credits associated with a given course, based on highest of the values for each course in the C022 table.

CTE - career and technical education - career preparation programs that prepare workers to meet employment needs in a variety of occupations.

LEA - Local Education Agency - A public school district or open enrollment charter school. Texas has over 1,000 LEAs.

Perkins - The Carl D. Perkins Career and Technical Education Act of 1983 (reauthorized in 1990, 1996, 2006, and 2022) - intended to provide increased focus on the academic achievement of career and technical education students, strengthen the connections between secondary and postsecondary education, and improve state and local accountability.

1. Go through the logic of **Code 7** first:

Identify students completing three or more courses (service IDs) for 4 or more credits in the *same program of study*, with at least one course being a level 3 or 4; Pass/Fail Indicator must equal 1 – assign CTE Indicator “7”. Record the Program of Study ID for every instance of a unique Program of Study.

**Note:** The credits are determined from the course units in the [Service-ID C022 table](#), not from the credits awarded by the district on the transcript. If there is a range of credits, use the highest value in the range.

2. Next go through logic of **Code 6**:

Identify students completing two or more courses (service IDs) for at least two credits within the *same program of study*; Pass/Fail Indicator must equal 1 – assign CTE Indicator “6”. Record the Program of Study ID for every instance of a unique Program of Study. (Do not assign a “6” for the Program of Study if a “7” was already for that Program of Study.)

# Sample of TSDS PEIMS Data Elements Used

## C135 COURSE-SEQUENCE-CODE

- In order for the course to count in calculations, it must be the last course in a sequence.

## C136 PASS/FAIL-CREDIT-INDICATOR-CODE

- Codes 6 (Concentrator) and 7 (Completer) require students to pass, complete and receive credit.

## C220 PROGRAM-OF-STUDY-CODE

- Provides code set and names for statewide and regional programs of study.

## C227 STATE-CAREER-CLUSTER-CODE

- Provides code set and names of state programs of study.

## C228 FEDERAL-CAREER-CLUSTER-CODE

- Provides code set and names of federal programs of study.



# The CTE Indicator Codes

# Code 4 (Not CTE) Definition

**Code 4:** A student who never enrolled or who did not complete any high-school CTE course as defined by 19 TAC Chapter 126 (C), 127 (B) or 130.



# Code 4 (Not CTE) Definition: Ben



<b>Ben</b>	
<i>Code 4 in one district</i>	
Ben focuses on academics and football in high school and does not take any CTE courses.	
6 <sup>th</sup> Grade 2017-2018	No CTE Courses <b>Code 4</b>
7 <sup>th</sup> Grade 2018-2019	No CTE Courses <b>Code 4</b>
8 <sup>th</sup> Grade 2019-2020	No CTE Courses <b>Code 4</b>
9 <sup>th</sup> Grade 2020-2021	No CTE Courses <b>Code 4</b>
10 <sup>th</sup> Grade 2021-2022	No CTE Courses <b>Code 4</b>
11 <sup>th</sup> Grade 2022-2023	No CTE Courses <b>Code 4</b>
12 <sup>th</sup> Grade 2023-2024	No CTE Courses <b>Code 4</b>
Program of Study	None
Federal Career Cluster	None

- Ben did not complete any CTE courses and focused on football instead.
- Because Ben did not attempt or complete any CTE courses he is a code 4 Not CTE throughout high school.

# Code 5 (CTE Participant) Definition

**Code 5:** A student completing one or more courses for less than two credits, defined by 19 TAC 126 (C), Chapter 127 (B) or 130 (the student does not have to pass or receive credit).



# Code 5 (CTE Participant) Definition: Susan



Susan	
Code 5 in one district	
Susan is on the swim team and takes one course in Arts and AV but no other CTE courses.	
6 <sup>th</sup> Grade 2017-2018	No CTE Courses <b>Code 4</b>
7 <sup>th</sup> Grade 2018-2019	No CTE Courses <b>Code 4</b>
8 <sup>th</sup> Grade 2019-2020	No CTE Courses <b>Code 4</b>
9 <sup>th</sup> Grade 2020-2021	Principles of Arts, A/V Technology, and Communications <b>Code 5</b>
10 <sup>th</sup> Grade 2021-2022	No CTE Courses <b>Code 5</b>
11 <sup>th</sup> Grade 2022-2023	No CTE Courses <b>Code 5</b>
12 <sup>th</sup> Grade 2023-2024	No CTE Courses <b>Code 5</b>
Program of Study	None
Federal Career Cluster	None

- Susan completed Principles of Arts, A/V Technology, and Communications.
- Because Susan completed at least one high school CTE course but no more throughout high school, she is a code 5 Participant starting at the end of the 9<sup>th</sup> grade, and in each grade thereafter.

# Code E (CTE Explorer) Definition

**Code E:** A student completing two or more high school CTE courses for a total of two or more credits defined by 19 TAC Chapter 126 (C), 127 (B) or 130 and not a participant, concentrator or completer (the student does not have to pass or receive credit).





**Stanley**  
Code E in one district  
Stanly takes CTE courses in two career clusters, exploring CTE courses, but never concentrates in one program of study. Stanly is a code E.

6 <sup>th</sup> Grade 2017-2018	No CTE Courses <b>Code 4</b>
7 <sup>th</sup> Grade 2018-2019	No CTE Courses <b>Code 4</b>
8 <sup>th</sup> Grade 2019-2020	No CTE Courses <b>Code 4</b>
9 <sup>th</sup> Grade 2020-2021	No CTE Courses <b>Code 4</b>
10 <sup>th</sup> Grade 2021-2022	Animation I <b>Code 5</b>
11 <sup>th</sup> Grade 2022-2023	Advertising <b>Code E</b>
12 <sup>th</sup> Grade 2023-2024	Principles of Hospitality and Tourism <b>Code E</b>
Program of Study	None
Federal Career Cluster	None

- Stanley completed two high-school CTE courses in different programs of study.
- Because Stanley completed two courses but not in the same program of study, he is a code E Explorer starting at the end of the 10<sup>th</sup> grade, and in each grade thereafter.

# Code 6 (CTE Concentrator) Definition

**Code 6:** A student completing and passing two or more 19 TAC Chapter 126 (C), 127 (B) or 130 CTE courses for a total of at least two credits within the same program of study and not a completer.





<b>Shuri</b> <i>Code 6 in one program of study</i>	
Shuri completes courses in engineering but stops short of becoming a CTE Completer. She completes three courses for 3 credits in the Engineering program of study. She is a code 6.	
6 <sup>th</sup> Grade 2017-2018	Lives outside U.S.A.
7 <sup>th</sup> Grade 2018-2019	Lives outside U.S.A.
8 <sup>th</sup> Grade 2019-2020	Lives outside U.S.A.
9 <sup>th</sup> Grade 2020-2021	Principles of Applied Engineering <b>Code 5</b>
10 <sup>th</sup> Grade 2021-2022	Manufacturing Engineering Technology I <b>Code 6 (Engineering)</b>
11 <sup>th</sup> Grade 2022-2023	National Security <b>Code 6 (Engineering)</b>
12 <sup>th</sup> Grade 2023-2024	<b>Code 6 (Engineering)</b> Scientific Research and Design
Program of Study	22 - Engineering
Federal Career Cluster	F16 - STEM

<b>Level 1</b>	Principles of Applied Engineering Computer Aided Drafting and Manufacturing (TBD) Introduction to Engineering Design (PLTW) Engineering Essentials (PLTW)
<b>Level 2</b>	Manufacturing Engineering Technology I
<b>Level 3</b>	Engineering and Design and Development (PLTW) Engineering Design and Presentation I Computer Integrated Manufacturing (PTLW) Aerospace Engineering (PLTW) Digital Electronics Civil Engineering and Architecture (PLTW) Engineering Science Environmental Sustainability (PTLW)
<b>Level 4</b>	Engineering Design and Problem Solving Engineering Design and Presentation II Practicum in STEM Scientific Research and Design

- Shuri moved to Texas in the 9<sup>th</sup> grade and completed one Engineering program of study course this first year.
- Even though Shuri completed a CTE course outside of the engineering program of study in the 11<sup>th</sup> grade, she completed enough courses within the program of study to be coded a code 6 concentrator starting in the 10<sup>th</sup> grade and in each grade thereafter.

# Code 7 (CTE Completer) Definition

**Code 7:** A student completing and passing three or more 19 TAC Chapter 126 (C), 127 (B) or 130 CTE courses for a total of four or more credits within a program of study, including one level three or level four course from within the same program of study.



# Code 7 (CTE Completer) Definition: James



**James**

*Code 7 in one district*  
James dreams of joining the Marine Corps as a pilot one day. James completes the Aviation Flight regional program of study.

6 <sup>th</sup> Grade 2017-2018	No CTE Courses <b>Code 4</b>
7 <sup>th</sup> Grade 2018-2019	No CTE Courses <b>Code 4</b>
8 <sup>th</sup> Grade 2019-2020	No CTE Courses <b>Code 4</b>
9 <sup>th</sup> Grade 2020-2021	Introduction to Aerospace and Aviation Introduction to Aircraft Technology <b>Code 6</b>
10 <sup>th</sup> Grade 2021-2022	Introduction to Unmanned Aerial Vehicles <b>Code 6 (Aviation Flight)</b>
11 <sup>th</sup> Grade 2022-2023	Aviation Ground School (does not pass) <b>Code 6 (Aviation Flight)</b>
12 <sup>th</sup> Grade 2023-2024	Aerospace Engineering <b>Code 7 (Aviation Flight)</b>
Program of Study	56 – Aviation Flight
Federal Career Cluster	F17 - Transportation, Distribution, and Logistics

<b>Level 1</b>	Introduction to Aerospace and Aviation Introduction to Aircraft Technology
<b>Level 2</b>	Introduction to Unmanned Aerial Vehicle Flight
<b>Level 3</b>	Aviation Ground School Aerospace Engineering
<b>Level 4</b>	Practicum in Transportation Systems Scientific Research and Design

- James started completing regional program of study Aviation (Flight) CTE courses in the 9<sup>th</sup> grade, where he completed one course in the program.
- James completed two level 3 courses, he completed enough program of study courses and credits, including a level 3 or 4 course, and is coded a code 7 completer in the 12<sup>th</sup> grade.

# Code E (CTE Explorer) Definition



## Regional Explorers

### Regional Explorers

**Also Code E:** A student completing enough courses in a regional program of study to be coded a 6 or 7 but completes the school year in a district and geographic region where the regional program is not approved. The code 6 or 7 is changed to a code E.

# Code E (CTE Explorers) Definition: Arthur and Diana



How are students coded if they complete regional program of study courses in a region that is not approved for the program?

- Students may take and complete CTE courses anywhere in Texas.
- If the region is not approved for the regional program of study, once students complete enough courses to be coded a code 6 (concentrator) or code 7 (completer), the code reverts to a code E (explorer) each year.
- This process gives credit to the student and district, acknowledging the work.
- If the student later moves to a region where the regional program of study is approved, at the end of the school year the code will be either a code 6 or code 7, depending on how many courses and specific levels are completed.

Regional Program of Study Codes 6 & 7 Showing as a Code E in Un-Approved Region		
When a student completes enough regional program of study courses and completes a school year in a non-approved region, if they have enough credits to be coded a 6 or 7, their CTE Indicator code will revert to a Code E, until they are enrolled in an approved region for the program of study.		
	 <b>Arthur</b>	 <b>Diana</b>
	<i>Regional code E in one district in a non-approved region</i>	<i>Regional Code E, 6 and 7 in one district after moving regions</i>
	Arthur is fascinated with the sea and aquatic life. He takes regional maritime program of study courses in a non-approved region., even though his region was never approved for the maritime regional program of study He is a code E..	Diana dreams of flying her own plane one day. She takes regional aviation courses in an approved region, moves to a non-approved region, and eventually moves back to her original approved region. She ends up a code 7.
<i>6<sup>th</sup> Grade 2017-2018</i>	No CTE Courses <b>Code 4</b>	Introduction to Aerospace and Aviation <b>Code 5</b>
<i>7<sup>th</sup> Grade 2018-2019</i>	Principles of Maritime Science <b>Code 5</b>	Introduction to Unmanned Aerial Vehicles <b>Code 6 (Aviation)</b>
<i>8<sup>th</sup> Grade 2019-2020</i>	No CTE Courses <b>Code 5</b>	No CTE Courses <b>Code 6 (Aviation)</b> <i>Moves to region B in the summer</i>
<i>9<sup>th</sup> Grade 2020-2021</i>	Maritime Science I <b>Code E</b>	<b>Code E</b> <i>No CTE Courses</i> <i>Code E (Aviation) in non-approved region B</i>
<i>10<sup>th</sup> Grade 2021-2022</i>	Maritime Science II <b>Code E</b>	<b>Code E</b> <i>No CTE Courses</i> <i>Code E (Aviation) in non-approved region B – Moves back to region A</i>
<i>11<sup>th</sup> Grade 2022-2023</i>	Practicum in Transportation Systems <b>Code E</b>	Aerospace Engineering <b>Code 6 (Aviation)</b>
<i>12<sup>th</sup> Grade 2023-2024</i>	No CTE Courses <b>Code E</b>	Scientific Research and Design <b>Code 7 (Aviation)</b>
<i>Program of Study</i>	58 - Maritime	56 – Aviation Flight
<i>Federal Career Cluster</i>	F17 - Transportation, Distribution, and Logistics	F17 - Transportation, Distribution, and Logistics

# Code E (CTE Explorers) Definition: Arthur and Diana (Cont.)



- Arthur dreams of working on a ship one day.
- He completes enough courses in the Maritime regional program of study to be a code 7 completer, even though his region is not approved for the program.
- When he completed enough courses in the sequence, his codes 6 and 7 at different points in time are changed to a code E.

Regional Program of Study Codes 6 & 7 Showing as a Code E in Un-Approved Region When a student completes enough regional program of study courses and completes a school year in a non-approved region, if they have enough credits to be coded a 6 or 7, their CTE Indicator code will revert to a Code E, until they are enrolled in an approved region for the program of study.	 <b>Arthur</b>	 <b>Diana</b>
		<i>Regional code E in one district in a non-approved region</i>
	Arthur is fascinated with the sea and aquatic life. He takes regional maritime program of study courses in a non-approved region., even though his region was never approved for the maritime regional program of study He is a code E..	Diana dreams of flying her own plane one day. She takes regional aviation courses in an approved region, moves to a non-approved region, and eventually moves back to her original approved region. She ends up a code 7.
6 <sup>th</sup> Grade 2017-2018	No CTE Courses <b>Code 4</b>	Introduction to Aerospace and Aviation <b>Code 5</b>
7 <sup>th</sup> Grade 2018-2019	Principles of Maritime Science <b>Code 5</b>	Introduction to Unmanned Aerial Vehicles <b>Code 6 (Aviation)</b>
8 <sup>th</sup> Grade 2019-2020	No CTE Courses <b>Code 5</b>	No CTE Courses <b>Code 6 (Aviation)</b> <i>Moves to region B in the summer</i>
9 <sup>th</sup> Grade 2020-2021	Maritime Science I <b>Code E</b>	<b>Code E</b> <i>No CTE Courses</i> <i>Code E (Aviation) in non-approved region B</i>
10 <sup>th</sup> Grade 2021-2022	Maritime Science II <b>Code E</b>	<b>Code E</b> <i>No CTE Courses</i> <i>Code E (Aviation) in non-approved region B – Moves back to region A</i>
11 <sup>th</sup> Grade 2022-2023	Practicum in Transportation Systems <b>Code E</b>	Aerospace Engineering <b>Code 6 (Aviation)</b>
12 <sup>th</sup> Grade 2023-2024	No CTE Courses <b>Code E</b>	Scientific Research and Design <b>Code 7 (Aviation)</b>
Program of Study	58 - Maritime	56 – Aviation Flight
Federal Career Cluster	F17 - Transportation, Distribution, and Logistics	F17 - Transportation, Distribution, and Logistics

- Diana starts a regional Aviation (Flight) program of study in an approved region and is coded a code 6 Concentrator at the end of the 7<sup>th</sup> grade.
- Diana moved to an un-approved region for the program; her code 6 reverts to a code E Explorer for the years she completes courses outside an approved region.
- Prior to her Junior year, over the summer Diana moved back to a district in the approved region. At the end of the 11<sup>th</sup> grade, she is coded a code 6 again.
- Diana completed enough courses in the program her Senior year to be coded a code 7 Completer.

- In the technical resources we provide some validation rules to assist with local code and report development.
- Validation rules are consistent with the requirements.

## Examples

- A student cannot be both a code 4 or code 5 AND a code E, 6 or 7 within the same year (mutually exclusive).
- A student cannot be both a code 6 and 7 in the same program of study in the same year.



# Closing



- [Career and Technical Education Program Information](#)
  - [Approved Statewide Programs of Study Frameworks](#)
  - [Approved Regional Programs of Study Frameworks](#)
  - [Frequently Asked Questions](#)
- [2020-2021 Texas Web Enabled Data Standards \(pending\) Technical Documentation](#)
  - Field version of Auto-Code requirements
  - Look-up reference tables
  - Student Scenarios
  - CTE Indicator Definitions One-page Document

See links above for resources.



# Where Can I Find More Information?

For more information contact the Statewide CTE Coordinators in the College, Career and Military Preparation Division, Texas Education Agency

## **Career and Technical Education**

College, Career, and Military Preparation Division  
1701 North Congress Avenue  
Austin, TX 78701-1401  
(512) 936-6060  
[CTE@tea.texas.gov](mailto:CTE@tea.texas.gov)