

MEMORANDUM

April 5, 2017

TO: Rick Cruz
Officer, HISD College and Career Readiness

FROM: Carla Stevens
Assistant Superintendent, Research and Accountability

SUBJECT: **CAREER AND TECHNICAL EDUCATION PROGRAM SUMMARY AND
STUDENT PERFORMANCE OUTCOMES, 2015–2016**

Attached is the 2015–2016 summative report on the Houston Independent School District's (HISD) Career and Technical Education (CTE) program. HISD CTE programs are tailored to prepare students to meet the current and future needs of Houston's industries. The purpose of this report is to provide an overview of the initiatives of the CTE program, academic outcomes on the State of Texas Assessments of Academic Readiness (STAAR) End-Of-Course (EOC) exams, and matriculation rates of CTE students in HISD.

Key findings include:

- There was a 12.2 percent increase in CTE enrollment overall from the 2014–2015 school year to the 2015–2016 school year. The number of CTE 2 and 3 students, who were enrolled in a coherent sequence, was 22,123 in 2015–2016, a 5.8 percent increase from the 2014–2015 school year. There was a 22.2 percent increase in the number of CTE 1 students who were enrolled in CTE classes as electives, from 13,232 in 2014–2015 to 16,168 in 2015–2016.
- Higher percentages of CTE students met the Level II: Satisfactory Student Standard on the 2016 Algebra I, English II, and U.S. History EOC exams.
- The percentage of CTE students from the ninth-grade cohort graduating from high school in a four-year period decreased from 91.5 percent in 2014 to 90.5 percent in 2015. These rates continue to exceed the graduation rates of the district as a whole.

Further distribution of this report is at your discretion. Should you have any further questions, please contact me at 713-556-6700.


CJS

Attachment

cc: Grenita Lathan
Michael Love



RESEARCH

Educational Program Report

**CAREER AND TECHNICAL EDUCATION PROGRAM
SUMMARY AND STUDENT PERFORMANCE
OUTCOMES, 2015-2016**

HISD

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CAREER AND TECHNICAL EDUCATION PROGRAM SUMMARY AND STUDENT PERFORMANCE OUTCOMES, 2015–2016

Executive Summary

The Houston Independent School District's (HISD) Career and Technical Education (CTE) programs are "specifically tailored to [prepare students to] meet the current and future needs of Houston's thriving industries (2016a). The program's goals and objectives focus on preparing students for success in their field of interest following graduation. The rigorous content was developed to assist students in grades six through twelve acquire knowledge and skills to apply to their selected field of interest (emerging profession). The program provides opportunities for early career application by allowing students to gain real world experience working with business collaborators and community stakeholders. Students learn interviewing techniques, communication skills, and portfolio/resumé development. Students also receive mentorship and guidance from teachers and business partners. This report provides summative information pertaining to: CTE enrollment trends, CTE program initiatives, STAAR End-of-Course 2016 performance of CTE students, and graduation and dropout trends.

Highlights

- There was a 12.2 percent increase in CTE enrollment overall from the 2014–2015 school year to the 2015–2016 school year. The number of CTE 2 and 3 students, who were enrolled in a coherent sequence, was 22,123 in 2015–2016, a 5.8 percent increase from the 2014–2015 school year. There was a 22.2 percent increase in the number of CTE 1 students who were enrolled in CTE classes as electives, from 13,232 in 2014–2015 to 16,168 in 2015–2016.
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 Algebra I EOC was 1.7 percentage points higher than the percentage of Non-CTE students who met the standard (66.9 percent vs. 65.2 percent).
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 Biology was lower than the percentage of Non-CTE students who met the standard (83.6 vs. 84.2 percent).
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 English I EOC was 1.5 percentage points lower than the percentage of Non-CTE students who met the standard (51.6 percent vs. 53.1 percent).
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 English II EOC was 7.1 percentage points higher than the percentage of Non-CTE students who met the standard (58.9 percent vs. 51.8 percent).
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 U.S. History EOC was 3.0 percentage points higher than the percentage of Non-CTE students who met the standard (92.1 percent vs. 89.1 percent).

- The percentage of CTE students from the ninth-grade cohort graduating from high school in a four-year period decreased from 91.5 percent in 2014 to 90.5 percent in 2015.

Recommendations

- The CTE Department should continue to provide a variety of program offerings and opportunities across career concentrations so that CTE students can select their career interests from a number of career pathways and participate in multiple career development experiences. The variety of course offerings available for students encourages career exploration and helps students to develop an awareness of future career opportunities.
- The percentages of CTE students from the ninth-grade cohort who graduated from high school in four-years remained consistently higher than the four-year longitudinal graduation rates of all HISD students for the past two years. Although slight increases were noted in both CTE and HISD results, annual dropout rates of CTE students continues to be lower than those of HISD students. Considering the higher longitudinal graduation rates and lower annual dropout rates of CTE students, efforts should continue to be made to increase the enrollment of high school students in CTE courses that allow students to focus on diverse career options. Early entry into the CTE program may help students develop vested interests in school and career-oriented activities such that graduation becomes a more realistic and attainable goal.
- Based on the 2016 STAAR EOC results, the rate of CTE students meeting the Advanced standard was lower than the Non-CTE students across all subject areas. However, the percentage of students meeting the Advanced standard was higher in Algebra I, English II, and U.S. History than the previous year. The CTE department is encouraged to continue both setting and supporting high expectations for students' performance and targeting subject areas that students experienced academic declines this report year.

Introduction

The Career and Technical Education program (CTE) in the Houston Independent School District (HISD) empowers students to compete in a global society through rigorous coursework relative to their career goals. The CTE curriculum is aligned with the state required Texas Essential Knowledge and Skills (TEKS) for Career and Technical Education, Chapter 130 and the TEKS for Career Development, Chapter 127 for High Schools. The program provides students with two paths to earn college credit: (1) Dual credit courses that allow students to earn both high school and college credit-hours simultaneously; and (2) Advanced Technical Credit courses that may be accepted for college-course credit after the student has enrolled at a participating college. Students graduate with marketable skills to apply to careers related to their concentration. The Texas Education Agency (TEA) has identified the following career concentrations that are implemented across the district:

- Agriculture, Food, & Natural Resources
- Architecture & Construction
- Arts, Audio/Video Technology & Communications
- Business, Management and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections, and Security
- Manufacturing
- Marketing
- Science, Technology, Engineering, and Mathematics (STEM)
- Transportation, Distribution, and Logistics

Appendix A, page 16 shows the list of the sixteen course concentrations paired with examples of related courses offered by the HISD CTE program (Houston Independent School District [HISD], 2016b).

Methods

Data Collection

- Descriptive data, including HISD student demographics and longitudinal enrollment figures in the CTE program, were obtained from the Public Education Information Management System (PEIMS). Within the program students were assigned a CTE code that indicated their level of enrollment in CTE courses. Students who were not enrolled in a CTE class were coded as “0”; students who took one or more CTE courses as electives were coded as “1”. Students enrolled in CTE courses that combine college preparation with the acquisition of technical skills as part of a coherent sequential plan of study were assigned a code of “2” or “3” (See **Appendix B, pg. 17**). The CTE program will be consolidating requirements for academic study plans 2 and 3 into one coded track, 2 in 2016–2017.

- This report included three student groups. The CTE group includes students who are enrolled in a coherent sequential plan of study — coded “2” or “3” and who had an Average Daily Attendance (ADA) eligibility classification other than ‘0’ — enrolled, no membership. Non-CTE data includes students who met the same ADA qualifications and were coded CTE “0” or “1”. HISD demographic data reflected all students who were eligible to participate in CTE courses (grades 6–12) and who met the same ADA qualifications. This information was grouped by CTE codes 1, 2, and 3 combined.
- In spring 2016, CTE students took the State of Texas Assessments of Academic Readiness (STAAR) End-of-Course (EOC) exams. The STAAR is a state-mandated, criterion-referenced assessment used to measure students’ achievement in English language arts (English I and English II), mathematics (Algebra I), science (Biology), and social studies (U.S. History). Frequency analyses were conducted in order to determine the proportion of first-time test takers—from grades ninth through twelfth—who met the Level II: Satisfactory Progression Standards and/or the Level III: Advanced Student Standards on the spring 2015 and spring 2016 EOC exams. The 2015 Level II Phase-in 1 Satisfactory Standard was increased to the 2016 Level II Satisfactory Progression Standard meaning that students taking an EOC in 2016 would have to answer more items correctly to “pass” the STAAR EOC exams than in the previous year (Houston Independent School District [HISD], 2016). STAAR results for CTE 2 and 3 coded students were combined to create the CTE student group, and the results for CTE 0 and 1 coded students were combined to create the non-CTE student group. Only the results of students who took the standard STAAR EOCs were included for analyses in this report. The performance standards set for the STAAR End-Of-Course assessments are as follows:
 - **Level I: Unsatisfactory Academic Performance** – students are inadequately prepared for the next grade or course.
 - **Level II: Satisfactory Academic Performance** – students are sufficiently prepared for the next grade or course.
 - **Level III: Advanced Academic Performance** – students are well prepared for the next grade or course (Texas Education Agency [TEA], 2013).
- CTE and HISD longitudinal graduation and annual dropout rates were obtained from the Texas Education Agency (2016) Accountability Completion, Graduation, and Dropout Summary reports and the TEA Performance-Based Monitoring Analysis System 2016 Report. CTE student data included students coded as CTE 2 and CTE 3 combined. The data reflect matriculation trends for HISD students in grades nine through twelve. The CTE matriculation data are based on the federal definitions without exclusions.

Limitations

- Students’ Average Daily Attendance (ADA) membership was not verified for data generated by the Texas Education Agency (TEA). As such, the results presented may not truly reflect the student groups’ 2015–2016 academic outcomes, longitudinal graduation rates, and annual dropout rates if ADA membership was factored in.

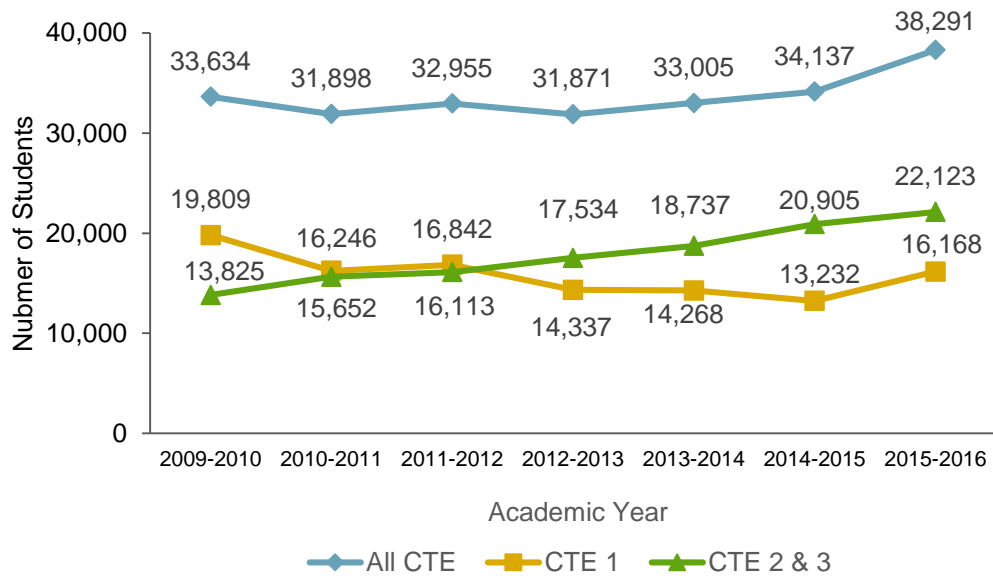
Results

What were the demographic characteristics of students enrolled in the CTE program over the past seven years, 2010–2016?

Figure 1 presents seven-year enrollment data by CTE program codes for 2009–2010 through 2015–2016. CTE student enrollment by program code can also be found in **Appendix C-Table 1 (pg. 19)**.

- Results in Figure 1 show that the enrollment for all CTE students was 38,291 in 2015–2016. This was a 12.2 percent increase in enrollment from the 2014–2015 school year. The number of CTE 2 (coherent sequence) and 3 (tech prep) students was 22,123 in 2015–2016, a 5.8 percent increase from the 2014–2015 school year. Similarly, there was a 22.2 percent increase in the number of CTE 1 students from 13,232 in 2014–2015 to 16,168 in 2015–2016.

Figure 1. Enrollment Trends by CTE Code, 2009–2010 through 2015–2016



Source: PEIMS Fall 2016 (Research Department Access Database); HISD TAPR Report 2015–2016.
Note. Figure was revised from the previous year report (2014–2015).

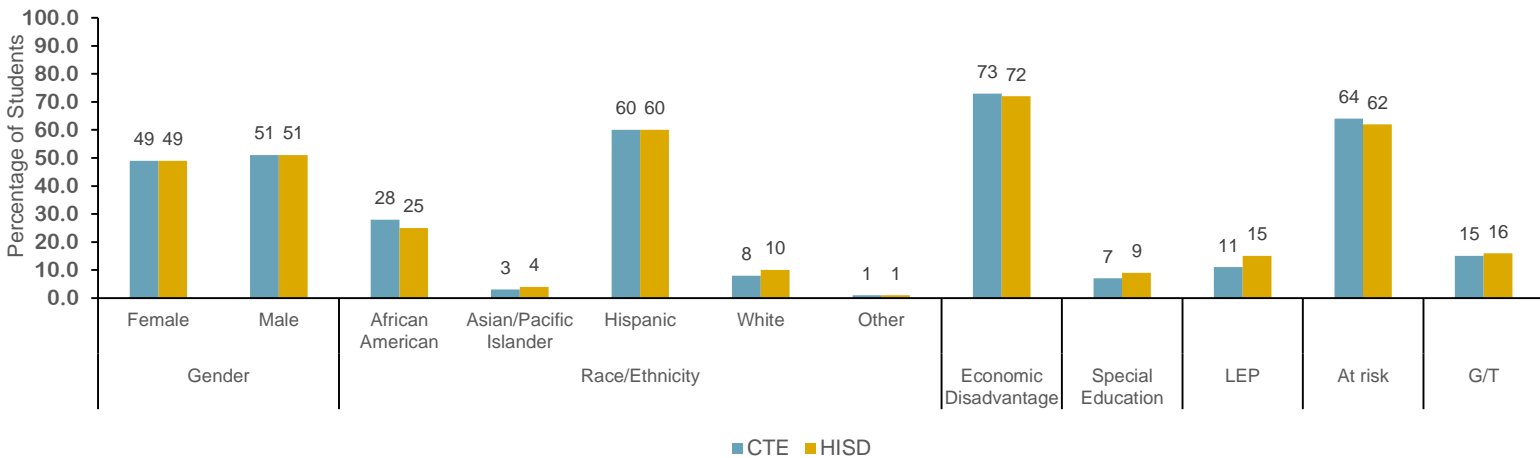
Enrollment by demographic information for CTE students (CTE codes 1, 2, and 3 combined) and all HISD students in eligible CTE grades (6th through 12th) are shown in **Figure 2. Appendix C-Table 2, pg. 20**, includes demographic data trends for the past two years.

- The ratio of female to male students enrolled in CTE program/classes (49:51) was the same as the ratio for HISD students (49:51) as displayed in Figure 2.
- There was a higher percentage of African American students enrolled in CTE programs (28 percent) compared to the overall percentage of HISD students who were African American (25 percent) in

grades six through twelve. A lower proportion of Asian and White students were enrolled in CTE programs compared to the HISD overall Asian and White student enrollment.

- There were higher percentages of CTE students identified as economically disadvantaged and/ at risk compared to the HISD overall student enrollment in grades six through twelve.
- There were lower percentages of CTE students identified as eligible for special education services, limited English proficient (LEP), and gifted and talented (G/T) compared to the enrollment percentage of these student groups across the district.
- Two-year data trends displayed in Table 2 (Appendix C-Table 2, pg. 20) revealed that the percentage of CTE and HISD students coded as economically disadvantaged in grades six through twelve slightly increased from 2014–2015 to 2015–2016 by 1.3 and 0.8 percent, respectively. Students in grades six through twelve within the district receiving special education services decreased by 0.2 percent, from 9.2 percent in 2014–2015 to 9.0 percent in 2015–2016. Similar trends were seen among CTE students where there was a 0.4 percent decrease in the percentage of students receiving special education services (7.6% to 7.2%).
- The percent of sixth through twelfth grade students identified as limited English proficient (LEP), increased from 2014–2015 to 2015–2016 (14.9% to 15.4%). The CTE program also experienced an increase of students identified as LEP by 0.7 percent from the 2014–2015 to 2015–2016 school years.

Figure 2. Percentage of CTE Students and HISD 6th–12th Grade Students by Demographic Group, 2015–2016



Source: PEIMS Fall 2016 (Research Department Access Database)

Note. The total enrollment for CTE students is N=38,291; HISD grades 6th–12th is N=93,193. Percentages may not total 100 due to rounding.

What were key CTE program initiatives implemented in HISD during the 2015–2016 academic year?

Under the umbrella of the Career Readiness department, HISD provided career awareness and technical education experiences to students in the 2015–2016 school year. Some key initiatives included: Broadening Work-Based Learning Opportunities through Business Partnerships, Providing Career Awareness to Elementary Students, Increasing Career Exploration Experiences for Middle School Students, Providing Print and Online Resources for Students and their Families, and Providing Additional Dual Credit Options for High School Students.

In addition to these key initiatives, the Career Readiness department offered a variety of programs through Career and Technical Education (CTE) coursework from which students could select a career pathway of study. Career pathways guide students in course selection regardless of their abilities, talents, or desired levels of education. By taking CTE courses, students are given opportunities to participate in hands-on training within their career pathway of interest. As such, HISD students engage in opportunities to explore career options and prepare for work and/or post-secondary education. The initiatives ensure that all CTE students develop career awareness within their selected course of study and receive exposure to professional experiences to develop mastery, confidence, and leadership skills. The following provides additional details regarding key initiatives in Career Readiness:

Broadening Work-Based Learning Opportunities through Business Partnerships:

Business partnerships provide students with enriching learning experiences, including one-on-one mentoring and real-world work opportunities. CTE students are invited to participate in field trips, site visits, and internships at local businesses. These businesses recognize the need to expose local students to various aspects of the world of work and the importance of on-the-job training experiences. Such experiences in 2015–2016 included serving as interns at Texas Children’s Hospital and Methodist Hospital and job shadowing at the Houston Emergency Center. HISD business partners, including Vaughn Construction, S&B Engineers, Lone Star College, Walmart, CVS Pharmacy, Exxon, Houston Community College, Kroger, Mustang CAT, Baker Hughes, and International Trucks of Houston continue to partner with district high schools to provide assistance such as paid and unpaid internships for students, classroom speakers, facility tours, teacher externships, and financial and human capital support for the annual When I Grow Up Career EXPO, hosted by the Career Readiness department.

Providing Career Awareness to Elementary Students:

HISD elementary school students are exposed to career exploration presentations to increase their career awareness and peak interest in various careers within the local labor market. The Career Cowboy provides students with interactive, music-filled demonstrations with information about various professions. Students also participate in activity stations and hands-on demonstrations that help them begin to develop connections between their skills, interests, and future career choices. In 2015–2016 year, the Career Cowboy visited 25 Elementary Schools and engaged 10,355 students in the Career Ready Wagon, a converted school bus filled with hands-on interactive stations in career exploration. Since 2012, 34,786 students have been exposed to career awareness activities through the Career Ready Wagon program.

Increasing Career Exploration Experiences for Middle School Students:

In 2015–2016, HISD increased middle school enrollment to 2,784 in three hybrid courses: Professional Communications, Principles of Information Technology, and Concepts of Engineering. The courses are designed to provide high school level credit in Information Technology or Engineering, while at the same time providing a specific curriculum that allows students to explore their own interests and aptitude as

related to careers. Students are then able to make more informed decisions about their high school and endorsement choices.

Providing Print and Online Resources for Students and their Families:

The Career Readiness Department maintains an engaging and up-to-date online platform (website) and provides printed and online career program materials (Career Program booklet) to better inform students, parents, teachers, and business partners about career programming throughout the district. The website presence is audience driven and targets three audience groups through key functions: PLAN (Students and Families), PREPARE (Teachers), and Partner (Businesses). The site can be visited at the following link: <http://www.hisdcareerreadiness.org>. Information regarding descriptions of Career and Technical Education Programs of study available can be found at the following link: <http://www.hisdcareerreadiness.org/plan/programs/>

When I Grow Up Career EXPO

During the 2015–2016 school year, the Career Readiness department held the fourth annual When I Grow Up Career EXPO to allow area students to explore career options and develop an awareness of the career opportunities available to them in Houston and Gulf Coast region. The free event included hands-on demonstrations, interactive presentations, and student competitions and was open to all K-12 students, parents, and the local community at large. The accomplishments of district CTE students were showcased as well as business and industry career opportunities available in the Houston and Gulf Coast region. Over 90 businesses and approximately 5,000 people attended the 2015–2016 event.

College Credit for CTE Students

The district offers two types of college credit options while in high school: Dual Credit and Advanced Technical Credit (ATC). Dual credit courses allow students to earn both high school and college credit hours simultaneously. These courses are developed and taught by college-approved instructors. No prerequisite classes are required to enroll in these courses. ATC courses are developed at the state level and are taught by local high-school teachers who receive specialized training. College credit for ATC courses is awarded once students enroll in a participating college or university. The ATC program provides an opportunity for students to receive credit at participating community colleges across Texas for taking specified enhanced technical courses during high school. ATC courses are only offered in technical or workforce areas.

Dual Credit and Advanced Technical Credit opportunities are offered on many high school campuses as well as at the eight campuses that offer a Futures Academy program. In collaboration with Houston Community College, students in a Futures Academy are able to earn an associate's degree or Level 1 certificate in a high-demand technical field. In the 2015–2016 school year, 91 Futures Academy students earned an Associate's degree and 27 Futures Academy students earned a Level 1 Certificate. Additionally in 2015–2016, 446 CTE students entered into Dual Credit sequences to work towards earning their Level 1 Certificates in high-demand, high-growth, and high-wage career fields.

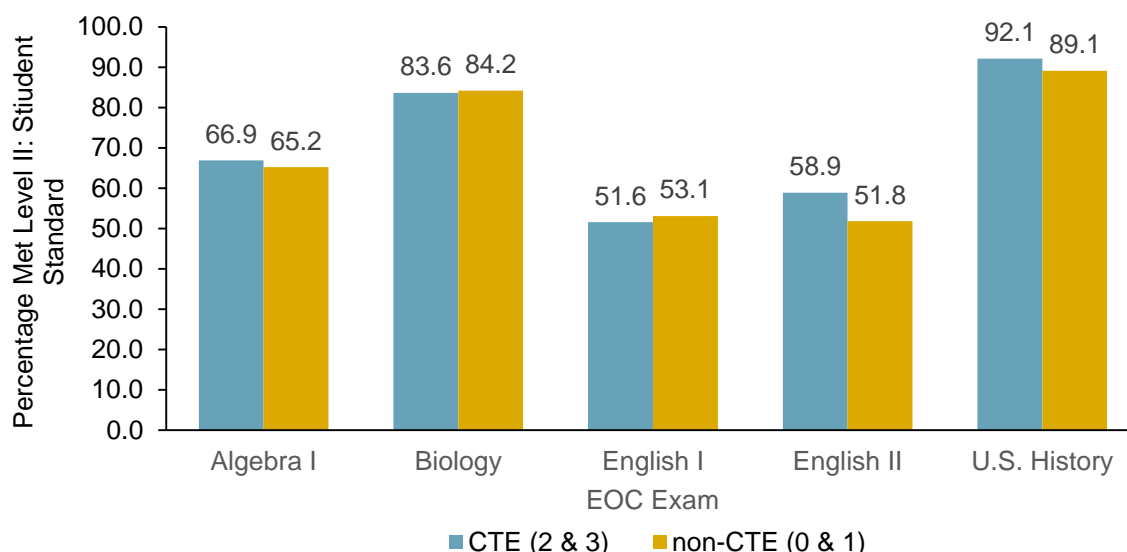
Career and Technology Student Organizations (CTSO)

CTE students are encouraged to join student organizations that are directly related to their selected career pathway. These organizations offer students opportunities to develop leadership and teamwork skills that help prepare them for the workforce and/or for postsecondary education and training. HISD has developed several partnerships with local, regional, and national professional organizations to allow school-level student organizations to participate fully in related activities of these organizations and to benefit from their professional memberships. Some of these organizations include the Business Professionals of America

(BPA), Future Business Leaders of America (FBLA), Family, Career and Community Leaders of America (FCCLA), Health Occupations Students of America (HOSA), Skills USA, and the Technology Student Association (TSA). In the 2015–2016 school year, 2,236 students participated in district CTE student organization activities.

What were the academic performance results of 9th through 12th grade students enrolled in the CTE program compared to non-CTE students in HISD over the past two school years, 2014–2015 and 2015–2016?

Figure 3. Percent Met Level II: Satisfactory Student Standard for 9th through 12th grade CTE and non-CTE students on the STAAR EOC Exams, Spring 2016



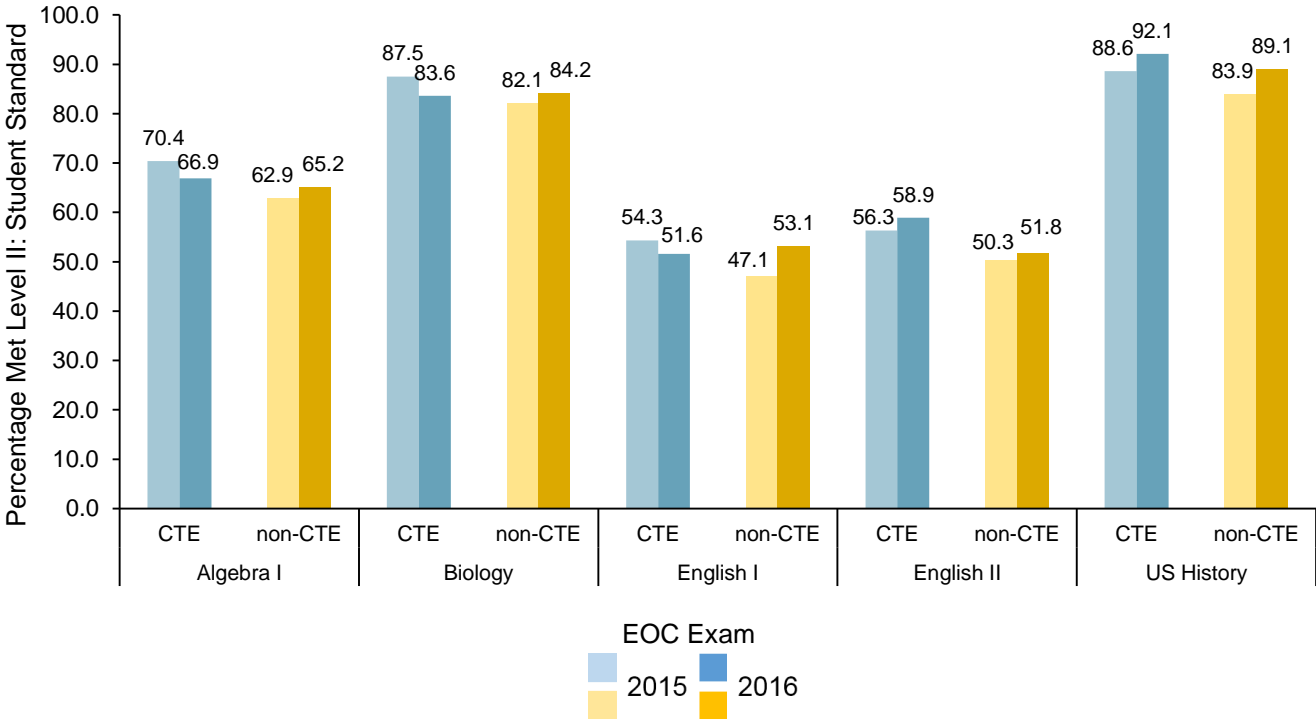
Source. STAAR EOC Spring 2015–2016; PEIMS 2014–2016 HISD student databases (Research Department Access Database)

The STAAR End-of-Course (EOC) comparative results of ninth through twelfth grade CTE students (code 2 and 3 combined) and non-CTE ninth through twelfth grade students (Codes 0 and 1 combined) in the district are presented in **Figure 3**. CTE codes 2 and 3 represent students who were on track to earn a CTE certification or license based on their CTE curriculum sequence. The STAAR EOC measures academic performance in Algebra I, Biology, English I, English II, and U.S. History. The percentage of ninth through twelfth grade students who met the Level II: Satisfactory Student Standard on the 2016 STAAR EOC assessments by CTE status and subject are shown below. The following data trends indicated that:

- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 Algebra I EOC was 1.7 percentage points higher than the percentage of non-CTE students who met the standard (66.9 percent vs. 65.2 percent).

- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 Biology EOC was lower than the percentage of non-CTE students who met the standard by 0.6 percentage points (83.6 vs. 84.2 percent).
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 English I EOC was 1.5 percentage points lower than the percentage of non-CTE students who met the standard (51.6 percent vs. 53.1 percent).
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 English II EOC was 7.1 percentage points higher than the percentage of non-CTE students who met the standard (58.9 percent vs. 51.8 percent).
- The percentage of CTE students who met the Level II: Satisfactory Student Standard on the 2016 U.S. History EOC was 3.0 percentage points higher than the percentage of non-CTE students who met the standard (92.1 percent vs. 89.1 percent).

Figure 4. Percent Met Level II: Satisfactory Student Standard for 9th through 12th grade CTE and non-CTE students on the STAAR EOC Exams, Spring 2015 and Spring 2016



Source: STAAR EOC Spring 2016 and PEIMS Fall 2016 (Research Department Access Databases)

- When examining the performance of the students who met the Level III: Advanced standard on the EOC assessments in 2016, CTE students trailed behind non-CTE student in all content areas. The largest differences between the CTE and Non-CTE students was in Biology, English I, and U.S. History.

CTE students scored 8.8 percentage points lower than non-CTE students in Biology, 6.2 percentage points lower in English I, and 5.3 percentage points lower in U.S. History (Appendix C, Tables 3a and 3b, pg. 21).

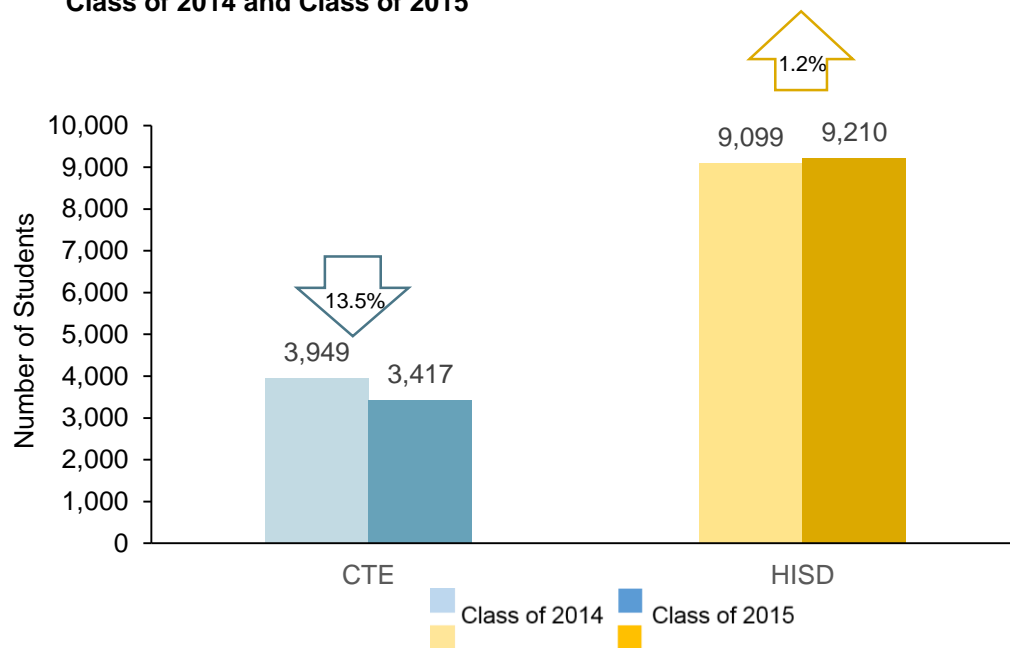
Figure 4 displays a two-year comparative performance trend between the CTE and non-CTE students on the Algebra I, Biology, English I, English II, and U.S. History STAAR EOC exams (Appendix C, Tables 3a and 3b, pg. 21). The 2014–2015 results were obtained from the previous annual report.

- Students in the CTE program performed consistently better than Non-CTE students in both 2014–2015 and 2015–2016 on the STAAR EOC Algebra I, English II, and U.S. History assessments. Non-CTE students outperformed CTE students on the 2016 STAAR EOC Biology and English I assessments.
- The percentage of CTE students who met the Level II: Satisfactory Student Standards between 2014 –2015 and 2015–2016 increased on the English II and U.S. History assessments. The percentages of non-CTE who met standard increased between 2014–2015 and 2015–2016 in all subjects on the STAAR EOC.

What were the longitudinal graduation and annual dropout rates for students enrolled in the CTE program compared to HISD students districtwide from 2013–2014 to 2014–2015?

Longitudinal graduation rates

Figure 5. CTE and HISD Longitudinal Graduate Counts Based on Ninth Grade Cohorts, Class of 2014 and Class of 2015

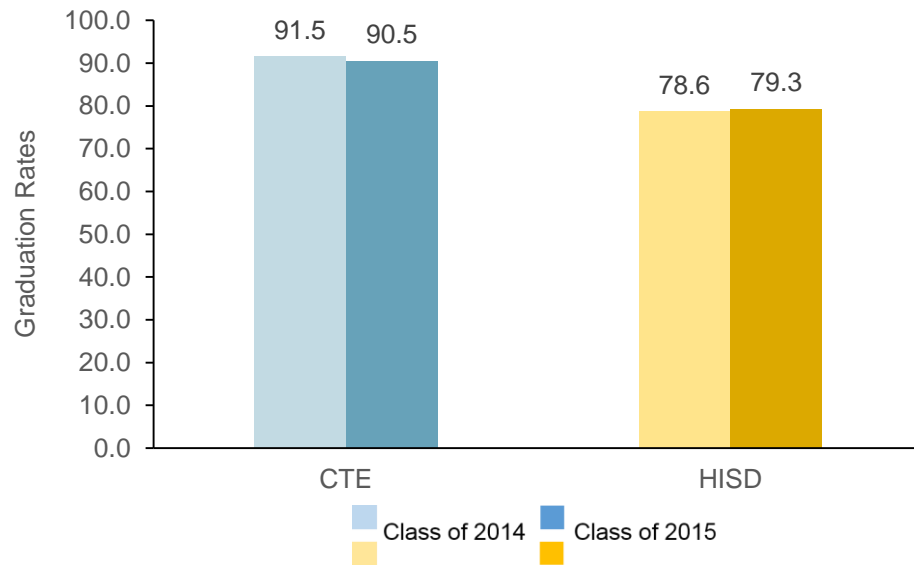


Source: Texas Education Agency, *Class of 2014 and 2015 Four-Year Longitudinal Summary Reports*.
 Note. No statutory exclusions applied for state accountability for PBMAS reporting.

The longitudinal graduation rates represent the percentage of students from a class of first-time ninth graders who complete their high school education by their anticipated graduation. **Figures 5 and 6** display the four-year longitudinal graduation counts and rates for students coded as CTE (codes 2 and 3 combined) and all HISD students for the 2014 and 2015 graduating classes. Graduation rates for the 2015–2016 school year will be available in 2016–2017. Students who enrolled in CTE courses as a general elective and who were coded as CTE 1 are not included, as these students are enrolled in CTE classes, but are not on a CTE plan to complete the CTE program.

- There was a 13.5 percent decrease in the total number of CTE graduates from the ninth-grade cohort during a four-year period from 3,949 graduates in the spring of 2014, to 3,417 graduates in the spring of 2015. For the corresponding period, the number of all HISD graduates increased by 1.2 percent, from 9,099 to 9,210 graduates.
- The percentages of CTE students from the ninth-grade cohort graduating from high school in a four-year period decreased from 91.5 percent (3,949 of 4,316 students) in 2014 to 90.5 percent (3,417 of 3,774 students) in 2015. The percentage of all HISD students in the ninth-grade cohort graduating from high school in a four-year period increased from 78.6 percent in 2014 to 79.3 percent in 2015. For each year displayed, the percentage of CTE students graduating from high school in the four-year period was at least 11.2 percentage points higher than that of the district.

Figure 6. CTE and HISD Longitudinal Graduation Rates Based on Ninth Grade Cohorts, Class of 2014 and Class of 2015



Source: Texas Education Agency, *Class of 2014 and 2015 Four-Year Longitudinal Summary Reports*.
 Note. No statutory exclusions applied for state accountability for PBMAS reporting.

Diploma Distinctions

Twelfth-grade students could earn one of four diploma distinctions based on the level and quantity of credits acquired during high school. These four diploma types are Completion of Individualized Education Plan

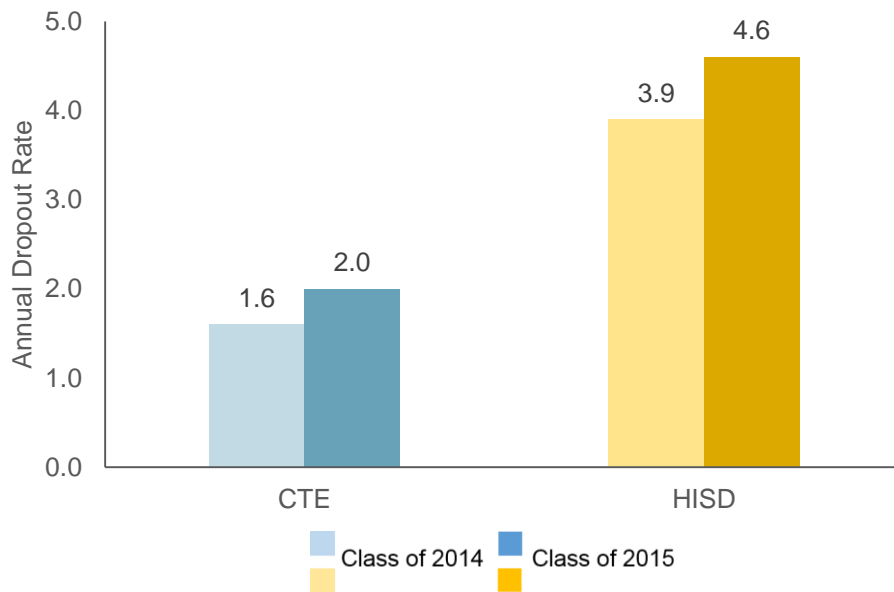
(IEP), Regular/Minimum, Recommended, Distinguished Achievement, and Transitional/Foundational High School Program (**Appendix C, Table 4, pg. 22**). **Appendix D** shows the corresponding codes used to compute percentages for each diploma distinction (**pg. 23**)

- The majority of CTE students who graduated earned the Recommended diploma in the spring of 2015 (82.4 percent). This was 0.9 percentage points higher than the percentage for CTE students who graduated with Recommended diploma in spring 2014 (81.5 percent). A higher percentage of CTE students earned a Recommended diploma in both 2014 and 2015 compared to the all students in HISD (Appendix C, Table 4, pg. 22).
- The percentage of CTE students who graduated with a Distinguished Achievement diploma increased between the class of 2014 and the class of 2015 (4.6 percent vs. 5.3 percent). A lower percentage of CTE students earned a Distinguished Achievement diploma in both 2014 and 2015 compared to the all students in HISD (Appendix C, Table 4, pg. 22).

Annual Dropout Rates

Figure 7 shows the annual dropout rates¹ (grades 9 through 12) for CTE (codes 2 and 3 combined) and HISD students for the 2013–2014 and 2014–2015 school years. Data for the 2015–2016 school year will not be available until June 2017.

Figure 7. CTE (2 and 3 combined) and HISD Annual Dropout Rates, Grades 9 through 12, 2013–2014 and 2014–2015



Source: TEA Performance-Based Monitoring Analysis System Report (PBMAS), 2016; TEA, Completion, Graduation, and Dropouts data, 2013–2015

¹ The annual dropout rate is the number of students that dropped out of school in grades nine through twelve in a particular school year divided by the number of students enrolled in that particular school year. Only students with PEIMS CTE status codes 2 (coherent sequence) or 3 (tech prep) are included in the calculation of this indicator.

- In 2013–2014, the annual dropout rate of the CTE students was 1.6 percent and increased to 2.0 percent in 2014–2015. The annual dropout rates for HISD students was 3.9 percent in 2013–2014 and increased to 4.6 percent in 2014–2015.

Summary

The HISD CTE program offers career concentration courses and career pathways in which students are equipped with the academic and technical skills required to successfully enter the workforce and post-secondary education after high school graduation. Many CTE students earn certifications and/or licensures as evidence of skill mastery in selected career concentrations. Participation of CTE students in organizations fosters their development of leadership skills, while exposure to mentors and business partners provides students guidance and practical experiences. Results indicated CTE students outperformed their Non-CTE peers on the Algebra I, English II, and U.S. History 2016 STAAR EOC exams, experiencing a notable increase in the percent of students meeting the Satisfactory standard from the previous school year on the latter two exams. However, the percent of Non-CTE students who met both Satisfactory and Advanced standards increased across all subject areas from the previous year, surpassing CTE student percentages for meeting Advanced standards. Longitudinal graduation rates among CTE students continue to be higher than the district rates with at least 90 percent of CTE students graduating in spring of 2014 and 2015. Conversely, the annual dropout rates among CTE students continues to be lower than the district rates for the 2014–2015 school year (2.0 percent vs. 4.6 percent).

Recommendations

- The CTE Department should continue to provide a variety of program offerings and opportunities across career concentrations so that CTE students can select their career interests from a number of career pathways and participate in multiple career development experiences. The variety of course offerings available for students encourages career exploration and helps students to develop an awareness of future career opportunities.
- The percentages of CTE students from the ninth-grade cohort who graduated from high school in four-years remained consistently higher than the four-year longitudinal graduation rates of all HISD students for the past two years. Although slight increases were noted in both CTE and HISD results, annual dropout rates of CTE students continues to be lower than those of HISD students. Considering the higher longitudinal graduation rates and lower annual dropout rates of CTE students, efforts should continue to be made to increase the enrollment of high school students in CTE courses that allow students to focus on diverse career options. Early entry into the CTE program may help students develop vested interests in school and career-oriented activities such that graduation becomes a more realistic and attainable goal.
- Based on the 2016 STAAR EOC results, the rate of CTE students meeting the Advanced standard was lower than the Non-CTE students across all subject areas. However, the percentage of students meeting the Advanced standard was higher in Algebra I, English II, and U.S. History than the previous year. The CTE department is encouraged to continue both setting and supporting high expectations for students' performance and targeting subject areas that students experienced academic declines this report year.

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APPENDIX A
Career Concentrations and Related Courses*, 2015–2016

Career Concentration	Sample of Related Courses
Agriculture, Food & Natural Resources	Animal Science Horticulture Science and Resource Management Agricultural Mechanics
Architecture & Construction	Structural Design and Engineering Building Maintenance Construction Technology Plumbing HVAC Electrical Technology
Arts/AV Technology & Communications	Printing and Imaging Audio/Video Production Graphic Design and Engineering
Business, Management and Administration	Human Resources Business Management
Education and Training Services	Education and Training
Finance	Accounting Banking and Securities
Government and Public Administration	Political Science
Health Science	Health Science Technology Biomedical Technology
Hospitality and Tourism	Culinary Arts Hotel and Restaurant Management
Human Services	Cosmetology
Information Technology	Computer Networking Computer Programming Digital Media and Web Technologies Geographic Information Systems Telecommunications and Networking
Law, Public Safety, Corrections and Security	Court Systems Firefighter/EMT Forensic Science Law Enforcement and Corrections
Manufacturing	Precision Metal Manufacturing Welding Engineering
Marketing, Sales and Service	Retail Management
Science, Technology, Engineering and Mathematics	Robotics Engineering
Transportation, Distribution and Logistics	Automotive Technology Logistics and Global Supply Aviation Technology Maritime Studies

*Complete listing of courses for each program can be found at <http://www.hisdcareerreadiness.org/prepare/pathways/course/>

Appendix B

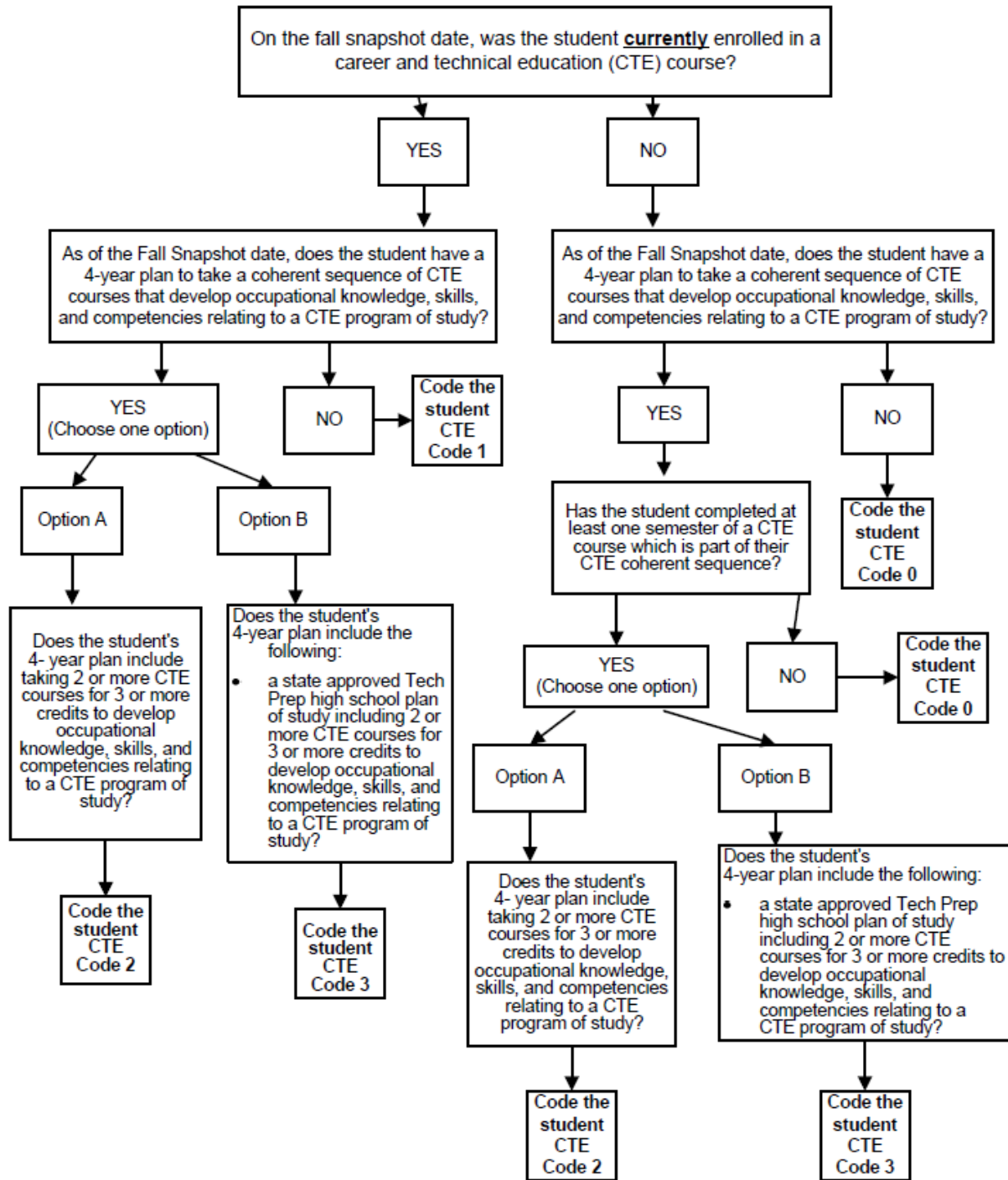
*PEIMS 2015–2016 Data Standards – Career and Technical Education Indicator Codes

Code	Translation
	When assigning the Career and Technical Indicator Code, include enrollment in all Career and Technical Education (CTE) courses, regardless of course funding weight
0	Not Enrolled In A CTE Course
1	<p>Enrolled In A CTE Course A student in grades 6-8 who is taking a CTE course as of the fall snapshot date or completed a CTE course by the end of the school year.</p> <p>A student in grades 9-12 who is taking a CTE course as of the fall snapshot date or completed a CTE course by the end of the school year, and the student's 4-year plan of study does not outline a coherent sequence of courses in CTE</p>
	The following codes are for students who on the fall snapshot date: (a) have a 4-year plan to take a coherent sequence (2 or more CTE courses for 3 or more credits) of courses in CTE, and (b) are enrolled in or have completed a semester of CTE course(s), which are part of their CTE coherent sequence of courses. If a student's 4-year plan changes, then the student could go from a code 2 or 3 to a 0 or 1 in a subsequent school year
2	<p>Participant In A Coherent Sequence Of Courses A student in grades 9-12 who is enrolled in a sequential course of study, which develops occupational knowledge, skills, and competencies relating to a CTE program of study. The student must have a 4-year plan of study to take 2 or more CTE courses for 3 or more credits</p>
3	<p>Participant In Tech Prep Program A student in grades 9-12 who follows a state approved Tech Prep high school plan of study leading to postsecondary education and training. The student must have a 4-year secondary plan of study that includes a CTE coherent sequence of courses of 2 or more CTE courses for 3 or more credits. The plan must provide at least one option for articulated and/or concurrent credit at the postsecondary level.</p>

Source: Retrieved from the Texas Education Agency at http://tea.texas.gov/Reports_and_Data/Data_Submission/PEIMS/PEIMS_Data_Standards/2015-2016_Data_Standards/

Note. Code 3 will remain in place for the 2015–2016 school year and then be removed for the 2016-2017 school year. New edits are in place for the 2015–2016 school year that restrict certain students from being reported with CTE code 3

Career and Technical Education Indicator Code Fall Snapshot Decision Chart (E0031)



Appendix C

Table 1. Student Enrollment by CTE Codes, 2014–2015 and 2015–2016

	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016
Total HISD Student Enrollment (6th – 12th)	87,826	87,244	87,418	90,630	92,355	93,193
CTE Student Enrollment						
Number of CTE Students Coded 1	16,246	16,842	14,337	14,268	13,232	16,168
Number of CTE Students Coded 2	13,709	12,283	14,858	17,843	20,856	22,121
Number of CTE Students Coded 3	1,943	3,830	2,676	894	49	2
Total Number of CTE Students	31,898	32,955	31,871	33,005	34,137	38,291

Source. PEIMS 2014–2016 HISD student databases (Research Department Access Database Access)

Table 2. CTE Students (Codes 1, 2, and 3) and HISD, 6th–12th Grade Students by Demographic Group, 2014–2015 and 2015–2016

Subgroup	Academic Year			
	2014–2015		2015–2016	
	N	%	N	%
HISD 6th through 12th Grade Student Enrollment	92,355	100	93,193	100
Gender				
Female	45,348	49.1	46,011	49.4
Male	47,007	50.9	47,182	50.6
Ethnicity				
American Indian	208	<1.0	236	<1.0
Asian/Pacific Islander	3,470	3.7	3,576	3.8
African-American	23,541	25.5	23,281	25.0
Hispanic	55,616	60.2	56,211	60.3
White	8,803	9.5	9,065	10.0
Two or More	717	<1.0	824	<1.0
Economically Disadvantaged	65,586	71.0	66,920	71.8
At Risk	59,516	64.4	57,900	62.1
Special Education	8,521	9.2	8,351	9.0
Limited English Proficiency	13,790	14.9	14,385	15.4
Gifted & Talented (G/T)	14,569	15.8	14,868	16.0
Total CTE Student Enrollment				
	34,137	100	38,291	100
Gender				
Female	16,742	49	18,802	49.1
Male	17,395	51	19,489	50.9
Ethnicity				
American Indian	70	<1.0	106	<1.0
Asian/Pacific Islander	1,151	3.5	1,234	3.4
African-American	9,665	28.3	10,607	27.7
Hispanic	20,866	61.1	23,047	60.2
White	2,183	6.4	3,017	7.9
Two or More [†]	212	<1.0	280	<1.0
Economically Disadvantaged	24,568	72.0	28,061	73.3
At Risk	23,848	69.9	24,422	63.8
Special Education	2,583	7.6	2,763	7.2
Limited English Proficiency	3,640	10.7	4,351	11.4
Gifted & Talented (G/T)	5,259	15.4	5,553	14.5

Source. PEIMS 2014–2016 HISD student databases (Research Department Access Databases)

Table 3a. Percent of 9th–12th Grade Students who met Level II: Satisfactory Student Standard and Advanced Standard by STAAR EOC Subject and CTE Status, Spring 2016

	N	% Satisfactory	% Advanced
CTE (Codes 2 & 3)			
Algebra I	5,056	66.9	9.7
Biology	5,884	83.6	11.5
English I	7,594	51.6	3.7
English II	7,394	58.9	4.6
US History	4,572	92.1	22.1
Non-CTE (Codes 0 & 1)			
Algebra I	5,166	65.2	12.1
Biology	6,265	84.2	20.3
English I	8,251	53.1	9.9
English II	7,405	51.8	7.9
US History	6,114	89.1	27.4

Source. STAAR EOC Spring 2016 and PEIMS Fall 2016 (Research Department Access Databases)

Table 3b. Percent of 9th–12th Grade Students who met Level II: Satisfactory Student Standard and Advanced Standard by STAAR EOC Subject and CTE Status, Spring 2015

	N	% Satisfactory	% Advanced
CTE (Codes 2 & 3)			
Algebra I	4,518	70.4	9.1
Biology	5,514	87.5	14.2
English I	6,699	54.3	6.3
English II	6,581	56.3	3.5
US History	4,518	88.6	20.5
Non-CTE (Codes 0 & 1)			
Algebra I	6,011	62.9	8.2
Biology	6,976	82.1	13.7
English I	8,843	47.1	7.0
English II	7,058	50.3	5.1
US History	5,896	83.9	24.1

Source. STAAR EOC Spring 2015 and PEIMS Fall 2015 (Research Department Access Databases)

Table 4. Percent of CTE Graduates by Diploma Type, Spring 2014 and Spring 2015

	Type of Diploma	2014		2015	
		N	%	N	%
CTE Code 2 and 3	Completion of Individualized Education Plan	66	1.6	92	2.7
	Regular/Minimum ¹	488	12.2	287	8.3
	Recommended	3,261	81.5	2,860	82.4
	Distinguished Achievement	183	4.6	184	5.3
	Transitioning ²	3	<0.1		
	Foundation High School Program			46	1.3
HISD	Completion of Individualized Education Plan	398	4.2	393	4.0
	Regular/Minimum ¹	1,376	14.4	1,294	13.3
	Recommended	7,026	73.5	7,217	74.1
	Distinguished Achievement	757	7.9	624	6.4
	Transitioning ²				
	Foundation High School Program			212	2.2

Source: District and School Profiles, 2014–2015 and 2015–2016; HISD 2013–2015 Graduate files (Access); PEIMS 2013–2015 HISD student databases (Access)

Note ¹Students who completed received special education services graduate in a minimum high school program under TAC Chapter 74 with curriculum content modifications through the student’s individualized education program (IEP).

²Transitioning students are students who are completing the fourth/final year of high school during the 2013–2014 school year and chose to earn a Foundation High School Program diploma. These students will graduate under TAC Chapter 74.

³Includes all ADA eligibility codes; no statutory exclusions applied for state accountability.

Appendix D

*PEIMS 2015–2016 Data Standards – Graduation Indicator Codes

Code Table ID	Name	Date Issued	Date Updated
C062	GRADUATION-TYPE-CODE	04/10/89	03/01/14
Code	Translation		
	<p>The following codes will apply only to students receiving special education services. These students will graduate in a minimum high school program under TAC Chapter 74 with curriculum content modifications through the student’s individualized education program (IEP).</p>		
04	Completion Of IEP And Full-Time Employment With Sufficient Self-Help Skills To Maintain Employment Without Public School Services TAC §89.1070(b)(3)(A), revised August 22, 2011		
05	Completion Of IEP And Demonstrated Mastery Of Specific Employability And Self-Help Skills TAC §89.1070(b)(3)(B), revised August 22, 2011		
06	Completion Of IEP And Access To Services, Employment, Or Education Outside Of Public Education TAC §89.1070(b)(3)(C), revised August 22, 2011		
07	Completion Of IEP And Reached Age 22 TAC §89.1070(b)(4), revised August 22, 2011		
	<p>The following codes will apply only to students receiving special education and related services.</p>		
18	Completion Of Minimum Curriculum And Credit Requirements For Graduation Applicable To Students In General Education And Participated In The Exit-Level Assessment Instrument Identified In The IEP – Minimum High School Program TAC §89.1070(b)(2), revised August 1, 2002. [27 Tex. Reg. 3103] (for students who entered grade 9 in 2001-2002 through 2013-2014)		
19	Completion Of Minimum Curriculum And Credit Requirements For Graduation Applicable To Students In General Education And Participated In The Exit-Level Assessment Instrument Identified In The IEP – Recommended High School Program TAC §89.1070(b)(1), revised August 1, 2002. [27 Tex. Reg. 3103] (for students who entered grade 9 in 2001-2002 through 2006-2007)		
20	Completion Of Minimum Curriculum And Credit Requirements For Graduation Applicable To Students In General Education And Participated In The Exit-Level Assessment Instrument Identified In The IEP – Distinguished Achievement Program		

Code Table ID	Name	Date Issued	Date Updated
C062	GRADUATION-TYPE-CODE	04/10/89	03/01/14
Code	Translation		
	TAC §89.1070(b)(1), revised August 1, 2002. [27 Tex. Reg. 3103] (for students who entered grade 9 in 2001-2002 through 2006-2007)		
21	<p>The following codes will apply only to students entering grade 9 in 2001-2002, 2002-2003, and 2003-2004. These students will graduate under TAC Chapter 74</p> <p>Minimum High School Program TAC Chapter 74.42, revised June 2000; for students who entered grade 9 in 2001-2002, 2002-2003, and 2003-2004 (including TAC §89.1070(b)(2) for students receiving special education services, revised August 1, 2002 [26 Tex. Reg. 1837])</p> <p>22 Recommended High School Program TAC Chapter 74.43, revised June 2000; for students who entered grade 9 in 2001-2002, 2002-2003, and 2003-2004 (including TAC §89.1070(b)(1) for students receiving special education services, revised August 1, 2002 [26 Tex. Reg. 1837])</p> <p>23 Distinguished Achievement Program TAC Chapter 74.44, revised June 2000; for students who entered grade 9 in 2001-2002, 2002-2003, and 2003-2004 (including TAC §89.1070(b) (1) for students receiving special education services, revised August 1, 2002 [26 Tex. Reg. 1837])</p> <p>The following codes will apply only to students entering grade 9 in 2004-2005, 2005-2006, 2006-2007. These students will graduate under TAC Chapter 74.</p> <p>24 Minimum High School Program TAC Chapter 74.52, revised November 2003; for students who entered grade 9 in 2004-2005 and thereafter (including TAC §89.1070(b)(2) for students receiving special education services, revised August 1, 2002)</p> <p>25 Recommended High School Program TAC Chapter 74.53, revised November 2003; for students who entered grade 9 in 2004-2005 and thereafter (including TAC §89.1070(b) (1) for students receiving special education services, revised August 1, 2002)</p> <p>26 Distinguished Achievement Program TAC Chapter 74.54, revised November 2003; for students who entered grade 9 in 2004-2005 and thereafter (including TAC §89.1070(b) (1) for students receiving special education services, revised August 1, 2002)</p>		

Code Table ID	Name	Date Issued	Date Updated
C062	GRADUATION-TYPE-CODE	04/10/89	03/01/14
Code	Translation		
	<p>The following codes will apply only to students entering grade 9 in 2007-2008, 2008-2009, 2009-2010, 2010-2011 and 2011-2012. These students will graduate under TAC Chapter 74.</p>		
27	<p>Minimum High School Program TAC Chapter 74.62, revised September 1, 2005; including TAC §89.1070(b)(2) for students receiving special education services, revised August 1, 2002. (for students who entered grade 9 in 2007-2008, 2008-2009, 2009-2010, 2010-2011, and 2011-2012)</p>		
28	<p>Recommended High School Program TAC Chapter 74.63, revised September 1, 2005; including TAC §89.1070(b) (1) for students receiving special education services, revised August 1, 2002. (for students who entered grade 9 in 2007-2008, 2008-2009, 2009-2010, 2010-2011, and 2011-2012)</p>		
29	<p>Distinguished Achievement Program TAC Chapter 74.64, revised September 1, 2005; including TAC §89.1070(b) (1) for students receiving special education services, revised August 1, 2002. (for students who entered grade 9 in 2007-2008, 2008-2009, 2009-2010, 2010-2011, and 2011-2012)</p>		
	<p>The following codes will apply only to students entering grade 9 in 2012-2013 and 2013-2014. These students will graduate under TAC Chapter 74.</p>		
30	<p>Minimum High School Program TAC Chapter 74.72, revised May 30, 2012; including TAC §89.1070(b)(2) for students receiving special education services, revised August 1, 2002. (for students who entered grade 9 in 2012-2013 and 2013-2014)</p>		
31	<p>Recommended High School Program TAC Chapter 74.73, revised May 30, 2012; including TAC §89.1070(b) (1) for students receiving special education services, revised August 1, 2002. (for students who entered grade 9 in 2012-2013 and 2013-2014)</p>		
32	<p>Distinguished Achievement Program TAC Chapter 74.74, revised May 30, 2012; including TAC §89.1070(b) (1) for students receiving special education services, revised August 1, 2002. (for students who entered grade 9 in 2012-2013 and 2013-2014)</p>		

Code Table ID	Name	Date Issued	Date Updated
C062	GRADUATION-TYPE-CODE	04/10/89	03/01/14
Code	Translation		
33	<p>The following code will apply only to students who are completing the fourth/final year of high school during the 2013-2014 school year and chose to earn a Foundation High School Program diploma. These students will graduate under TAC Chapter 74.</p> <p>Foundation High School Program (Transitioning Students) TAC Chapter 74.1022, revised December 16, 2013; including TAC §89.1070(b)(2) for students receiving special education services, revised August 1, 2002. (for students who are completing the fourth/final year of high school during the 2013-2014 school year)</p>		
34	<p>The following code applies to all students entering grade 9 in 2014-2015 and thereafter, or who entered grade 9 prior to the 2014-2015 school year and opted to graduate under the Foundation High School Program. These students will graduate under TAC Chapter 74.</p> <p>Foundation High School Program TAC Chapter 74.1021, revised December 16, 2013, TAC 74.12; including TAC §89.1070(b)(1) for students receiving special education services, revised August 1, 2002. (for students who entered grade 9 in 2014-2015 and thereafter or entered grade 9 prior to the 2014-2015 school year and opted to graduate under the Foundation High School Program)</p>		

Source: Texas Education Agency, 2014–2015 Data Standards, retrieved from http://tea.texas.gov/Reports_and_Data/Data_Submission/PEIMS/PEIMS_Data_Standards/2014-2015_Data_Standards/