

## Purpose

The purpose of this document is to explore a range of student Career and Technical Education (CTE) scenarios in detail to help local education agencies and vendors better understand the logic behind the TEA CTE autocalculations. This document complements the Illustrated Scenarios document, which explores a wider range of scenarios at a higher level.

**Note:** in all scenarios below students must either complete a single semester CTE course OR the last semester of a multi-semester course in order to have the course count toward CTE indicator calculation. All scenarios reflect students passing all courses unless noted otherwise.

- For codes 5 (Participant) and code E (Explorer) students must complete but do not have to pass courses.
- For codes 6 (Concentrator) and code 7 (Completer) students must complete the course and pass the course.

**Example:** In Amanda's freshman (9<sup>th</sup> grade) year she completes the first semester of a two-semester course in Principles of Arts, A/V Technology, and Communications. In her sophomore (10<sup>th</sup> grade) year she completes the second semester of the course. The course would not count toward CTE indicator calculation until she completed the last semester (2<sup>nd</sup>) of the two-semester course.

For more information on course sequence codes, contact your local TSDS PEIMS coordinator and discuss C135 (COURSE-SEQUENCE-CODE) [TSDS Web-Enabled Data Standards](#) table information.

## Scenarios

### Student 1: Code 4 – not participating in CTE

Ben focuses on academics and football in high school and does not take any CTE courses. Ben never takes a CTE course and is coded a 4 (Not CTE) each year for his high-school career.

Ben	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	None	None	None	None
Annual Reported CTE Indicator Code	Code 4	Code 4	Code 4	Code 4

### Student 2: Code 5 - participating in CTE

Susan is on the swim team and takes one course in Arts and A/V but no other CTE courses. In her freshman year she completes Principles of Arts, A/V Technology, and Communications and is coded a 5 (Participant). She does not take or complete any other CTE courses in high school and remains reported a code 5 each subsequent year.

Susan	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Principles of Arts, A/V Technology, and Communications	None	None	None
Annual Reported CTE Indicator Code	Code 5	Code 5	Code 5	Code 5

### Student 3: Code E – exploring CTE

Jack is interested in becoming an artist and writer. Jack takes a few courses in different programs of study but never concentrates or completes a program of study. In his freshman year he completes Principles of Arts, A/V Technology, and Communications and is coded a 5 (Participant). His sophomore year he completes the Entrepreneurship course (which is in a different program of study and career cluster) and is coded an E (Explorer). He is coded an E (Explorer) because he completed two or more high school CTE courses for two or more credits in different programs of study, and therefore is not a participant, concentrator, or completer. He does not take or complete any other CTE courses in high school and remains reported a code E (Explorer) each subsequent year.

Jack	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Principles of Arts, A/V Technology, and Communications	Entrepreneurship	None	None
Annual Reported CTE Indicator Code	Code 5	Code E	Code E	Code E

### Student 4: Code 6 – concentrating in the Emergency Services program of study

Johnny wants to be a firefighter and takes a couple of courses in the Emergency Services program of study but does not complete the sequence. Johnny completes Principles of Law, Public Safety, Corrections, and Security in his freshman year and is coded a 5 (Participant). In his sophomore year he completes a course in the same program of study - Firefighter I. At this point Johnny is coded a 6 (Concentrator) because he completes, passes, and receives credit in 2 or more CTE courses for at least 2 credits within the same program of study. He does not take or complete any other CTE courses in high school and remains reported a code 6 (Concentrator) in the Emergency Services program of study each subsequent year.

Johnny	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Law, Public Safety, Corrections, and Security	Firefighter I	None	None
Annual Reported CTE Indicator Code	Code 5	Code 6 (Emergency Services)	Code 6 (Emergency Services)	Code 6 (Emergency Services)

### Student 5: Code 7 – completing the Engineering program of study

Reed is interested in science and takes math and physics courses, and he completes a sequence in the Engineering program of study. Reed completes Principles of Applied Engineering in his freshman year and is coded a 5 (Participant). In his sophomore year he completes a course in the same program of study - Manufacturing Engineering Technology I. At this point Reed is coded a 6 (Concentrator) because he completes, passes, and receives credit in 2 or more CTE courses for at least 2 credits within the same program of study. His junior year Reed completes the Digital Electronics course in the same program of study, but because he did not complete 4 or more credits in the same program of study, he is still coded a 6 (Concentrator) until he completes enough courses in the program of study and receives 4 or more credits. In his senior year Reed completes Engineering Design and Development (PTLW) in the program of study sequence. Because Reed completes at least one level 3 or 4 course and meets all other “completer” definitions, he is coded a code 7 (Completer).

Reed	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Principles of Applied Engineering	Manufacturing Engineering Technology I	Digital Electronics	Engineering Design and Development (PTLW)
Annual Reported CTE Indicator Code	Code 5	Code 6 (Engineering)	Code 6 (Engineering)	Code 7 (Engineering)

### Student 6: Code 6 - concentrating in the Biomedical Science program of study while completing courses from other programs of study

After being bitten by a spider, Peter becomes fascinated with science. Peter completes Principles of Applied Engineering his freshman year and is coded a 5 (Participant). He then completes Principles of Biomedical Science his sophomore year. Because this second course is from a different program of study, he is coded an E (Explorer) at this time. His junior year he takes Biotechnology I. Because this course is also in the Biomedical Science program of study course sequence, he is coded a 6 (Concentrator) in this program of study. He does not take another CTE course and remains a code 6 (Concentrator) his senior year.

Peter	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Principles of Applied Engineering	Principles of Biomedical Science	Biotechnology I	None
Annual Reported CTE Indicator Code	Code 5	Code E	Code 6 (Biomedical Science)	Code 6 (Biomedical Science)

## Student 7: Code 6 – concentrating in the Engineering program of study while completing courses from other programs of study

Shuri is interested in science and technology. Shuri completes Principles of Applied Engineering her freshman year and is coded a 5 (Participant). She then completes Manufacturing Engineering Technology I her sophomore year. Because this second course is also in the Engineering program of study course sequence, she is coded a 6 (Concentrator) in this program of study. In her junior year Shuri becomes interested in the military and completes a CTE course in National Security. While this is also a CTE course, it is in a different program of study than Engineering. Since she was already a code 6 (Concentrator) in the Engineering program of study, she remains a code 6 in this program of study. In her senior year Shuri completes a CTE course in Scientific Research and Design. Because this course is one credit, she has not completed 3 or more CTE courses for 4 or more credits within the same program of study, and therefore remains a code 6 (Concentrator).

Shuri	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Principles of Applied Engineering	Manufacturing Engineering Technology I	National Security	Scientific Research and Design
Annual Reported CTE Indicator Code	Code 5	Code 6 (Engineering)	Code 6 (Engineering)	Code 6 (Engineering)

### Student 8: Code 7 – completing the Engineering program of study while concentrating in the Aviation Maintenance program of study

Carol always dreamed of flying in the military. Carol completes both Principles of Applied Engineering and Introduction to Aircraft Technology in her freshman year. Because these two courses are from different programs of study, she is coded an E (Explorer) at the end of her freshman year. Her sophomore year she completes both Manufacturing Engineering Technology I and Occupational Safety & Environmental Technology I. Because the one course is from the Engineering program of study and the other course is from the Aviation Maintenance program of study, and the first two courses she took are also from those programs of study, she is a code 6 (Concentrator) in two programs of study at this time. In her junior year she completes Aerospace Engineering (PLTW). While she completes, passes, and receives credit for three CTE courses in the Engineering program of study, the total credits for these three courses only totals 3 credits; she would need to total 4 or more credits with at least one level 3 or 4 course to be coded a 7 (Completer). Therefore, at the end of her junior year she is still coded a 6 (Concentrator) in both programs of study. In her senior year she completes the Scientific Research and Design course. This last level 4 course adds enough credits to code her a 7 (Completer) in the Engineering program of study. She also remains a code 6 (Concentrator) in the Aviation Maintenance program of study as well.

Carol	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Principles of Applied Engineering Introduction to Aircraft Technology	Manufacturing Engineering Technology I Occ. Safety & Env. Tech. I	Aerospace Engineering (PLTW)	Scientific Research and Design
Annual Reported CTE Indicator Code	Code E	Code 6 (Engineering) Code 6 (Aviation Maintenance)	Code 6 (Engineering) Code 6 (Aviation Maintenance)	Code 7 (Engineering) Code 6 (Aviation Maintenance)

### Student 9: Code 7 – completing the Aviation Flight regional program of study after failing one course

James wants to join the U.S. Marine Corps, fly helicopters, and explore engineering. His freshman year James completes and passes both Introduction to Aerospace and Aviation and Introduction to Aircraft Technology courses and is a code 6 (Concentrator). His sophomore year James completes and passes Introduction to Unmanned Aerial Vehicles and is still a code 6 (Concentrator). His junior year James completes but fails\* (due to excessive absences) program of study course Aviation Ground School. At the end of his 3<sup>rd</sup> year, while James completes 3 or more courses for 4 or more credits with one or more a level 3 or 4 course, failing one of the courses keeps him from progressing to a code 7 (Completer) at this time. His senior year James completes and passes Aerospace Engineering. Because James passes and completes this course, he meets all criteria to be coded a code 7 (Completer) in the Aviation Flight regional program of study.

James	9 <sup>th</sup> Grade CTE Courses	10 <sup>th</sup> Grade CTE Courses	11 <sup>th</sup> Grade CTE Courses	12 <sup>th</sup> Grade CTE Courses
CTE Courses Completed	Introduction to Aerospace and Aviation Introduction to Aircraft Technology	Introduction to Unmanned Aerial Vehicles	Aviation Ground School (completed but failed the course)	Aerospace Engineering
Annual Reported CTE Indicator Code	Code 6 (Regional - Aviation Flight)	Code 6 (Regional - Aviation Flight)	Code 6 (Regional - Aviation Flight)	Code 7 (Regional - Aviation Flight)

\*To progress to a code 6 or 7 from a lower code value, a student must both pass and complete each course. A student can complete a course and still fail due to multiple reasons. For more information on Pass/Fail Credit Indicator codes, contact your local TSDS PEIMS coordinator and discuss C136 (PASS/FAIL-CREDIT-INDICATOR-CODE) [TSDS Web-Enabled Data Standards](#) table information.