

Career and Technical Education (CTE) Course Substitutions: The Who, What, When, Why and How

What are CTE course substitutions and Who can use them?

Rule 6A-1.09963, Florida Administrative Code (F.A.C.), permits students with disabilities who are using one of the standard high school diploma options outlined in section 1003.4282(10), Florida Statutes, (F.S.), to substitute Career and Technical Education (CTE) courses with “content related” for the following courses:

1. English 4
2. One math (excluding Algebra 1 and Geometry)
3. One science (excluding Biology 1)
4. One social studies (excluding U.S. History)

The high school diploma options referenced in section 1003.4282(10)(F.S.), which are only available to students with disabilities, are the standard diploma via *Academic and Employment Requirements* or via Access Courses (24-credit or 18-credit). Students pursuing the standard diploma via *Academic and Employment Requirements* have additional requirements to consider. Besides the traditional requirements for the 24-credit and 18-credit standard diplomas (Graduation Options Chart: http://project10.info/Documents/24-Credit_and_18-Credit_Grad_Options_Chart_03.30.2020.FINAL.pdf), students pursuing this option must:

1. Earn at least one-half credit in an employment-based course.
 - a. Exceptional student education (ESE) courses may be included.
 - b. Must be paid employment.
2. Document achievement of academic and employment competencies on an Employment Transition Plan. This plan is required for the *Academic and Employment Requirements* graduation option only. <http://www.fldoe.org/core/fileparse.php/7567/urlt/EmploymentPlanTemplate.doc>.
 - a. The student, parent and employer must sign the plan.
 - b. The plan will include the work schedule and minimum hours per week; academic and employment competencies the student will develop; the criteria for evaluating, industry certifications, if any; and the supervision the school district will provide.

Please note, there are some CTE course substitutions available to all students, with or without a disability. For example, Principles of Agribusiness (8009120) and Agricultural Sales and Services (8116010) can fulfill the economics requirement for all students. Below are the CTE courses that fulfill the **equally rigorous science requirement**:

- 8106810 Agriscience Foundations 1
- 8106860 Agricultural Biotechnology 3
- 8112010 Aquaculture 2
- 8112020 Aquaculture 3
- 3027010 Biotechnology 1
- 3027020 Biotechnology 2

- 8708110 Principles of the Biomedical Sciences
- 8708120 Human Body Systems
- 8708130 Medical Interventions
- 8006120 Introduction to Alternative Energy
- 8600580 Aerospace Technologies I
- 8600680 Aerospace Technologies II
- 8601780 Aerospace Technologies III

When and Why should CTE course substitutions be considered?

The January 2019 Project 10 Topical Brief was dedicated to Career and Technical Education -

http://project10.info/Documents/January_2019_Topical_Brief_Career_and_Tech.pdf. In this Topical Brief, modified occupational completion points (MOCPs) were available for use. With the new B.E.S.T. Standards, occupational completion points (OCPs) will no longer be used as a performance measure. Therefore, MOCPs will not be used as a performance measure. However, students with more significant disabilities may continue to access CTE courses with modifications and should be documented in the IEP by the IEP team.

Pursuing CTE programs/courses provides students with the opportunities to do the following:

- Develop competencies required for specific industries/careers.
- Plan for a career based on interests and preferences.
- Develop leadership skills.
- Develop decision-making competencies in career and life.

IEP teams should take into consideration CTE options when discussing students' postsecondary goals—it may be the most appropriate/beneficial pathway to achieve them.

CTE course substitutions expand a student's opportunity to earn a high school diploma while helping support job readiness and the application of skills during high school. If a high school student with a disability is struggling to pass one of the courses that are eligible for CTE course substitutions, this option may make the difference of whether that student graduates with his/her cohort. For students entering high school who have historically struggled throughout their education, knowing that this option exists may give them hope and motivation as they start their road to graduation.

It is important to note that planning for CTE course substitutions can take time, especially if the CTE course being considered has not been reviewed yet for academic alignment to the specific core course. Reviewing CTE courses for academic alignment to a specific core course will need to be noted in the student's IEP and the appropriate graduation path recorded. Transition IEP teams should discuss the Academic and Employment Requirements standard diploma option with students and their families and begin planning as soon as possible if the student plans to pursue this graduation pathway (e.g. ensure the student has paid employment in order to complete the Employment Transition Plan).

How do districts accurately identify CTE courses that can be substituted for a specific academic course requirement?

The Florida Department of Education (FDOE) Bureau of Education and Student Services (BEES) created a guidance document regarding **CTE Course Substitutions** in August 2015.

<http://www.fldoe.org/core/fileparse.php/7571/urlt/CTEsubstitutions.pdf>

Information regarding CTE course substitutions, and the diploma options available only to students with disabilities, is also included in the FDOE Technical Assistance Paper (TAP), *High School Graduation Options for Students with Disabilities* (April 2016). <http://www.fldoe.org/academics/exceptional-student-edu/beess-resources/technical-assistance-papers-memos-note.stml>

In 2014 the FDOE began checking for alignment by comparing the CTE curriculum frameworks to the course standards and alignment tables were embedded within the CTE curriculum frameworks. The legislation did not state how much alignment is required for a CTE course to be considered “content related.” This means a course with 1% alignment would be acceptable. With the new standards, districts will need to conduct their own course alignments through collaboration with content specialists, ESE and CTE stakeholders.

CTE curriculum frameworks are updated annually and must be reviewed for alignment each year; course standards can also potentially change. The FDOE is in the process of adopting and implementing the new Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards. More information regarding the roll out of the new standards, including the timeline, can be found in the FDOE’s Memorandum:

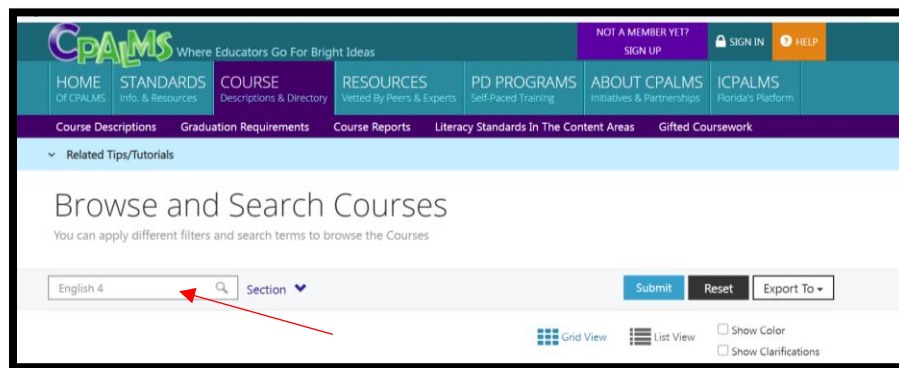
<https://info.fldoe.org/docushare/dsweb/Get/Document-8838/dps-2020-26.pdf>. Due to the forthcoming implementation of the new B.E.S.T. Standards, the 2020-2021 CTE curriculum frameworks do not contain any alignment tables. Each of the 2020-2021 CTE curriculum frameworks contain the following statement:

Academic Alignment - Secondary Career and Technical Education courses are pending alignment to the B.E.S.T. (Benchmarks for Excellent Student Thinking) Standards for English Language Arts (ELA) and Mathematics that were adopted by the State Board of Education in February 2020. Academic alignment is an ongoing, collaborative effort of professional educators that provide clear expectations for progression year-to-year through course alignment. This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses.

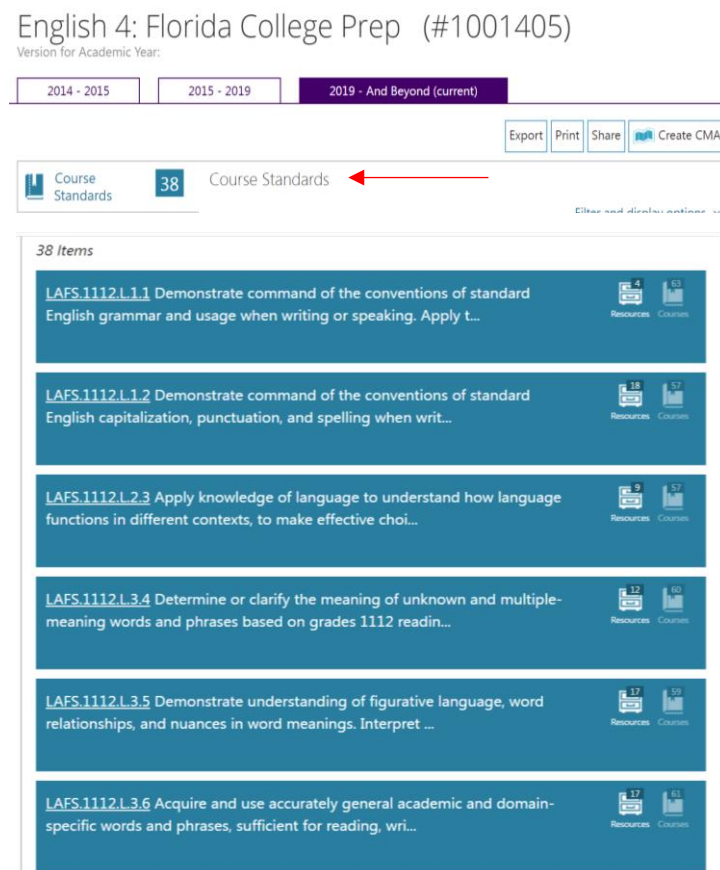
How does this impact CTE course substitutions for students with disabilities pursuing a standard diploma via *Academic and Employment Requirements* or via *Access Courses*? In order for districts to use a CTE course substitution they will need to complete their own review. Past CTE Curriculum Frameworks that have already been reviewed and found to have alignment may be helpful, and some districts have already gone through the process with certain courses and may be able to share; however, a current review by the district would still need to be conducted and process and approval documented.

There is flexibility in how districts complete and document their review for alignment; however, there are some basic elements which are discussed in detail below.

1. Ensure the individuals reviewing for alignment are considered content experts.
This includes a core content area expert (e.g. teacher, department head, district instructional supervisor in the specific area, etc.) and a CTE content expert. The course alignment content experts will change based on the courses that are being aligned. It will be helpful to provide some background information regarding why the CTE course alignment is important and how it can positively impact student outcomes. Please note, additional supports can be used in the process, such as a Staffing Specialist.
2. Prepare for the alignment review by using CPALMS to identify the standards for the course that is being checked for alignment and the CTE Curriculum Frameworks to find the standards/benchmarks of the CTE course being reviewed.
 - a. Find the course that is being considered for the CTE course substitution via the CPALMS Course Descriptions and Directory: <https://www.cpalms.org/Public/search/Course>. We are going to search for English 4.



- b. Each course will have a list of course standards. For English 4 there are 38 course standards.



- c. Go to the CTE Curriculum Frameworks web page - <http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/>; click on the link to access the CTE curriculum frameworks for the current year (2020-2021) - <http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/>; select the Career Cluster for the CTE course in consideration—we have selected “Architecture & Construction”.

2020-21 CTE CURRICULUM FRAMEWORKS

The Career & Technical Education (CTE) Programs section is responsible for developing and maintaining educational programs that prepare individuals for occupations important to Florida's economic development. Each program is aligned to a career cluster and is detailed in curriculum frameworks. With partners from education, business and industry, and trade associations, the curriculum frameworks include program standards that are both academically integrated and responsive to business and industry. To determine in which cluster a particular program is assigned, you may view an alphabetical list of all [Secondary/Career Certificate CTE programs](#) (RTF) or [AS/AAS/CCC programs](#) (RTF).

Click on one of the career clusters listed below to access a curriculum framework.

- [Agriculture, Food & Natural Resources](#)
- [Architecture & Construction](#)
- [Arts, A/V Technology & Communication](#)
- [Business, Management & Administration](#)
- [Education & Training](#)
- [Energy](#)
- [Engineering & Technology Education](#)
- [Finance](#)
- [Government & Public Administration](#)
- [Health Science](#)
- [Hospitality & Tourism](#)
- [Human Services](#)
- [Information Technology](#)
- [Law, Public Safety & Security](#)
- [Manufacturing](#)
- [Marketing, Sales & Service](#)
- [Transportation, Distribution & Logistics](#)
- [Additional CTE Programs/Courses](#)
 - [Diversified Education](#)
 - [Instructional Support Services \(Special Needs\)](#)
 - [Other Career and Technical Education Programs](#)

- d. CTE Course substitutions are only available in courses under: “Secondary Courses/Programs”. Select the course that you are considering for the course substitution. We selected “Building Construction Technologies”.

2020-21 CTE CURRICULUM FRAMEWORKS

Architecture & Construction

For more information about these curriculum frameworks, contact [David Mueller](#), State Supervisor of Construction Education at 850-245-9016.

[Architecture & Construction Home](#)

Middle School Courses

- [Fundamentals of Architecture & Construction \(8130300\)](#) (RTF)
- [Introduction to Architecture & Construction \(8109350\)](#) (RTF)
- [Introduction to Architecture & Construction and Career Planning \(8109360\)](#) (RTF)
- [Orientation to Career Clusters \(8000400\)](#) (RTF)

Secondary Courses/ Programs

- [Air-Conditioning, Refrigeration and Heating Technology \(8723000\)](#) (RTF)
- [Architectural Drafting \(8101100\)](#) (RTF)
- [Brick and Block Masonry \(8722900\)](#) (RTF)
- [Building Construction Technologies \(8720300\)](#) (RTF)
- [Building Trades & Construction Design Technology \(8722000\)](#) (RTF)
- [Cabinetmaking \(8104400\)](#) (RTF)
- [Carpentry \(8104300\)](#) (RTF)
- [Civil Engineering Aide \(8915000\)](#) (RTF)
- [Drafting \(8725000\)](#) (RTF)
- [Electricity \(8727200\)](#) (RTF)
- [Painting and Decorating \(8721500\)](#) (RTF)
- [Plumbing \(8105500\)](#) (RTF)
- [Civil and Surveying Drafting \(8101200\)](#) (RTF)

Career Certificate Programs

- [Brick and Block Masonry \(I463112\)](#) (RTF)
- [Building Construction Technologies \(I460401\)](#) (RTF)
- [Building Trades & Construction Design Technology \(C100100\)](#) (RTF)
- [Cabinetmaking \(C410400\)](#) (RTF)

- e. A Word file with the specific CTE Curriculum Framework will download; click to open. The document has multiple sections:

- i. The first section includes the Program Title and Type, Career Cluster, Purpose, and Program Structure. The screenshot below shows the Program Structure for Building Construction Technologies 1-7.

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8720310	Building Construction Technologies 1	AC HEAT ME @7 7G	1 Credit	49-9071	2	
8720320	Building Construction Technologies 2	BLDG CONST @7 7G	1 Credit		2	
8720330	Building Construction Technologies 3	BLDG MAINT @7 7G	1 Credit		3	
8720340	Building Construction Technologies 4	CARPENTRY @7 7G	1 Credit		2	
8720350	Building Construction Technologies 5	DRAFTING @7 7G	1 Credit		2	
8720360	Building Construction Technologies 6	ELECTRICAL @7 7G	1 Credit		2	
8720370	Building Construction Technologies 7	ENG 7G	1 Credit		2	
		PLUMBIN @7 7G				
		SHEETMETAL @7 7G				
		TEC CONSTR @7 7G				
		TEC DRAFT 7G				
		TROWEL TR 7G				

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

- ii. The second section includes the “Common Career Technical Core—Career Ready Practices”.
- iii. The third section includes a list of the CTE course standards. In the screenshot below you will note that there are 36 standards for Building Construction Technologies 1-7.

<u>Standards</u>	
After successfully completing this program, the student will be able to perform the following:	
01.0	Demonstrate the importance of health, safety and environmental management systems in organizations and their importance to organizational performance and regulatory compliance.
02.0	Investigate the construction industry and explore related occupations.
03.0	Select and use basic hand tools.
04.0	Select and use power tools and describe their proper operation.
05.0	Demonstrate mathematics knowledge and skills relevant to the construction industry.
06.0	Read and interpret construction drawings.
07.0	Frame floor systems based on drawing and specification requirements.
08.0	Frame walls and ceilings based on drawing and specification requirements.
09.0	Frame a roof based on drawing and specification requirements.
10.0	Analyze construction components, materials, hardware and characteristics.
11.0	Demonstrate masonry skills.
12.0	Erect, plumb and brace a simple concrete form with reinforcement.
13.0	Place concrete.
14.0	Demonstrate welding knowledge and skills (optional).
15.0	Understand construction documents, contract documents and specifications.
16.0	Select the appropriate heavy equipment for a given task. (optional)
17.0	Identify local, state and federal codes and regulations.
18.0	Perform site preparation and maintenance.
19.0	Estimate project costs and schedule construction activities for a specific job.
20.0	Investigate sustainability issues related to the design, construction and maintenance of the built environment.
21.0	Complete a construction project using skills learned in the program
22.0	Install roofing materials.
23.0	Install exterior finishes.
24.0	Explain the importance of employability and entrepreneurship skills.
25.0	Demonstrate interior carpentry skill.
26.0	Install cabinets.
27.0	Prepare and apply finishes to surfaces.
28.0	Build stairs.
29.0	Troubleshoot, repair and install plumbing systems.
30.0	Demonstrate knowledge of Drain, Waste and Vent (DWV) systems.
31.0	Measure, cut and join plastic piping.
32.0	Properly measure, ream, cut and join copper piping.
33.0	Demonstrate electrical safety.
34.0	Troubleshoot, repair and install electrical systems.
35.0	Research the Heating, Ventilation and Air-Conditioning (HVAC) profession.
36.0	Maintain, repair and install HVAC systems.

- iv. The fourth section breaks the standards by each individual course—in this case, there are 7—and then includes the benchmarks for each standard. The screenshot below shows some of

the CTE Standards and Benchmarks for Building Construction Technologies 1 (Course #8720310). This course has 9 of the 36 standards, and there are 67 benchmarks in total.

2020 – 2021

**Florida Department of Education
Student Performance Standards**

Course Title: Building Construction Technologies 1
Course Number: 8720310
Course Credit: 1

Course Description:

The purpose of this course is to develop the competencies essential to the building construction industry. These competencies include skills and knowledge related to safety practices, the proper use of hand and power tools, plan reading, basic rough carpentry and framing.

CTE Standards and Benchmarks	
01.0	Demonstrate the importance of health, safety and environmental management systems in organizations and their importance to organizational performance and regulatory compliance--The student will be able to:
01.01	Understand the role and the purpose of the Occupational Safety and Health Administration (OSHA) rules and regulations.
01.02	Identify and locate Safety Data Sheets (formerly called Material Safety Data Sheets (MSDS)) and follow the procedures as necessary.
01.03	While using a safety data sheet, identify health-related problems that may result from exposure to work-related chemicals and hazardous materials, and demonstrate knowledge of the proper precautions required for handling such materials.
01.04	Describe "Right-to-Know" Law as recorded in (29 CFR-1910.1200)
01.05	Identify and use safety equipment and personal protective equipment (PPE).
01.06	Describe personal and jobsite safety rules and regulations that maintain safe and healthy work environments.
01.07	Explain emergency procedures to follow in response to workplace accidents.
02.0	Investigate the construction industry and explore related occupations--The student will be able to:
02.01	Demonstrate an understanding of the relationship between construction and the environment.
02.02	Describe the role of trade unions in the construction industry.
02.03	Research apprenticeship opportunities.
02.04	Identify the different classifications of construction projects.
02.05	Define the roles and responsibilities of the general contractor, specialty contractor, construction management and design build firms.

- v. The final section of the CTE Curriculum Framework document contains “Additional Information” such as Academic Alignment, which was already referenced, and Accommodations. Below is an excerpt from the accommodations section; please note, only students taking Access courses are able to have CTE courses modified:

Accommodations - Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student’s Individual Educational Plan (IEP) or 504 plan or postsecondary student’s accommodations’ plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education[ESE]) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

3. Document the results of the alignment review.

Once you have identified your content experts and pulled the standards for the core course and the standards/benchmarks for the CTE course you are ready to roll! The Columbia County School District (CCSD) shared their process for using CTE course substitutions to benefit students with disabilities. These are some ideas to consider as you plan your own process:

- a. Create a district document/template that is shareable. CCSD selected to use a Google Doc but there are additional options, such as Microsoft Office 365, OneNote and others.
 - b. Include a title page/header for your document. At a minimum this should include: the title and number of the CTE course, the name of the core course (e.g. English 4), and the school year (e.g. 2020-2021). Districts may want to include a description of the CTE course as well.
 - c. Indicate the name of the school district somewhere within the document (e.g. title page, a signature page, etc.).
4. To create the alignment table, copy the CTE standards and benchmarks from the CTE Curriculum Framework and paste them into the shared document.
- Add a column to the right of the CTE standards and benchmarks. Label the left column, “CTE Standards/Benchmarks” and the right column heading should indicate the core course being reviewed for the corresponding standards. The following sample is shared from the CCSD review of their Welding Technologies 4 and English 4 alignment table.

English 4 Florida Standards	
CTE Standards and Benchmarks	Course Code: English 4 Standards
11.0 Demonstrate an understanding of employability skills and career opportunities related to the welding industry.--The student will be able to:	
11.01 Demonstrate knowledge of good workplace behavior and how to address improper workplace behavior.	LAFS.1112.W.3.7 Conduct short as well as more sustained research projects to answer a question
11.02 Discuss motivation and human behavior.	LAFS.1112.L.1.1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking LAFS.1112.SL.1.1 Initiate and participate effectively in a range of collaborative discussions LAFS.1112.W.3.7 Conduct short as well as more sustained research projects to answer a question
11.03 Develop a personal stress management plan.	LAFS.1112.W.3.7 Conduct short as well as more sustained research projects to answer a question

5. There are two options for completing the alignment table; there is some flexibility in the process, but these will provide some foundation:
- a. The first option involves scheduling a time to meet with the core team and content area experts; ensure each participant has access to the standards/benchmarks for the CTE class and the standards for the core class, and the district alignment document; and then review the documents together and document the correlation on the district’s form.
 - b. The second option involves one person with adequate knowledge of both the CTE standards/benchmarks and the core course standards to *preliminarily* identify the correlation and note on the district form. The preliminary draft document would then be shared with the content experts for their review and feedback. With a shared document the content experts can also make edits as needed.

- As a best practice districts should note the staff who were involved in the review of the standards/benchmarks. Districts may want to consider using a signature page; the signature page could include other personnel, such as administrators from CTE and the district.
- The completed alignment table should be shared with relevant district staff, such as school counselors, ESE staff, school-based administration, CTE personnel, etc.
- A copy of the alignment document should be housed at various locations in the district (e.g. schools, CTE office, ESE office, etc.).
- As mentioned previously, districts may want to check out a CTE Curriculum Framework from the previous year to see if any academic alignment had already been found. Find the 2019-20 CTE Curriculum Frameworks at <http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/2019-20-frameworks>. Below is a screenshot of the 2019-20 alignment table for the Building Construction Technologies Curriculum Framework. You will note that academic alignment to English 4 was not found in the first two courses, however, there was alignment in Building Construction Technologies 3-7.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science 1	Marine Science 1 Honors	Physical Science	Physics 1
8720310	4/87 5%	4/80 5%	24/83 29%	4/69 6%	22/67 33%	4/70 6%	4/69 6%	22/82 27%	4/66 6%	22/74 30%	4/72 6%
8720320	6/87 7%	11/80 14%	26/83 31%	10/69 14%	25/67 37%	4/70 6%	7/69 10%	30/82 37%	11/66 17%	33/74 45%	10/72 14%
8720330	7/87 8%	8/80 10%	6/83 7%	7/69 10%	4/67 6%	15/70 21%	8/69 12%	6/82 7%	13/66 20%	5/74 7%	7/72 10%
8720340	22/87 25%	24/80 30%	2/83 2%	22/69 32%	3/67 4%	20/70 29%	23/69 33%	3/82 4%	18/66 27%	24/74 33%	24/72 33%
8720350	2/87 2%	4/80 5%	2/83 2%	2/69 3%	3/67 4%	#	3/69 4%	3/82 4%	3/66 5%	3/74 4%	4/72 6%

2

8720360	1/87 1%	2/80 3%	#	2/69 3%	1/67 1%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	2/74 3%	2/72 3%
8720370	3/87 3%	5/80 6%	2/83 2%	5/69 7%	4/67 6%	2/70 3%	4/69 6%	3/82 4%	5/66 8%	7/74 9%	10/72 14%

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8720310	17/67 25%	9/75 12%	23/54 43%	8/46 17%	8/45 18%	#	#
8720320	18/67 27%	10/75 13%	19/54 35%	5/46 11%	5/45 11%	#	#
8720330	6/67 9%	9/75 12%	5/54 9%	#	#	7/45 16%	7/45 16%
8720340	11/67 16%	16/75 21%	12/54 22%	#	#	4/45 9%	4/45 9%
8720350	4/67 6%	2/75 3%	3/54 6%	#	#	3/45 7%	3/45 7%
8720360	#	1/75 1%	#	#	#	4/45 9%	4/45 9%
8720370	3/67 4%	2/75 3%	2/54 4%	#	#	6/45 13%	6/45 13%

Alignment attempted, but no correlation to academic course

How do districts ensure proper documentation for the student's IEP and coding for the student's transcript?

- All course of study changes, including CTE course substitutions, and any changes regarding the diploma decision and/or diploma designation, must be discussed by the IEP team and appropriately documented in the student's IEP.
- Work with the data processing/Information Technology (IT)/Management Information System (MIS) team to ensure the students' transcripts have accurate codes.

- The FDOE *Course Code Directory & Instructional Personnel Assignments* contains instructions for properly coding CTE course substitutions. The 2020-2021 Directory can be found at <http://www.fldoe.org/core/fileparse.php/7746/urlt/CCDNarrative2021.pdf>. Below is a screenshot of information included on pages 20 and 21 related to course substitutions.

Course Substitutions

Section 1003.4282, F.S., authorizes the substitution of up to two (2) mathematics credits (MA) and one (1) equally rigorous science (EQ) credit toward high school graduation for earning certain industry certifications. In order to qualify for an exemption, a student must earn a certification for which there is a statewide articulation agreement at the time the certification was earned. The eligible industry certifications for which there are active agreements may be found at <http://www.fldoe.org/academics/career-adult-edu/career-technical-edu-agreements/industry-certification.shtml>.

It is important to note that a student would need to earn three separate industry certifications tied to college credit in order to earn the maximum three substitution credits (two for math, one for science). The school district determines which industry certifications, for which there is valid statewide articulation agreement at the time the certification was earned, can yield course substitutions for mathematics and science.

Course Substitution Number	Course Substitution Title	Graduation Code Awarded*
1200998	Industry Certification Math Substitution 1	MA
1200999	Industry Certification Math Substitution 2	MA
2000999	Industry Certification Science Substitution	EQ

Rule 6A-1.09441, F.A.C., Effective May 2020
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*These substitutions cannot be used to award graduation codes of A1, GE, or BI, as mandated by statute.

State Board of Education Rule 6A-1.09963, F.A.C., provides additional substitutions for students with significant cognitive disabilities who are on access points, or students with disabilities who have chosen the academic and employment graduation option, using eligible career/technical courses containing content related to the course for which it is substituting, for both core access and non-access courses. The technical assistance paper, *High School Graduation Options for Students with Disabilities*, provides additional clarification to determine if CTE courses are eligible for substitution, and is available at <https://info.fldoe.org/docushare/dsweb/Get/Document-7322/dps-2015-34.pdf>.

Course Substitution Number	Course Substitution Title	Graduation Code Awarded*
7910998	CTE Substitution for Access English 4	EN
7910999	CTE Substitution for English 4	EN
7912998	CTE Substitution for Access Mathematics	MA
7912999	CTE Substitution for Mathematics	MA
7920998	CTE Substitution for Access Science	EQ
7920999	CTE Substitution for Science	EQ
7921998	CTE Substitution for Access Social Studies	Elective
7921999	CTE Substitution for Social Studies	Elective

*These substitutions cannot be used to award graduation codes A1, AG, AH, EC, GE, BI, WH.

Section 1007.2616, F.S., provides the definition of computer science and includes a requirement that computer science courses be identified in the Course Code Directory. Section 1003.4282(3), F.S., authorizes the substitution of up to one (1) mathematics credit (MA) and one (1) equally rigorous science (EQ) credit toward high school graduation for a student who takes an identified computer science course that meets the definition of computer science. A listing of eligible computer science courses for the current school year is posted at <http://www.fldoe.org/policy/articulation/ccd/2020-2021-course-directory.shtml>.

Course Substitution Number	Course Substitution Title	Graduation Code Awarded*
1200997	Computer Science Substitution for Mathematics	MA
2000998	Computer Science Substitution for Science	EQ

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Helpful Tips

- Provide an example of a completed alignment table to the content experts who will be reviewing the standards/benchmarks.
- The wording of the CTE standards/benchmarks may not match exactly with the course standards, but it can still have a correlation. Districts do not have to submit their alignment tables for the FDOE to review; however, they do need to be able to defend their determinations. Districts may want to consider adding a column for comments to provide more details regarding the correlation.

3. As mentioned previously, the B.E.S.T. Standards will be implemented in High School beginning in the 2022-2023 school year (Math and English Language Arts). If an alignment table was completed prior to the implementation of the B.E.S.T. standards, districts may want to consider adding a column to note the correlation in the new standards, rather than delete the work that was already done.
4. Districts should consider creating a master CTE course substitution matrix specific to CTE classes that are available to students in the district. This document would benefit all stakeholders involved with course scheduling, credit checking and monitoring graduation status.
5. If a district is able to access an alignment table completed by another district (not the FDOE), the district must still have its content experts review it, and follow the other steps listed in Step 3 regarding the process for documenting the review.

Where can you get more information and additional support?

Project 10 Regional Transition Representatives (RTRs) are available to provide technical assistance regarding CTE course substitutions, including potentially accessing previously completed alignment charts. They also have access to a draft Alignment Table Catalogue which includes spreadsheets by CTE Career Cluster of all the CTE courses and any alignment previously found by the FDOE to core subjects—the resource cannot be disseminated but can be used by RTRs when providing technical assistance.

Acknowledgement

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Additional Resources:

- **6A-1.09963 High School Graduation Requirements for Students with Disabilities**
<https://www.flrules.org/gateway/ruleNo.asp?id=6A-1.09963>
- **Accommodations and Modifications for Students with Disabilities in Career Education and Adult General Education:**
http://www.fldoe.org/core/fileparse.php/5398/urlt/311201_acmod-voc.pdf
- **BEST Standards Fact Sheet:**
<http://www.fldoe.org/core/fileparse.php/18736/urlt/StandardsOnePager.pdf>
- **BEST Standards Timeline:**
<https://info.fldoe.org/docushare/dsweb/Get/Document-8838/dps-2020-26.pdf>
- **CPALMS Course Descriptions and Directory:**
<https://www.cpalms.org/Public/search/Course>
- **CTE Course Substitutions (August 2015):**
<http://www.fldoe.org/core/fileparse.php/7571/urlt/CTEsubstitutions.pdf>
- **CTE Curriculum Frameworks (2020-2021):**
<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/>
- **Employment Transition Plan Template:**
<http://www.fldoe.org/core/fileparse.php/7567/urlt/EmploymentPlanTemplate.doc>
- **Employment Transition Plan Template Instructions:**
<http://www.fldoe.org/core/fileparse.php/7567/urlt/EmploymentPlanInstructions.pdf>

- **Florida Department of Education (FDOE) Career and Technical Education (CTE) Brochure:**
<http://www.fldoe.org/core/fileparse.php/5652/urlt/CTE-brochure-online.pdf>
- **FDOE Course Code Directory & Instructional Personnel Assignments:**
<http://www.fldoe.org/core/fileparse.php/7746/urlt/CCDNarrative2021.pdf>
- **FDOE CTE Clusters:** <http://www.fldoe.org/core/fileparse.php/5652/urlt/CareerClusterInfographics.pdf>
- **Graduations Options Chart:**
http://project10.info/Documents/24-Credit_and_18-Credit_Grad_Options_Chart_03.30.2020.FINAL.pdf
- **Project 10 Topical Brief (Jan. 2019, this includes MOCs, which will no longer be in use, but modifications remain available for students with significant disabilities – see page 3):**
http://project10.info/Documents/January_2019_Topical_Brief_Career_and_Techni.pdf
- **Technical Assistance Paper High School Graduation Options for Students With Disabilities**
<https://info.fldoe.org/docushare/dsweb/Get/Document-7322/dps-2015-34.pdf>
- **Transition Contacts Meeting on May 21, 2020**
The PowerPoint and recording from this meeting are posted on the Project 10 website. The Columbia County School District presentation on CTE course substitution begins on slide #43 and at the 1 hour 18 minute mark in the recording. Both of these resources can be found at
<http://project10.info/DPage.php?ID=188#NS107>