



# Understanding Career and Technical Education (CTE)

**FLORIDA**  
COLLEGE ACCESS NETWORK  
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## WHAT IS CAREER AND TECHNICAL EDUCATION (CTE)?

Career and Technical Education (CTE) is a broad term that offers students organized educational activities providing both academic content and technical skills in current or emerging professions, while building pathways connecting to education and the workforce.

CTE includes courses and programs at the secondary (middle and high school) and postsecondary (technical school and college) levels. CTE courses are often directly tied to specific professions or occupational fields. CTE also prepares students for the labor market more broadly by integrating CTE with academic standards. CTE courses and programs can lead to an industry-recognized credential, a certificate, an associate's degree, or further education.

## IS CTE THE SAME THING AS VOCATIONAL EDUCATION?

CTE includes what is traditionally thought of as vocational education but is much broader. For much of the 20th century, vocational education centered around the skilled trades such as carpentry and plumbing, as well as career training programs in fields like cosmetology.

However, as technological advances gave rise to new careers, vocational education evolved to meet the changing needs of the labor market. Recognizing this, federal legislation in 2006 started using the term "career and technical education" instead "vocational education."

## IS CTE ONLY FOR STUDENTS WHO AREN'T COLLEGE BOUND?

No. Many college students and college-bound high school students take CTE courses to develop technical skills and gain hands-on experience to prepare for their future careers. Although some CTE credentials are the highest level of education achievable in that field, many are steppingstones

to college degrees or higher credentials. Students today don't need to choose between college or CTE: they can do both.

Florida offers an assortment of educational pathways that give students the opportunity to "stack" credentials toward degrees in a variety of fields. Here are just a few examples of CTE programs that also provide college credit toward specific degrees.

Career Certificate	# of College Credit Hours	Degree
Practical Nursing	10 credits	Nursing R.N. A.S.
Web Development	6+ credits	Internet Services Technology A.S.
Network Systems Administration	9+ credits	Computer Engineering Technology A.S.
Electronic Technology	15+ credits	Electronic Engineering Technology A.S.
Carpentry	3+ credits	Building Construction Technology A.S.
Accounting Operations	6+ credits	Office Administration A.S.
Automotive Service Technology	19+ credits	Automotive Service Management A.A.S.
Florida Law Enforcement Academy	15+ credits	Criminal Justice Technology A.S.

Industry Certification	# of College Credit Hours	Degree
Aerospace/Aircraft Assembly	9 credits	Aerospace Technology A.S.
Cisco Certified Network Associate	12 credits	Computer Engineering Technology A.S.
Certified Culinarian	6 credits	Restaurant Management A.S.
Pharmacy Technician	9 credits	Pharmacy Management A.S.
Quickbooks Certified User	3 credits	Accounting Technology A.S.
Certified Apprentice Drafter - Architectural	3 credits	Architectural Design and Construction Technology A.S.
Air Conditioning Service Technician	3 credits	Air Conditioning, Refrigeration, and Heating Systems Technology A.A.S.
Certified Veterinary Assistant	3 credits	Veterinary Technology A.S.

# Understanding Career and Technical Education (CTE):

## HOW DO HIGH SCHOOL CTE PROGRAMS WORK?

High school CTE students have the chance to explore a career while learning technical and employability skills that integrate into or complement their academic studies. Some of these programs are designed to connect with and lead to post-high school programs and more specialized technical instruction; some prepare students to go straight to work out of high school in their chosen fields; and some give students the option to do both.

Additionally, through Florida's career dual enrollment program, high school students can work toward an industry certification and receive high school credit by taking a CTE course at their district technical center or local state college. Some of these certifications can apply toward college credit and degrees—at no cost to the student.

## HOW DO CTE PROGRAMS WORK AT THE POSTSECONDARY LEVEL?

Post-high school CTE consists of programs designed to prepare students for the skills needed for specific occupations or careers. Credentials may include associate's degrees, industry-recognized credentials, customized training for a particular employer, or continuing education to maintain a license or certification. Postsecondary CTE providers in Florida include school district technical colleges; state colleges; universities; industry groups that sponsor pre-apprenticeships, apprenticeships, and other training programs; and adult workforce education centers.

## HOW IS FLORIDA IMPROVING CTE?

In 2019, Governor DeSantis called for Florida to become first in the nation in workforce education by 2030 and ensure that students are prepared for the jobs of the future. That same year, the Florida Legislature passed HB 7071, which created the Sail to 60 initiative and set a goal for 60% of working-age Floridians to hold a high-quality degree, credential, or training experience by 2030.

To help meet that goal, Florida is strengthening CTE programs in several ways. For example, the Florida Department of Education is tasked to review CTE courses yearly with partners in business and industry to ensure that programs are high-quality, current, and aligned with regional workforce demands. School districts are charged with developing articulation agreements between their technical colleges and Florida state colleges to create pathways to further education and career opportunities for students. The state also developed a CTE pathway option for a high school diploma, which allows high school students to delve deeper into a technical pathway to earn an industry recognized credential.

In 2023, the Florida Legislature passed SB 240, which broadened CTE opportunities for students. Under this bill, all high school students will have access to work-based learning like internships and pre-apprenticeships; middle school students who complete a CTE course can continue in the same program in high school; and certain CTE courses and work-based learning experiences can apply toward some high school graduation requirements, among other provisions.

# Florida CTE Participation at A Glance:

## FLORIDA PUBLIC HIGH SCHOOL CTE STUDENTS (2021-2022 SCHOOL YEAR):

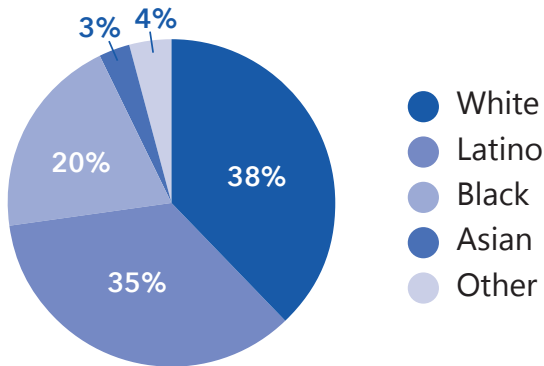
Enrolled in CTE: **355,005**

CTE Concentrators: **202,130**

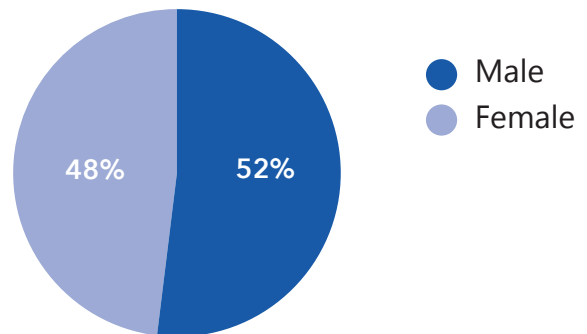
CTE Concentrators who graduate from high school: **95%**

Percent of graduates employed or continuing their educations: **72%**

**HIGH SCHOOL CTE ENROLLMENT BY RACE**



**HIGH SCHOOL CTE ENROLLMENT BY GENDER**



## FLORIDA PUBLIC POSTSECONDARY CTE STUDENTS (2021-2022 SCHOOL YEAR):

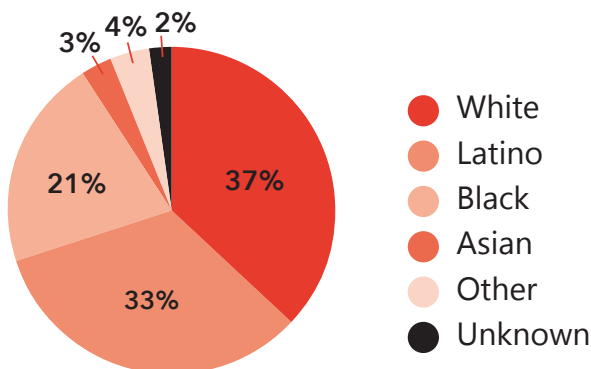
Students enrolled in CTE: **153,344**

CTE Concentrators: **130,338**

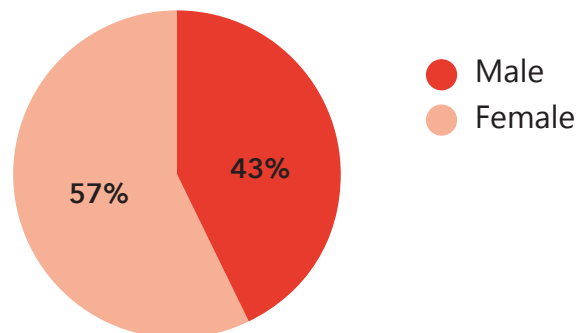
CTE Concentrators who earn a credential, certificate, or diploma: **60%**

CTE Concentrators who, within six months of program completion, enter employment, join the military, or continue their educations: **79%**

**POSTSECONDARY CTE ENROLLMENT BY RACE**



**POSTSECONDARY CTE ENROLLMENT BY GENDER**





## HOW CAN FLORIDA CONTINUE TO STRENGTHEN CTE?

Even with recent advances in CTE, certain barriers persist. Efforts are underway to lower such barriers, and additional policies and investments can help to erase them.

**Perception:** Some Floridians, including parents, confuse today's CTE with the vocational education of the 20th century. Many believe that CTE only leads to modest-paying, dead-end jobs. The Florida Department of Education is working to change this perception through the Get There program, which aims to raise awareness of CTE as a modern approach to higher education and training with career opportunities in fields like cyber security, robotics, global finance, aerospace technology, and emergency planning and response.

**Strengthening access to seamless "CTE to degree" programs:** Florida offers many options to receive college credit for CTE courses that apply to degree programs, but more can be done to strengthen student access. For example, students are not always aware of the options available and can miss out on receiving college credit for their CTE coursework. Targeted partnerships between school district technical centers, state colleges, and other education providers can increase transfer

options and help advise students of opportunities to continue their educations after completing their CTE program.

## SEAMLESS CTE TO DEGREE: TECH EXPRESS

Tech Express is a partnership between Valencia College, Orange Technical College, and Osceola Technical College that makes it easy for CTE students to earn college credit and transition to a degree program. Students at each technical college campus have access to Valencia advisors who help them review their career options, understand the degree programs available, and assist them with applying and enrolling at the state college.

**Technology and equipment:** The technology and equipment needed for many CTE programs is expensive, and not all colleges and school districts—especially in rural areas—have the resources to offer a breadth of CTE programming due to costs. Through a combination of public funding, business investments, and industry partnerships, Florida can ensure that students across the state have a variety of CTE programs to choose from in their communities. For example, in 2023, the Florida Legislature addressed this need in SB 240 through the Workforce Development Capitalization Incentive Grant program for school districts and state colleges to create or expand CTE programs, and appropriated \$100 million for its first year.

# Common CTE Terms:

**Articulation agreement:** Formal agreement between two or more educational institutions that guarantee students who complete courses at one school to receive credit when the student transfers to another school.

**Associate of Applied Science (A.A.S.) Degree:** A degree that prepares graduates to enter a career immediately upon graduation. These are typically considered terminal degrees.

**Associate of Science (A.S.) Degree:** A two-year college degree. Credits can transfer toward earning a bachelor's degree in a related field.

**Career Dual Enrollment:** A program in which a high school student can enroll in a postsecondary (college or technical center) course that leads to an industry certification and credit toward a high school diploma.

**Career Certificate:** A program of study governed by the Florida Department of Education (DOE) that trains students in technical skills that enable them to work in specific careers. Examples include firefighter, correctional officer, insurance claims adjuster, and cosmetology.

**Career Cluster:** A grouping of occupations that are in the same field and require similar skills. There are 17 recognized career clusters in Florida. Examples include health professions and related programs; business, management, and marketing; mechanic and repair technologies; computer and information sciences; and engineering.

**Career Pathway:** A series of connected education and training strategies and support services that enable individuals to secure industry relevant certification and obtain employment within an occupational area and to advance to higher levels of education and employment in that area.

**CTE Concentrator:** A high school student who has completed at least two courses in a single CTE program or program of study, or a postsecondary (college, technical school) student who has earned at least 12 credits within a CTE program or a program of study, or completed a program that encompasses fewer than 12 credits or the equivalent.

**CTE Participant:** A high school student who has attained at least one CTE credit.

**Industry-recognized credential:** A credential awarded to individuals with the skills, experience, knowledge, and/or a set of competencies that are recognized as necessary or desired for a particular occupation by the relevant industry. These credentials can be awarded by an accredited educational institution (like a school district or college), an industry recognized association, or an occupational association or professional society, and can include certain college degrees, postsecondary certificates, licenses, certifications, and Registered Apprenticeship certificates.

**Pre-apprenticeship:** A program or set of services designed to prepare individuals to enter and succeed in a Registered Apprenticeship program. Pre-apprenticeship programs have documented partnerships with at least one Registered Apprenticeship program. Pre-apprenticeships help individuals meet the entry requirements for apprenticeship programs and prepare them for success.


**Registered Apprenticeship:** A formal employer-driven training model that combines on-the-job learning and related classroom instruction on the technical and academic aspects of the job. Registered apprenticeships have established learning standards that meet national and state quality expectations. Students who complete a Registered Apprenticeship program receive a national credential that is recognized anywhere in the industry.

**Stackable Credential:** Part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications and help them move along a career pathway or up a career ladder to different and potentially higher-paying jobs.



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Florida College Access Network (FCAN) is Florida's collaborative network committed to ensuring all Floridians have the opportunity to achieve an education beyond high school and a rewarding career. We envision a Florida working together where education is the pathway to economic mobility for all.

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