Quick Guide: Career and Technical Education & Secondary Students with Disabilities

Brianna Buhrow has always loved to bake. "Ever since I was little, I'd have my Easy-Bake Oven. So it was always something I wanted to do," said Buhrow. Her dream is to own a bakery, and the Chippewa Falls High School senior is finding out first-hand what it will take to achieve her career goal. Through the *Wisconsin Youth Apprenticeship Program*, Buhrow got a job at Goodies Sweet Treats and More Bakery near Lake Wissota. She's getting work experience and credit toward her high school graduation requirements.

"I think it helped me get the idea of like a real-world experience because I've always wanted to be a baker, but I didn't know what it would be like," said Buhrow.

Brianna Buhrow's mom credits the Family and Consumer Sciences courses and the apprenticeship program with giving her daughter a head start on her career path.

"But this program has really made her decide, yes, this is what I wanted to do. And it's made our job easier as a parent to know okay she does want to go on to college," said Nancy Buhrow.

The soon-to-be high school graduate plans to attend UW-La Crosse to study business and marketing.

"I'm proud of her. I really hope it all works out for her, and she continues to follow that dream," said Nancy Buhrow (Wagner, D. 2017, February 9) Changing the course [Video file]. WEAU 13 News.

For more information on Brianna's story and the FCS program at Chippewa Falls High School, please visit: https://www.weau.com/content/news/Changing-the-Course-413366103.html

Why is Career and Technical Education Important for Secondary Youth with Disabilities?
Students with disabilities continue to lag behind their peers without disabilities in postsecondary education and employment (Hinz, Arbeit, & Bentz, 2017; USDOL, 2017). Outcomes of youth with disabilities are influenced by many factors, including but not limited to parent expectations and services received to support individual needs. For example, Lipscomb et al., (2008) indicated parents' expectations of their students obtaining postsecondary education, becoming employed, or living independently after high school varies greatly across disability subgroups and is not on par with the expectations of parents of students without disabilities (i.e., 61 percent and 90 percent, respectively). Services provided to students while in high school also contribute to positive outcomes. One important transition service that can be provided to students while in high school to assist in mitigating poor outcomes for youth with disabilities is access to career technical education (CTE; Mahadevan, Grenwelge, & Peterson, 2014).

What is Career and Technical Education?
College and Career Readiness is an emphasis across multiple Federal legislation initiatives aligning services and supports to students and youth with disabilities (e.g., IDEA, WIOA, ESSA, Perkins). Many educators (general and special education alike), students, families, and other service providers are familiar with the Common Core Standards (CCSS) and the expectations for preparing students to be

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college and career ready. The CCSS outline the necessary English Language Arts and mathematical knowledge and skills needed for entry into postsecondary studies (without remediation) and/or successful entry into a skilled workplace. In addition to implementing the CCSS, many States include "college and career readiness" indicators in the State accountability plans required under the Every Student Succeeds Act (ESSA); and measure Career Technical Education (CTE) program completion, credential attainment, and work-based learning.

In addition to the Common Core for secondary transition, it is important to align services and supports provided in secondary education programs with industry standards (e.g., Common Career Technical Core; Peterson et al., 2013). Education and industry have reached consensus on what students should know and be able to do at the end of a program of study in a particular career field (e.g., CTE concentrator, completion of at least two courses in a single CTE program or program of study; Advanced CTE, 2018). Industry standards provide guidance on common validated standards for each of the 16 occupational Career Clusters® and 79 Career Pathways. Common industry standards are also inclusive of industry validated Standards of Career Ready Practice. **The basic premise of both the CCSS and industry standards is to provide teachers, parents, employers, and other service providers with a consistent and clear understanding of what students are expected to learn to better position them to compete successfully in the global economy.**

How Does Research Support Career and Technical Education?
Previous research has found enrollment in vocational coursework (e.g., CTE) is predictive of positive outcomes in postsecondary education and employment after high school (Mazzotti et al., 2016; Test et al., 2009). More recently, Theobald, Goldhaber, Gratz, and Holden (2017) found students with disabilities who engage in a concentration of CTE courses in high school: (a) have fewer unexcused absences, (b) are more likely to graduate high school on-time, and (c) are more likely to be employed after high school than those students with disabilities who are enrolled in few to no CTE courses.

Where Can You Find the Primary Source for Career and Technical Education?
Association for Career & Technical Education, https://www.acteonline.org/, is the professional organization for CTE educators and provides educational leadership to empower educators and support implementation of high quality CTE programs thus increasing the likelihood of students achieving successful careers. This organization provides quality professional development via national events and online learning, tools to assess and implement high quality CTE programs, opportunities for leadership development, and a job bank that can be helpful to students and professionals.

The Center to Advance CTE is the primary resource for information regarding Career Technical Education and the common industry standards across the different Occupational Clusters. The Center to Advance CTE is an affiliate organization to Advance CTE: State Leaders Connecting Learning to Work (https://www.careertech.org/), a nonprofit organization representing State directors and leaders in secondary and postsecondary Career Technical Education. The purpose of these organizations is to support, promote, and sustain high-quality CTE policies, programs, and practice.

Another valuable resource is the College and Career Readiness & Success Center (https://ccrscenter.org/), an U.S. Department of Education Office of Elementary and Secondary Education funded center. The purpose of the center is to support States to effectively implement initiatives for college and career readiness success.

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How Does This Apply to Youth with Disabilities and Families?

- Once postsecondary goals have been developed, the CCSS and industry standards can assist in determining the skills to be developed through the Individualized Education Program (IEP) - https://www.acteonline.org/wp-content/uploads/2018/05/Techniques-October2014-CTE-IEPs.pdf
- Work with your IEP team to determine what annual goals are needed to support post-school goals - https://www.naset.org/index.php?id=760
    - o A resource for writing SMART [Specific, Measurable, Actionable, Realistic, Time-limited] IEPs - http://www.wrightslaw.com/bks/feta2/ch12.ieps.pdf
- Determine CTE coursework that aligns with post-school goals [refer to schools' Program of Study handbook] - https://www.heath.gwu.edu/career-and-technical-education
- Meet with guidance counselor, career counselor, or special education case manager to discuss enrollment in CTE coursework and accommodations needed to be successful (e.g., reduced assignments, extended time, one-on-one support) - http://www.ncwd-youth.info/publications/youth-in-action-leading-your-transition-planning/
- Explore Career Aptitude Testing Resources to help explore career options - https://careertech.org/student-interest-survey, https://www.youscience.com/
- Provide self-advocacy/self-determination instruction to youth with disabilities to assist them in asking for needed accommodations in CTE coursework (e.g., additional time to complete technical skills assessments, credentialing exams, additional instructional support to master workplace competencies) - http://www.ou.edu/education/centers-and-partnerships/zarrow/transition-education-materials
- Enroll students in CTE and complete requirements for concentration in a CTE Program of Study aligned with post-school goals - https://careertech.org/cte-your-state (see state specific requirements)
- Explore pre-employment transition services (Pre-ETS) offered by your local Vocational Rehabilitation office: http://www.wintac.org/topic-areas/pre-employment-transition-services

How Does This Apply to Administrators?

- Ensure general education and special education faculty, staff, students, and families are aware of common industry standards and how the school is addressing the standards across the curriculum - https://www.careertech.org/cctc
- Provide common planning time for general academic, special education, and CTE teachers, and counselors to discuss the common industry standards and how to best address across curricula - https://www2.ed.gov/programs/slcp/finalcommon.pdf
- Provide professional development and co-teaching opportunities to all faculty and staff on providing appropriate accommodations to students with disabilities - https://osepideasthatwork.org/node/109
- Provide guidance or team teaching to CTE instructors for implementing needed accommodations for youth with disabilities - https://osepideasthatwork.org/node/109

How Does This Apply to School-Level Special Education Practitioners?

- Include the Programs of Study in the IEP, such as CTE coursework, aligned with a student's post-school goals *(see Tables 1-2 for examples below for a student with more intensive support needs*

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on track to receive an alternate diploma and a student on track for receiving a standard diploma)

- Attend IEP meetings and ask questions regarding students' abilities, skills, and potential for success in a CTE program of study - https://www.acteonline.org/wp-content/uploads/2018/05/Techniques-October2014-CTE-IEPs.pdf
- Ask that a copy of the IEP document and minutes be sent to you - https://www.acteonline.org/wp-content/uploads/2018/05/Techniques-October2014-CTE-IEPs.pdf
- Provide the IEP team documentation of progress in CTE coursework and on annual IEP goals - https://www.acteonline.org/wp-content/uploads/2018/05/Techniques-October2014-CTE-IEPs.pdf
- Provide career development opportunities (e.g., curriculum-based virtual field trips, Work-based learning) - https://files.eric.ed.gov/fulltext/EJ854371.pdf; https://files.eric.ed.gov/fulltext/EJ854911.pdf
- Define and provide appropriate accommodations, as defined by the IEP, in CTE courses - https://osepideasthatwork.org/node/109
- Determine appropriate transition services that will support attainment of post-school goals including services to be delivered in CTE (e.g., work-based learning, participation in school-based enterprise, job shadowing) (*see Figure 1*)- https://www.wrightslaw.com/info/trans.index.htm
- Refer students to vocational rehabilitation for pre-employment transition services (Pre-ETS) as early as age 14: http://www.wintac.org/topic-areas/pre-employment-transition-services

How Does This Apply to Vocational Rehabilitation Counselors?
- Provide pre-employment transition services (Pre-ETS) as the first step to career exploration and identifying career pathways at the age of 16 or earlier - http://www.wintac.org/topic-areas/pre-employment-transition-services
- Use occupational clusters or career pathways to help guide the process in developing the Individualized Plan for Employment (IPE) goals and identifying the needs of the students with disabilities as interests and careers are explored - https://www.transitionta.org/sites/default/files/news/VR%20Resources%2011_21.pdf
- Collaborate with CTE teachers to ensure students learn about careers and gain skills that the local labor market identify as high demand or in demand areas - https://www.onetonline.org/
- Provide students with work-based learning experiences aligned with identified interests and CTE classes. https://cte.ed.gov/wbltoolkit/
- Use industry standards to develop annual IEP goals focused on the technical skills needed for students to successfully achieve their post-school goals *(see Table 3 examples below for a student with more intensive support needs on track to receive an alternate diploma and a student on track for receiving a standard diploma)*

Table 1.
Sample program of study for student on tract to receive alternate diploma reflecting CTE

Post-School Goal: After graduation from high school, Kevin will work 20 or more hours, as a sous chef in the deli of the local grocery store.

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24 credits Alternate Diploma	Courses	Activities including pre-employment transition services to be provided in collaboration with Vocational Rehabilitation
9th Grade	• English for Occupations I • Math for Community Living I • Environmental Science • Computer Applications I • Foreign Language/Elective • Elective course	• Industry tours • Job exploration counseling • Workplace readiness training • Counseling on enrollment opportunities in comprehensive transition and postsecondary education programs at institutions of higher education • Work-based learning experiences • Instruction in self-advocacy
10th Grade	• English for Occupations II • Math for Community Living II • Geography • Food Science • Accounting I • Health	• Job shadow at local grocery store (work-based learning experience) • Participation in school-based enterprise • Instruction in self-advocacy • Workplace readiness training to develop social skills and independent living
11th Grade	• English for Occupations III • Math for Community Living III • Civics • Culinary Arts I • Consumer Strategies • Physical Education	• Community-based vocational training • Instruction in self-advocacy • Workplace readiness training to develop social skills and independent living
12th Grade	• English for Occupations IV • Math for Community Living IV • Culinary Arts II • Food Preparation Fundamentals • U.S. Government • Home and Consumer Science Internship	• Paid Internship (work-based learning experience) • Job exploration counseling

Table 2.
Sample program of study for student on track to receive standard diplom reflecting CTE

Post-School Goal: After graduation from high school, Camilla will obtain a job working at the airport and work toward becoming a full-time flight attendant.		
24 credits Standard Diploma	**Courses**	**Activities including pre-employment transition services to be provided in**

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		collaboration with Vocational Rehabilitation
9th Grade	• English I • Math • Science • Foreign Language/Elective • Introduction to Hospitality and Tourism • Elective course	• Career Assessments • Exploration of careers in aviation via O'NET • Vocational Interest inventory with discussion of results • Career-specific guest speakers • Job exploration counseling • Instruction in self-advocay
10th Grade	• English II • Math • Science • World History • Physical Education • Technology for Hospitality and tourism	• Structured Interview with a flight attendant • Virtual tour of airport • Participate in opportunities provided with career and technical student organizations (e.g., Future Business Leaders of America) • Workplace readiness training
11th Grade	• English III • Math • Science • U.S. History • Foreign Language/Elective • Travel & Tourism Marketing & Management	• Job shadow at airport • Participate in workplace readiness training to develop social skills, i.e., • communication, problem solving, decision making, conflict resolution
12th Grade	• English IV • Math • Science • US Government/Economics • Health • Hospitality & Tourism Entrepreneurship	• Internship at airport • Job exploration counseling

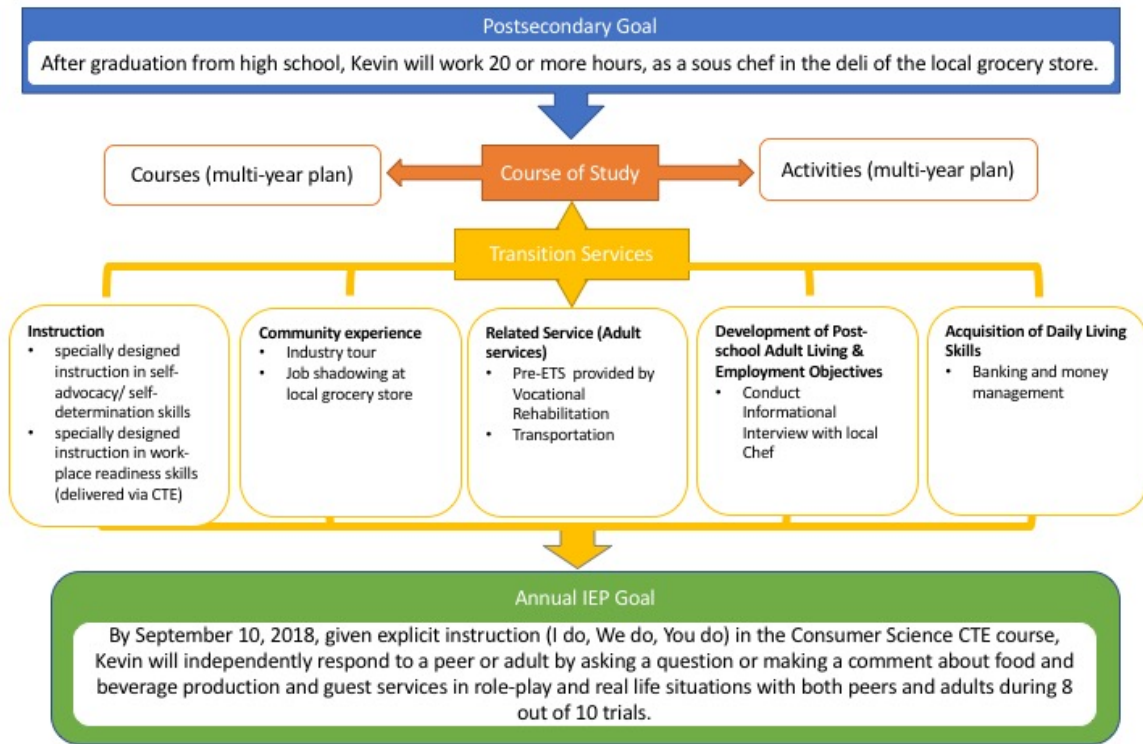**Figure 1.** Transition Servces Aligned with Post-school Goals for Students on Track for Alternate Diploma

Postsecondary Goal
After graduation from high school, Kevin will work 20 or more hours, as a sous chef in the deli of the local grocery store.

Courses (multi-year plan) ← **Course of Study** → Activities (multi-year plan)

Transition Services

Instruction	Community experience	Related Service (Adult services)	Development of Post-school Adult Living & Employment Objectives	Acquisition of Daily Living Skills
• specially designed instruction in self-advocacy/ self-determination skills • specially designed instruction in work-place readiness skills (delivered via CTE)	• Industry tour • Job shadowing at local grocery store	• Pre-ETS provided by Vocational Rehabilitation • Transportation	• Conduct Informational Interview with local Chef	• Banking and money management

Annual IEP Goal

By September 10, 2018, given explicit instruction (I do, We do, You do) in the Consumer Science CTE course, Kevin will independently respond to a peer or adult by asking a question or making a comment about food and beverage production and guest services in role-play and real life situations with both peers and adults during 8 out of 10 trials.

Figure 2. Transition servces aligned with post-school goals for Student on Track for Standard Diploma

Postsecondary Goal
After graduation from high school, Camilla will obtain a job working at the airport and work toward becoming a full-time flight attendant.

Courses (multi-year plan) ← **Course of Study** → Activities (multi-year plan)

Transition Services

Instruction	Community experience	Related Service (Adult services)	Development of Post-school Adult Living & Employment Objectives	Acquisition of Daily Living Skills
• specially designed instruction in self-advocacy/ self-determination skills • specially designed instruction in work-place readiness skills (delivered via CTE)	• Virtual tour of airport	• Pre-ETS provided by Vocational Rehabilitation • Transportation	• Job exploration and counseling (Pre-ETS) • Vocational Interest inventory with discussion of results	• Opportunities to practice communication, problem solving, decision making, conflict resolution skills

Annual IEP Goal

After graduation from high school, Camilla will obtain a job working at the airport and work toward becoming a full-time flight attendant.

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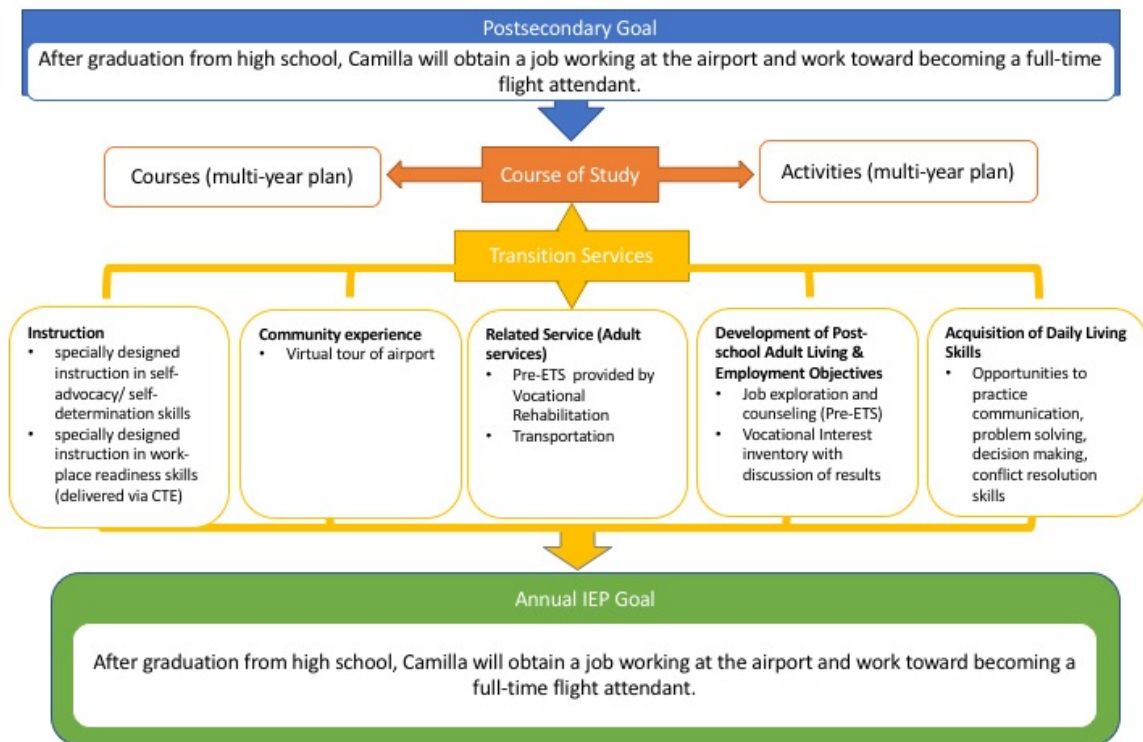www.TransitionTA.org

Table 3.
Sample annual IEP goals aligned with post-school goals reflecting industry standards

Post-School Goal	Sample Industry Standards	Annual IEP Goal
After graduation from high school, Kevin will work 20 or more hours, as a sous chef in the deli of the local grocery store.	**Occupational Cluster or Pathway:** Restaurants & Food/Beverage Services Career **Standard:** Implement standard operating procedures related to food and beverage production and guest services.	By September 10, 2018, given explicit instruction (I do, We do, You do) in the Consumer Science CTE course, Kevin will independently respond to a peer or adult by asking a question or making a comment about food and beverage production and guest services in role-play and real life situations with both peers and adults during 8 out of 10 trials.
After graduation from high school, Camilla will obtain a job working at the airport and work toward becoming a full-time flight attendant.	**Occupational Cluster of Pathway:** Travel & Tourism Career **Standard:** Assess the potential (real and perceived) hazards related to multiple environments, and recommend appropriate safety, health and security measures for travelers.	By May 30th, 2019, given small group instruction on health and security measures for travelers in the Travel and Tourism Management course at the local Career Technical Education Resource Center, Camilla will identify appropriate health and security measures with 100% accuracy.

For additional topic resources relevant to secondary education see: (*Note: Please visit your state's Department of Education/CTE/VR websites for resources pertaining to CTE and Secondary Youth with Disabilities*)

- Association for Career & Technical Education: https://www.acteonline.org/
- U.S. Department of Education Work-based Learning Toolkit: https://cte.ed.gov/wbltoolkit/
- NTACT Competitive Integrated Employment Toolkit: https://www.transitionta.org/cietoolkit
- Center for Apprenticeships and Work-based Learning: https://center4apprenticeship.jff.org/resources/?resource_type=case-studysuccess-story&resource_type=report&resource_type=tooltoolkit
- Association for Career and Technical Education: https://www.acteonline.org/professional-development/

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