

# Consolidated Annual Report, Program Year 2015 - 2016 Connecticut

## Step 3: Use of Funds: Part A

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1. During the reporting year, did your state use Perkins funds to develop valid and reliable assessments of technical skills?

No

2. During the reporting year, did your state use Perkins funds to develop or enhance data systems to collect and analyze data on secondary and postsecondary academic and employment outcomes?

No

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## Step 3: Use of Funds: Part B

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### 1. During the reporting year, how did your state assess the career and technical education programs funded under Perkins IV?

The Connecticut Statewide CTE Assessment (2016)

Skill Attainment is a centerpiece of Connecticut Career and Technical Education as it has direct impact on all aspects of improving the quality of teaching and learning in CTE.

There is an emphasis placed on the Connecticut Statewide CTE Assessment in all of Connecticut Career & Technical Education because of the need to establish measurable goals for student (concentrator) technical skill attainment in the process of improving the quality of CTE. The statewide assessment is required of every school receiving funding/benefits from the Perkins grant.

The Connecticut Career and Technical Education statewide assessment program was initiated in 2001 after two years of research and testing. For the 2015-16 school year, Version IX of the CTE statewide assessment was implemented, based exclusively on the most recent national performance standards for each area of concentration, assimilated into the 2016 Connecticut State Performance Standards and Competencies. Each CTE competency in each area of concentration is assessed in Connecticut's mandated electronic assessment of every school's concentrators.

#### Areas of Concentration

The Connecticut "areas of concentration" in Career and Technical Education represent the largest course categories across all school districts in Connecticut. Connecticut has identified 21 areas of concentration, general categories of CTE courses, each aligned to national CTE standards.

#### ACADEMIC INTEGRATION – COMMON CORE

The heavy emphasis of "academic integration" in the Perkins Act of 2006, led to Connecticut's commitment to integrate the Common Core State Standards (CCSS) for ELA and mathematics into all 21 areas of concentration of the Connecticut Statewide Assessment. Submitted, reference Perkins Act, Section 24, part (aa), states "integrating those programs with academic content standards and student academic achievement standards, as adopted by States under section 1111(b)(1) of the Elementary and Secondary Education Act of 1965".

Version IX of the CTE Statewide Assessment for each of the 21 areas of concentration includes 40% of all test items to be the contextual application of CCSS math and reading practices (competencies), making the Connecticut Statewide CTE Assessment one of the most academically rigorous in the nation.

In 2016, there were 13,415 concentrators in Connecticut (tested in the state CTE assessment), a 14.4% increase in the number of concentrators from 2015. This is the highest number of CTE concentrators in Connecticut history and marks the 8th consecutive year of increased concentrators.

Here are the impact and application points for the Connecticut Statewide CTE Assessment program:

Local Perkins Grant application – The assessment is used to measure the incremental improvement of CTE teaching and learning. As part of the grant review process, State Department of Education CTE Unit staff correlate the program areas/courses identified for funding, the number of concentrators generated in those courses, and the performance of concentrators from each secondary school over a period of years.

Professional Development – Secondary schools must spend 5% of their Perkins grant on professional development. The school must address the performance of their concentrators (skill attainment) in the planning of their professional development activities.

Teacher Evaluation – The Connecticut State Board of Education, pursuant to sections 51 through 56 of P.A. 12-116, amended by sections 23 and 24 of P.A. 12-2 of the June, 2012 Special Session, and in consultation with the Performance Evaluation Advisory Council, adopted guidelines for teacher and administrator evaluation in Connecticut. The Connecticut Statewide CTE Assessment was utilized by secondary schools all over Connecticut during the 2014-15 school year, providing data in the development of CTE teacher goals, validated by concentrator performance to evaluate CTE teachers.

## NEGOTIATED PERFORMANCE LEVELS

Under sub-indicator (2S1) Technical Skill Attainment, Connecticut has negotiated the annual performance levels for the statewide CTE assessment program. These performance levels represent the percentage of all statewide CTE concentrators who should score at, or above, the 65% cut score (threshold score) in order for Connecticut to reach its annual federal goals. Connecticut's federal negotiated performance goal for 2016 was 45%. In 2016, the Connecticut secondary school concentrators scored at a 39.52% of concentrators who met, or exceeded the threshold score. The rigor of the new Version IX test, coupled with the increase in Common Core contextually applied test items is the most significant reason for the missing of the skill attainment target in 2015.

### 2015-16 Connecticut Statewide CTE Assessment Schedule

June-September, 2015 – Using State Assessment Data – Prior to the opening of the 2015-16 school year, data reports from the 2014 Connecticut Statewide CTE Assessment are utilized by teachers, administrators and local CTE Perkins grant managers to: a) plan the use of Perkins funds, directing funds at the lowest tested performance standard and competencies for the areas of concentration in which the school tested; b) mapping of instructional strategies for the coming school year; c) planning of professional development activities to improve instruction in low performing areas; and d) revision of local CTE curriculum, addressing standards and competencies in need of strengthening concentrator performance.

January, 2016 - Memorandum of Testing Agreement – All secondary school principals, including those districts that may not receive Perkins/benefits, were electronically sent the Connecticut Statewide CTE Assessment program package. Included in this introduction to the 2014 Connecticut Statewide CTE Assessment was the Memorandum of Testing Agreement. This signed document is required of all principals, stipulating that all protocols relating to the CTE assessment will be followed and meet timeline requirements.

February, 2016 – Final Commitment of Concentrators Form – Following the receipt of the Memorandum of Testing Agreement from the school principal, the school's CTE assessment coordinator will complete this form, identifying the exact number of students from each of the 20 areas of concentration who have met the instructional requirements to be considered a concentrator. NOTE: To be considered a concentrator, a student MUST be tested in the Connecticut Statewide CTE Assessment.

March, 2016 – Regional Briefing Sessions – All secondary schools receiving Perkins funds/benefits must test their students who have been identified as concentrators (to be a concentrator, a student must test). Given the annual improvements we make in the online testing program of the Connecticut Statewide CTE Assessment, all secondary schools must send representatives to at least one regional briefing session. Briefing sessions were increased dramatically in 2016 in order to service more teachers. Here is the 2016 schedule of regional briefing sessions: Meriden, February 29; Hartford, March 7; Cheshire, March 8; Education Connection, March 9; Waterbury, March 11; East Haven, March 14; EastCONN-Hampton, March 16; Middletown, March 17; North Haven, March 18; Lower Fairfield County, March 22; Education Connection-Danbury, March 24; New Haven, March 28; LEARN-Waterford, March 29; and New Britain, March 30th.

April 1 – 25, 2016 – USER CODING/DATA ENTRY – During this four week period, all secondary schools are required to assign the students to be tested with user codes and enter all categories of required for each student. Beyond the required data cohorts of the Perkins legislation, Connecticut requires data entry on each student in the categories of CTSO participation/membership; structured work-based learning; and college career pathways.

April 18 – May 27, 2016 – TESTING WINDOW – The six week testing window was designed to provide maximum coverage so that all students who reach the instructional threshold will be tested, becoming concentrators.

April – June, 2016 – SCORE REPORTS – The importance of data being provided to all school, administrators and CTE teachers in the most timely manner possible is a priority of the Connecticut Statewide CTE Assessment. As per protocol, schools that complete the testing of all students, including the pre-population of all student data will receive their complete Score Report Package within 48 hours.

SCORE REPORTS – Each principal receives three different score reports at the conclusion of the Connecticut Statewide CTE Assessment. They include:

CONCENTRATOR COMPETENCY SCORE REPORT – Each concentrator has a score report by individual competency. This report is an instructionally directed report that illustrates how each concentrator performed on each competency within a performance standard. Combined together the concentrator competency score reports for all concentrators provide a concise review of how effectively a competency was taught to students.

COMMON CORE SCORE REPORT – During the 2015-16 school year, 40% of all items on the Connecticut Statewide CTE Assessment were the contextual application of Common Core, reading and mathematics competencies to CTE competencies. The principal receives a report for all concentrators for each of the reading and math competencies, providing an illustrative chart of how academic competencies are being integrated into CTE instruction.

SUMMARY PERFORMANCE STANDARD REPORT – This report provides the principal with a more holistic review of student (concentrator) performance by each of the general performance standard categories.

June – August, 2016 – STATE RANKINGS/ITEM ANALYSIS – At the end of the testing window with the release of all score reports to all schools, two important tasks were completed:

State Rankings – Each secondary schools are ranked, based upon a) the percentage of concentrators who met/exceed the federally negotiated cutscore of 65%; and b) each of the 21 areas of concentration by the mean score of concentrators. These rankings are posted on our client services website.

Item Analysis – Following the completion of the End of the Year Report for the Connecticut Statewide CTE Assessment, we identify those competencies by area of concentration that were the lowest in terms of concentrator performance. These competencies become the focus of much of our professional development/technical assistance. Additionally, we use these lowest performed competencies as the target of our Sample Items for the ensuing assessment year.

## **2. During the reporting year, how did your state develop, approve, or expand the use of technology in career and technical education?**

The Connecticut Perkins grant process includes a Continuous Improvement Plan that provides opportunities to fund the purchase of technology, the expansion of technology in CTE instruction and professional development activities to keep CTE teachers on the cutting edge of new and emerging technology and applications. All technology/equipment requests for funding from schools must be accompanied by all relative information including vendor, CTE program area, area of concentration, courses in which the technology will be used; and the measurable outcomes of improvement for CTE concentrators.

As part of the grant review, each requested unit of technology and support services is carefully reviewed to ensure that most up-to-date technology is being integrated in our secondary schools for CTE. A focused initiative for the 2015-16 school year was our emphasis on DIGITAL LEARNING FOR CTE. As part of this statewide CTE initiative, the CTE unit planned and implemented an extensive professional development conference on Mastery-Based Learning that included a senior demonstration session that was attended by 242 CTE teachers and administrators.

Other statewide CTE professional development seminars on technology included a PD event, entitled, Engage at Every Stage: The Mobile Experience. This was a simulation from beginning to end that shows practical ideas to engage at every stage with mobile technologies that are all free & fabulous! Engage. Inspire. Assess. See how you can use more innovative, adaptable student-created media projects that integrate curriculum using Windows and Mac computers, Android devices, iPads, and smartphones in class and online. Mobile apps serve as an extension of the student's thinking -- a place to explore ideas, research questions, test hypotheses, compose thoughts, and come to conclusions – in other words, to learn!

Second was the well-attended workshop, entitled, Tech Scene. This professional development session focused on new technologies that can be integrated in CTE instruction. The state-of-the-art technology presentation included augmented reality and HoloLens. The "Internet of Things" session reviewed the data that predicts that 50 to 100 billion things will be electronically connected by 2020. This Internet of Things (IoT) will fuel technology innovation by creating the means for machines to communicate many different types of information with one another. Consequently, all objects in the world will be connected and classrooms will be transformed.

As part of the program compliance review process, CTE unit members check all equipment that has been purchased with Perkins funds to ensure that all equipment is being utilized in instruction in the CTE courses for which each piece of equipment was intended.

**3. During the reporting year, what professional development programs did your state offer, including providing comprehensive professional development (including initial teacher preparation) for career and technical education teachers, faculty, administrators, and career guidance and academic counselors at the secondary and postsecondary levels? On what topics?**

**2015-16 PROFESSIONAL DEVELOPMENT**

The 2015-16 package for Connecticut's Statewide CTE professional development was designed to promote program improvement in Career and Technical Education (CTE) among teachers, administrators and counselors through a variety of technical assistance and professional development (PD) opportunities.

Specifically, the professional development package included:

**Management of Connecticut's Career Technical Student Organizations (CTSOs)**

Each CTE program area's CTSO, managed by one of our PD providers, was charged with expanding the number of schools with CTSO's and providing support services for part-time state advisors for each organization. As a result of these efforts, CTSO membership increased in 2015-16.

**Professional Development for Local CTE Administrators**

With the dramatic turn-over in local secondary school administrators, professional development activities were added in 2015-16 to provide incremental professional development. These included:

**PERKINS ADMINISTRATORS**

Three "Perkins Administrators" workshops for a total of 83 CTE administrators were held at CREC's offices at 111 Charter Oak Avenue, Hartford, Connecticut.

**CONNECTICUT STATEWIDE CTE ASSESSMENT**

The expansion of mandated Connecticut CTE Assessment for all schools required the planning and implementation of ten (10) state assessment briefing sessions. The comprehensive CTE assessment program that includes on-line assessments in 21 areas of concentration drew large numbers of CTE teachers, and school/district administrators. This professional development included training in concentrator review sessions, competency mapping and test administration. The review sessions were as follows:

## BRIEFING SESSIONS

## 2016 Connecticut Statewide CTE Assessment

Monday, March 7	CREC/Coltsville-Hartford
Tuesday, March 8	Cheshire High School, Cheshire
Wednesday, March 9	Education Connection – Litchfield
Friday, March 11	Career Academy, Waterbury
Wednesday, March 16	EASTCONN – Hampton
Thursday, March 17	Middletown – SDE Office
Friday, March 18	North Haven High School
Tuesday, March 22	Aquaculture School – Bridgeport
Monday, March 28	Wilbur Cross High School, New Haven
Friday, March 29	LEARN – Waterford High School

## CONNECTICUT STATE CTE CONFERENCE

There were 255 CTE teachers, administrators and guidance counselors who attended the 2015 conference, held at the Crowne Plaza, Cromwell, Connecticut on October 15, 2015. The conference included:

Sixteen (16) 75-minute workshops on the following topics: tying assessment and CTSOs to program improvement; CWE, WBL/Unpaid ELP; Mastery-Based Learning/Senior Demonstration; round table discussions on CTE topics; Student Readiness- What it Means for Early College Programs; and panel on exemplar models for program improvement and strategies to increase student success on CTE Assessment.

## FINANCIAL LITERACY

The Financial Literacy professional development conference was attended by 122 Connecticut educators at the Crowne Plaza, Southbury, Connecticut on the topic of “Teaching Financial Literacy.”

The conference included twelve (12) 75-minute workshops on topics that included: “Personal Finance in the Paperless Classroom,” “Teaching Personal Finance Online,” “Curriculum Resources for Middle School Educators Teaching Personal Finance and “Personal Finance and Mastery-Based Learning.”

## INVESTING AND PERSONAL FINANCE WORKSHOPS

CREC, the SDE professional development provider implemented three (3) workshops for eight (8) school districts that were grantees of the Investing and Personal Finance Grant, designed to educate grantees on personal finance initiatives, innovative approaches to teaching personal finance.

## THE ON-LINE PERSONAL FINANCE WEBINARS

CREC, the professional development provider implement three (3) workshops for eight(8) Online Personal Finance Innovation School District Grantees (in September and December of 2015 and March and May of 2016) on teaching Personal Finance online. These webinars were most successful in keeping all grantee schools up-to-date with the progress of all other schools on a quarterly basis.

## MINI CONFERENCE – TECHNOLOGY IN THE CTE CLASSROOM

A mini CTE conference in April, 2016 focused on the use of technology in the CTE Classroom. There were 43 CTE teachers and administrators in attendance at the mini conference that included demonstrations of teaching with iPads/tablets, blended learning, flipped classrooms, online learning, and new and innovative technology.

## MEDICAL CAREERS CONFERENCE

The Medical Careers Education and Health Sciences Conference was held on December 3, 2015 at the Waterbury Career Academy. There were 34 medical careers educators at the conference. The workshop scheduled included: new innovations in the healthcare industry careers, National Consortium for Health Science Education (NCHS) updates and other curricular options and resources for medical careers teachers.

### Agricultural Science and Technology Education (ASTE)

With full participation from all agriculture science centers, two (2) half-day workshops were implemented in 2015-16. They were:

Work Based Learning and SAE opportunities for ASTE Students

FFA programs, rules and regulations

## TECHNOLOGY EDUCATION CONFERENCE

CREC, the CTE professional development provider planned and implemented a half-day workshop focusing on topics in technology education with a registration of 44 teachers. The workshop topics included: modern design of technology education lesson plans, curriculum activities in engineering, Science Technology Engineering and Math (STEM), manufacturing, transportation, graphic design, three-dimensional design and digital animation.

## COOPERATIVE WORK EDUCATION

Two sequential half-day workshops for 25 CTE teachers were implemented to provide discussion and redesigned for work-based learning programs throughout the state.

### **4. During the reporting year, how did your state provide preparation for non-traditional fields in current and emerging professions, and other activities that expose students, including special populations, to high skill, high wage occupations?**

The State Department of Education – CTE Unit in collaboration with the Connecticut Women's Education and Legal Fund (CWEALF) designed a full-year series of activities to address the preparation for non-traditional fields in current and emerging professions, and other activities that expose students, including special populations, to high skill, high wage occupations.

(1st of two expos) SPRING 2016 EXPO – Friday, March 14, 2016

Held at Gateway Community College (GCC) and at Central Connecticut State University (CCSU), the two expos included: a) two workshops infields in which women are underrepresented in STEM occupations; b) a college and career fair with women representing many nontraditional fields of study and occupations; c) One workshop for educators on strategies to enhance enrollment, completion or student success in nontraditional CTE; d) student and teacher materials related to college and career planning for all participants; e) a post activity survey, which CWEALF provided to all participants after each expo.

Ninety 92 students and 15 teachers participated in the Gateway Community College Expo including the following secondary schools: Cooperative Arts and Humanities High School, New Haven; East Haven High School, East Haven; Hyde School of Health Science and Sports Medicine, New Haven; West Haven High School, West Haven; West Haven High School, West Haven; West Haven High School, West Haven; Wilbur Cross High School, New Haven; and Hill Career High School, New Haven.

Each student participated in a morning activity and two hands-on STEM workshops. The morning "It STEMs from HERE" activity required students to work in small groups to "role play" many of the different careers available in the STEM fields activity, led by mentors from ManyMentors at Yale. The hands-on workshops were led by Gateway Community College professors, students, and local STEM professionals. During lunch the students also completed a scavenger hunt where they visited tables from the following local businesses:

Animal & Plant Health Inspection Service (APHIS), Connecticut Center for Advanced Technology/Dream It. Do It., Gateway Community College (Admissions, Career Services, Dual Enrollment, and Engineering Tech and Automotive), ManyMentors, New Haven Manufacturers Association, Next Generation Manufacturing Center, Assa Abloy, Education and Employment Information Center (EEIC), and the Society of Women Engineers (SWE).

Educators participated in a teacher workshop titled Women in Manufacturing led by staff from the Regional Center for Next Generation. The workshop introduced teachers to the many opportunities available in the manufacturing field.

(2nd of two Expos) SPRING 2016 EXPO – Friday, April 8, 2016

The second Expo was held at Central Connecticut State University (CCSU) in New Britain on Friday, April 8, 2016. Eighty (80) girls and 13 educators attended from the following schools: CREC Two Rivers Magnet High School, Hartford; Farmington High School, Farmington; Hartford Public High School Law and Government Academy, Hartford; Hamden High School, Hamden; Plainville High School, Plainville; and Terryville High School, Terryville.

The CCSU Expo included a group activity, two hands-on student workshops, an educator workshop, and a college and career fair with professionals from Central Connecticut State University; Connecticut Center for Advanced Technology/Dream It; Do It., Education and Employment Information Center (EEIC); Next Generation Manufacturing Center, Pennsylvania Globe; Society of Women Engineers, Hartford; Animal Plant and Health Inspection Service (APHIS); Capital Workforce Partners, Capital Community College; and Tunxis Community College.

Following the Expos, both Gateway Community College and Central Connecticut State University expressed interest in working with CWEALF to continue offering this program to high school students in 2017.

Local Technical Assistance and smaller focused events on non-traditional professions

November 30, 2015 – Cheney Technical High School

A workshop for ninth grade female students focusing on the nontraditional career paths open to women and the educational choices related to those career paths. Approximately 30 girls were in attendance. There was time provided for discussion as students considered the difference in pay rates in nontraditional trades and reviewed resources open to them in their decision making.

February 27, 2016 - Trinity College

CWEALF partnered with Connecticut's chapter of the American Association of University Women and Trinity College to plan and implement this TECH SAVVY event for high school girls and their parents, teachers and activity leaders at Trinity College. The event was held from 8:30 am until 4:30 pm. There were 104 female students from 17 schools who attended and 45 adults (parents) from the northern part of Connecticut.

Among the activities of the Tech Savvy event Girls and adults was a panel discussion with representatives from colleges and STEM companies and detailing careers in STEM related professions and the courses offered in secondary schools that best prepare students for STEM professions.

The participants completed mock interviews with each representative given individual guidance in how to interview and then actually proceeding through an actual interview. The workshops included in the February 27, 2016 event included: 3D Design & Printing; Body Bag, (Build a Body out of Medical Devices); Build a Hovercraft, Pratt & Whitney; Build a Lunar Lander, Central Connecticut State University; Design for Diversity, Farm Design; and FIRST LEGO Robotics.

October 23, 2015 - Invention X, University of Hartford

In partnership with the Connecticut Girls' Collaborative Project, a student and teacher workshop was held at the University of Hartford on the Invention X project that was attended by 24 students and teachers.

April 13, 2016 - CCAT, Making It Real

This workshop at the Connecticut Center for Advanced Technology, Inc. was entitled "Making It Real. This was a Manufacturing Summit for middle and secondary school females and CTE teachers. This CCAT event was endorsed by the National Manufacturing Association's Manufacturing Institute as a national best practice for attracting young women to future manufacturing careers. With students and teachers participating from both Connecticut and Rhode Island, there were 142 in attendance.

**5. During the reporting year, how did your state provide support for programs for special populations that lead to high skill, high wage and high demand occupations?**

HIGHLIGHT - Statewide CONCENTRATION for SPECIAL POPULATIONS increased by 50% in 2016.

During the 2015-16 school, the Connecticut State Department of Education required all secondary schools receiving Perkins funds to provide equal and fair access to all CTE courses for all students, including all special populations groups. All schools are encouraged to provide every CTE opportunity possible for special needs students. As per protocol, Connecticut requires that information on CTE courses and program offerings are fully communicated to students and their parents/guardians with sufficient advance notice to make the elective course decision making process more effective in crafting a student centered learning plan. The following strategies are implemented by the CTE Unit of the State Department of Education for Special Populations:

Perkins fund usage is encouraged for all schools to provide equal access for all CTE course offerings. Among the uses of Perkins funds for 2015-16 for special populations student included equipment, supplies, teacher aides, tutors and school-based enterprises.

Increasing membership for the 3rd consecutive year and participation for special population students in the Connecticut state associations for CTSO's including Skills/USA, DECA, FBLA, FFA, FCCLA, HOSA and TSA. Additionally, special accommodations are provided by the organizations so that special populations students may fully participate in the competitive events of each CTSO.

Special Populations Concentrators (Connecticut Statewide CTE Assessment) – The Connecticut State Department of Education requires that all students who reach the threshold/definition of a CTE concentrator MUST be tested in the Connecticut Statewide CTE Assessment. There was a 50% INCREASE IN SPECIAL POPULATIONS CONCENTRATORS IN 2016 over 2015.

**6. During the reporting year, how did your state offer technical assistance for eligible recipients?**

The State Department of Education, Academic Office – CTE Unit conducted a complete package of Technical Assistance on the local and state level in each of the CTE program areas of Business & Finance Education, Family and Consumer Sciences, Agriculture Education, Technology Education, Marketing Education, Medical Careers and Cooperative Work Education.

**Perkins Grant Review and Approval Process**

The review of all applications from local school districts is viewed as a technical assistance process. Through the Continuous Improvement Plan, required of each secondary school requesting funding, the CTE unit examines the specific strategies that a school has submitted for the measurable improvement of CTE. Each course is reviewed for its instructional alignment with the 2015 State Performance Standards and Competencies. With submitted enrollment data, we are able to review the process by which each course in each program area contributes mandated instructional competencies, leading to concentration. In grant reviews where we do not find adequate documentation, we require grant rewrites that address the CTE programmatic shortcomings. The Perkins grant review process requires that each school utilizes the data from the Connecticut Statewide CTE Assessment to show measured improvement in student performance (skill attainment). The disaggregated data for each school's concentrators from the statewide assessment is sent to each school as part of the review process. This data is used to reference and cross-reference a school's stated goals from the previous and current school years, requesting additional benchmarks for improvement.

**Program Compliance Review**

During the 2015-16 school year 17 school-wide program compliance reviews (PCR) were conducted by the CTE unit staff of the State Department of Education. The comprehensive PCR was designed to provide “program improvement” in all phases of a local CTE program. After examining all data related to a school’s CTE operations, the CTE unit conducts its day-long review that includes, but limited to the following activities:

Review of CTE Foundations with school district and school administrators;

Review of all CTE course descriptions and enrollment-equal access procedures for students with school guidance staff;

Meetings with student focus groups, regarding CTE courses;

Meetings with each CTE teacher by program area, reviewing statewide CTE assessment data of their students (concentrators);

Sight review of all equipment purchased in Perkins grant funds; and

A comprehensive report that includes commendations and recommendations for the improvement of infrastructure, teaching and learning in CTE for that school.

#### Local Secondary School Professional Development

During the 2015-16 school year, State Department of Education – CTE Unit members conducted approximately 52 professional development workshops for CTE teachers for individual secondary schools. These professional development sessions made at the request of school CTE teachers or administrators were focused on the following topics:

Creation of new courses or restructuring of CTE program areas;

Recruiting for non-traditional instructional areas;

Improved teaching strategies for the instruction of mandated Performance Standards;

Integration of Common Core Mathematics and ELA practices into CTE instruction;

Integrating Entrepreneurship in CTE courses;

Capstone Project Concepts for CTE;

Starting a CTSO in a co-curricular approach; and

Utilizing data/score reports from the Statewide CTE Assessment to improve instruction.

#### Statewide Professional Development

The individual career and technical education program areas, collaborating with the respective state CTE teachers’ organization, along with representatives from business and labor, planned and implemented 14 professional development conferences for their respective teachers. These subject area conferences provide technical assistance in key improvement areas including as the revision of curriculum; availability of new technology/software/equipment; and innovative teaching techniques and practices. The Annual Connecticut CTE Conference was held on October 15, 2015. The agenda of this conference was focused on providing technical assistance to CTE teachers in every program areas in the integration of ELA and math into CTE instruction. There were 68 secondary schools and approximately 255 in attendance for the important state CTE conference.

#### Statewide Briefing Sessions for CTE Assessment

In 2015-16 the Connecticut State Department of Education, CTE unit provided intensive technical assistance for all secondary schools through 10 regional statewide briefing sessions in preparation for the first year of implementation of the Connecticut CTE Statewide Assessment. These sessions provided detailed strategies in the instruction and review of the competencies for the 2016 Connecticut CTE Assessment that includes 21 (tested) areas of concentration. Individual teacher coaching techniques were included in all briefing session as CTE administrators and teachers learned of the revised protocols that were critical to the successful completion of the statewide online CTE assessment. Special attention was paid to the proper use of sample test items that address the individual competencies of new Version IX of the mandatory state CTE assessment for all concentrators.

## 7. Serving individuals in state institutions

### Part I: State Correctional Institutions

#### Amount of Perkins funds used for CTE programs in state correctional institutions:

0

#### Number of students participating in Perkins CTE programs in state correctional institutions:

0

#### Describe the CTE services and activities carried out in state correctional institutions.

##### USD #1 – CORRECTIONAL INSTITUTIONS

Perkins funds are not used for the Correctional agencies, however they do offer vocational, career and technical education training for their inmates.

The mission of USD #1 is to provide quality education programs for incarcerated individuals so that they can make a successful transition to society. Academic knowledge, vocational competencies, use of technology and life skills integrated with technology are offered to students in a positive environment to foster life-long learning, multicultural awareness.

Academic and vocational training is provided to inmates through a variety of programs flexible enough to accommodate a variety of learning styles. Development of the learner's ability to reason and to know where to seek information through the use of technology and traditional means is considered to be as essential as the mastery of facts.

All professional staff is highly qualified and state certified as required through the Connecticut State Department of Education. On a yearly basis approximately 40% of the inmate population attends some form of educational programming. Daily enrollment is approximately 2,500 students. Participation in 2013-14 in vocational (CTE) programs was approximately 900 students.

Alternative high school programs such as the External Diploma Program (EDP) and high school completion, vocational education, post-secondary education and enrichment classes, including transition and parenting skills are also offered to eligible students. A comprehensive 21-day Re-entry curriculum is provided in some of our facilities to assist students with their transition back to the community.

Through our vocational classes with support of the Carl D. Perkins grant provided by the Connecticut State Department of Education, incarcerated students earn Connecticut vocational (career & technical education) certificates in:

Auto Body Technology,

Building Maintenance,

Carpentry,

Computer Repair,

Cosmetology,

Drafting CAD/CAM,

Graphics and Printing Technology, and

Culinary Arts.

Career and technical education opportunities at individual correctional institutions include:

Bergin Correctional Institution (Storrs) – The Horticulture Farming Project has been most successful generating large amounts of produce for the inmate kitchen and for donation to local soup kitchens.

Enfield Correctional Institution (Enfield) – The Agriculture program harvested almost 20,000 pounds of fruits and vegetables to supplement inmate meals. Additionally, hundreds of pounds of vegetables were donated because of the CTE student work to charitable organizations including the senior center, food shelf, and local homeless shelter.

WILLARD-CYBULSKI CORRECTIONAL INSTITUTION (Enfield) – The VOC-ED Horticulture Program committed to educating their prison population relative to the occupational potential and joys of gardening. In 2013-14 new fields were plowed to harvest potatoes as well as vegetables and herbs. Basic computer repair skills are offered to inmates at the Willard site.

CHESHIRE CORRECTIONAL INSTITUTION (Cheshire) – The Vocational Education (CTE) programs that are offered include: Commercial Cleaning, Business Education, Wheel Chair Repair, Carpentry and Computer Repair. There are other CTE training opportunities made available through the system wide Correctional Enterprises of Connecticut program that include the market shop (license plates), plastic bag shop, and the graphic arts shop (sign shop).

The Connecticut Correctional agencies and facilities provide protection, programming, and education (vocational education) for those with special needs including prisoners who have physical or mental disabilities or communicable diseases, and prisoners who are under the age of eighteen or geriatric. Where applicable law does not provide for all such prisoners to be transferred to the care and control of a juvenile justice agency, a correctional agency should provide specialized facilities and programs to meet the education, special education, and other needs of this population. Correctional officials implement a protocol for identifying and managing prisoners whose behavior is indicative of mental illness, mental retardation, or other cognitive impairments.

After consultation with each prisoner, correctional authorities develop an individualized programming plan for the prisoner, in accordance with which correctional authorities and should provide each prisoner access to appropriate programs, including educational opportunities, mental health and substance abuse treatment and counseling, vocational and job readiness training, personal financial responsibility training, parenting skills, relationship skills, cognitive or behavioral programming, and other programs designed to promote good behavior in the facility and reduce recidivism. Correctional authorities should afford every prisoner an opportunity to obtain a foundation in basic literacy, numeracy, and vocational skills.

Each sentenced prisoner should be employed substantially full-time unless there has been an individualized determination that no work assignment for that prisoner is consistent with security and safety. Correctional authorities are permitted to assign prisoners to community service; to jobs in prison industry programs; or to jobs useful for the operation of the facility, including cleaning, food service, maintenance, and vocational agricultural programs. Prisoners' work assignments, including community service assignments, and teach vocational skills that will assist them in finding employment upon release, should instill a work ethic, and should respect others.

## **Part II: State Institutions Serving Individuals with Disabilities**

**Amount of Perkins funds used for CTE programs in state institutions serving individuals with disabilities:**

0

**Number of students participating of Perkins CTE programs in institutions serving individuals with disabilities:**

0

**Describe the CTE services and activities carried out in institutions serving individuals with disabilities.**

Perkins funds are provided to the Department of Children and Families, \$15,000.00. There is statutory authority for the Connecticut State Board of Education, Sections 4-5 and 4-8 of the Connecticut General Statutes and the provisions of Carl D. Perkins Career and Technical Education Improvement Act of 2006, codified at 20 U.S.C. 2301 et seq. to provide funds for the Department of Children and Families (DCF). The DCF shall use such funding (\$15,000.) for career and technical education. The 2015-16 Perkins grant for the DCF included funds for their vocational occupational training in Commercial Cleaning; Auto Detailing, Music & Sound Production and the Building Trades programs.

**8. During the reporting year, did your state use Perkins funds to support public charter schools operating career and technical education programs?**

No

**9. During the reporting year, did your state use Perkins funds to support family and consumer sciences programs?**

Yes

Family and Consumer Sciences (FCS) programs are one of the three largest CTE program areas in Connecticut in terms of total schools and enrollment. The Connecticut Perkins grant applications encourages the use of funds for Family and Consumer Sciences programs. The four principle areas of concentration in the FCS program area are Culinary and Food Production, Early Childhood Education, Nutrition and Food Production and Textiles and Design. Additionally, the national student organization for FCS, FCCLA is one of the seven recognized CTSO's in Connecticut.

2015-16 marked the 5th consecutive year that approximately 60% of all secondary schools with career and technical education programs included the program area of Family and Consumer Sciences in their CTE package of courses. All eligible secondary schools for Perkins grant funds may utilize such funds for Family and Consumer Sciences.

As evidence of the high levels of student enrollment and (concentrator) performance in Family & Consumer Sciences programs, more students reached the threshold of a concentrator in the areas of concentration of Family & Consumer Sciences than any of the other CTE program areas.

**FC&S CONCENTRATORS**

In the 2016 Connecticut Statewide CTE Assessment, the areas of concentration in Family and Consumer Sciences performed at these significant levels of achievement as evidence in the following data:

Area of Concentration	total concentrators	% at/above goal
Culinary & Food Production	997	33.50%
Early Childhood Education	1,257	68.81%
Nutrition & Food Production	793	22.57%
Textiles & Design	158	22.78%

**10. During the reporting year, did your state use Perkins funds to award incentive grants to eligible recipients for exemplary performance or for use for innovative initiatives under Sec. 135(c)(19) of Perkins IV?**

Yes

For the 2015-16 school year, Perkins funds were allocated for Innovation Grants, providing the development of new concepts and instructional practices for Connecticut Career and Technical Education.

To move the state forward in focused areas of CTE, the CTE Unit encouraged secondary schools to work on specific innovation themes that included: Mastery Based Learning Curriculum; CTE Senior (capstone) projects; Embracing Issues in Aging; development of Computer Programming Software; development of Laser Engraving Curriculum; and the development of 3-D Design Curriculum.

The eighteen (18) 2015-16 innovation grant awardees were:

Bolton High School

Family & Consumer Sciences

Mastery Based Learning Curriculum

\$17,650.00

Brookfield High School

All CTE Program Areas

CTE Senior (capstone) projects

\$39,980.00

Bacon Academy (Colchester)

Family & Consumer Sciences

Re-Design of course curriculum

\$20,000.00

Danbury High School

Medical Careers

Embracing Issues in Aging

\$39,999.00

East Hartford High School

Medical Careers

Embracing Issues in Aging

\$29,664.00

Jonathan Law & Foran High Schools (Milford)

Development of Computer Programming Software

New Britain High School

Development of Laser Engraving Curriculum

Technology Education

\$18,500.00

Newtown High School

Development of Laser Engraving Curriculum

Technology Education

\$19,549.00

Newtown High School

Development of 3-D Design Curriculum

Technology Education

\$13,559.00

E.O. Smith High School, (Storrs)

Development of Agricultural Mechanics Curriculum

Agriculture Education & Science

\$18,000.00

Stratford and Bunnell High Schools, (Stratford)

Development of 3-D Design Curriculum

Technology Education

\$20,000.00

Tourtellotte Memorial High School

All CTE Program Areas

Mastery Based Learning Curriculum

\$19,986.00

Tourtellotte Memorial High School

All CTE Program Areas

CTE Senior (capstone) projects

\$39,986.00

Lyman Hall & Sheehan High Schools, (Wallingford)

All CTE Program Areas

CTE Senior (capstone) projects

\$39,986.00

Windsor High School

Business & Finance Education

Development of 3-D Design Curriculum

\$20,000.00

Windsor High School

Technology Education

Development of Laser Engraving Curriculum

\$19,738.00

Windsor High School

Development of Computer Programming Software

Business & Finance Education

\$34,020.00

Windsor Locks High School

Technology Education

Development of 3-D Design Curriculum

\$20,000.00

**11. During the reporting year, did your state use Perkins funds to provide career and technical education programs for adults and school dropouts to complete their secondary school education?**

No

**13P. During the reporting year, did your state use Perkins funds to provide assistance to individuals who have participated in Perkins assisted services and activities in continuing their education or training or finding appropriate jobs?**

No

# Consolidated Annual Report, Program Year 2015 - 2016 Connecticut

## Step 3: Use of Funds: Part C

**1. During the reporting year, how did your state provide support for career and technical education programs that improve the academic and career and technical skills of students through the integration of academics with career and technical education?**

The

At the annual Connecticut State Department of Education CTE Conference in October, workshops were offered in:

Integrating Math into Business and Finance Technology, Family and Consumer Sciences, Health Sciences and Technology Education: Learn strategies through purposeful integration of CCS Math Practices in your content area. Create meaningful CTE State Assessment Sample Items that can be used in your classroom instruction.

Integrating ELA in Career and Technical Education Courses in Bristol Schools

Connecticut State Department of Education – CTE Unit encourages the full participation of all CTE program areas to participate in the Career and Technical Education Student Organizations (CTSOs). To receive Perkins funding, a secondary must have at least one CTSSO with paid membership and a program of work.

Through the Connecticut Perkins Grant application, school districts may provide a \$1,500.00 stipend for CTSSO advisors. The \$1,500.00 is the maximum a school may use Perkins funds for each organization.

CTSSO impact/effectiveness data is collected from the Connecticut Statewide CTE Assessment, gauging the impact of state conference/competitive event participation on the achievement of CTE concentrators.

For the 4th consecutive year, CTSSO membership increased. Here is the 2015-16 totals for the CTSSO's in Connecticut:

CTSSO	Number of Chapters	Total Membership
SkillsUSA	23	11,277
FFA	20	3,300
DECA	57	2,624
FBLA	55	2,053
HOSA	23	565
TSA	30	450
FCCLA	20	350

**2. During the reporting year, how did your state support partnerships among local educational agencies, institutions of higher education, adult education providers, and, as appropriate, other entities, such as employers, labor organizations, intermediaries, parents, and local partnerships, to enable students to achieve state academic standards, and career and technical skills.**

The ongoing partnership between Connecticut educational entities on the local and state levels is of the most consistent of Connecticut's CTE efforts.

1. The key to measured improvement on the state and local level is the consistency by which we implement academic standards. Connecticut is committed to the teaching and learning of the Common Core State Standards (CCSS), beginning with reading and mathematics. On the secondary level all 11th grade students are required to take the SAT test as it is aligned with the CCSS. This test directly connected to requirements for college review and subsequent matriculation is an expanding partnership with our state post-secondary institutions.
2. The statewide role of the CCSS in every school district in Connecticut is further enhanced by the commitment of the State Department of Education - CTE Unit to align our mandated Connecticut Statewide CTE Assessment with the CCSS. Version IX of our CTE Assessment system includes the direct integration of the CCSS on 40% of all test items in all 21 areas of concentration.
3. Furthering the partnership is the mandated state legislation for teacher evaluation. Teacher evaluation measures "education learning objectives" are tied directly to student performance on state assessments. In terms of Connecticut secondary schools, 53% of all schools use the statewide CTE assessment data for the evaluation of CTE teachers.
4. All school districts requesting funds from the Perkins Grant must organize and maintain a regular schedule of meetings of a specific CTE ADVISORY COMMITTEE. The local school districts are encouraged to include on their CTE advisory committee roster business and industry leaders, post-secondary representatives, guidance staff, CTE teachers, students and administrators. The design of local these committees has led to significant improvements in CTE program infrastructure, new courses and the updating of course curricula and instruction.
5. Connecticut recognizes the importance of a focused, wrap-around effort to connect academic and CTE achievement to a meaningful, sustainable career for each student. The Student Success Plan (SSP) enacted into law in 2012, is an individualized student driven plan that will be developed to address every student's needs and interests to help every student stay connected in school and to achieve postsecondary educational and career goals. The SSP begins in the 8th grade and continues through high school to provide the student support and assistance in setting goals for social, emotional, physical and academic growth, meeting rigorous high school expectations, and exploring postsecondary education and career interests. The Student Success Plan and supporting structures such as student portfolios and academic/personal records should be electronic and portable following the student from school to school and district to district.

Public Act No. 11-135 · Section 2(j)

An act concerning implementation dates for the Secondary School Reform, exceptions to the school governance council requirement and the inclusion of continuous employment in a cooperative arrangement as part of the definition of teacher tenure. "For the school year commencing July 1, 2012, and each school year thereafter, each local and regional board of education shall create a student success plan for each student enrolled in a public school, beginning in grade six. Such student success plan shall include a student's career and academic choices in grades six to twelve, inclusive."

6. Through the Perkins grant process, the Connecticut State Department of Education - CTE Unit provides school districts with the option to enter into a consortium with other districts. When a school district does not reach the threshold of the minimum \$15,000 Perkins entitlement or due to other circumstances is unable to offer a sufficient size, scope and quality of CTE that Connecticut requires through the Perkins grant requirements, consortium is an option. These partnerships provide opportunities for regional CTE professional development and collaboration in designing measurable improvement methods in CTE teaching and learning. Post-secondary institutions and local business and industry often play an important role in the development of CTE consortium.
7. In 2015-16, a collaboration between the Connecticut State Department of Education and the Connecticut Board of Regents developed written guidelines for College Career Pathways, a Perkins supported dual-enrollment program between high schools and eleven community colleges. The College Career Pathways program in Connecticut gives high school students the opportunity to experience college-credit bearing courses taught by college-approved high school teachers. College Career Pathways is a concurrent enrollment program which receives funding through the Carl D. Perkins Career and Technical Education Improvement Act of 2006.

Key topics addressed in the guidelines include:

Articulation Agreements

Student Qualification, Recruitment and Selection

Faculty Selection, Monitoring, Professional Development and Evaluation

Academic Standards, Curriculum and Evaluation

Student Support Services

[http://www.sde.ct.gov/sde/lib/sde/pdf/deps/career/ct\\_ccp\\_guidelines.pdf](http://www.sde.ct.gov/sde/lib/sde/pdf/deps/career/ct_ccp_guidelines.pdf)

**3. During the reporting year, did your state use Perkins funds to improve career guidance and academic counseling programs?**

No

**4. During the reporting year, did your state use Perkins funds to establish agreements, including articulation agreements, between secondary school and postsecondary career and technical education programs to provide postsecondary education and training opportunities for students?**

Yes

In addition to developing CCP Guidelines [http://www.sde.ct.gov/sde/lib/sde/pdf/deps/career/ct\\_ccp\\_guidelines.pdf](http://www.sde.ct.gov/sde/lib/sde/pdf/deps/career/ct_ccp_guidelines.pdf), the Connecticut State Department of Education, Academic Office – CTE Unit has encouraged the use of College Career Pathways the current program that replaced Tech Prep. Working in collaboration with the Connecticut community college system, high schools have carefully crafted articulation agreements for those dual enrollment courses. Within our College Career Pathway initiative, CTE students are provided with opportunities to gain proficiency in core competencies that are a requisite for college level work.

**CONNECTICUT COMMUNITY COLLEGE SYSTEM**

Eleven post-secondary state community colleges receive Perkins grant funds with the stipulation that each college receiving those funds will develop an implementation program of College Career Pathways. Each institution has articulated CTE courses.

The following charts lists the Connecticut College Pathway programs of each community college as each relates to a career cluster and the subsequent course that are articulated with local secondary schools.

**ASNUNTUCK COMMUNITY COLLEGE**

Career Cluster:Arts, Audio/Video Technology and Communications

Articulated Courses of Pathway:Arts-Graphics, Digital Photography, Computer Graphics

Career Cluster: Human Services

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Information Technology

Articulated Courses of Pathway: Information Technology

Career Cluster:Science, Technology & Mathematics – STEM

Articulated Courses of Pathway: Environmental Science

**CAPITOL COMMUNITY COLLEGE**

Career Cluster:Architecture and Construction

Articulated Courses of Pathway:Architecture

Career Cluster:Arts, Audio/Video Technology and Communications

Articulated Courses of Pathway:Audio/Visual/Film Technology

Career Cluster: Business Management and Administration

Articulated Courses of Pathway: Finance

Career Clusters: Human Services and Education & Training

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Information Technology

Articulated Courses of Pathway: Computer Science, Computer Web Design and Software Applications

Career Cluster: Law, Public Safety, Corrections and Security

Articulated Courses of Pathway: Criminal Justice

GATEWAY COMMUNITY COLLEGE

Career Cluster:Architecture and Construction

Articulated Courses of Pathway:Architecture

Career Cluster: Business Management and Administration

Articulated Courses of Pathway: Finance, Marketing

Career Clusters: Education & Training

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Health Science

Articulated Courses of Pathway:All health related courses

Career Cluster: Hospitality & Tourism

Articulated Courses of Pathway:Culinary courses

Career Cluster: Manufacturing

Articulated Courses of Pathway: Manufacturing

Career Cluster: Science, Technology, Engineering & Mathematics – STEM

Articulated Courses of Pathway:CADD, Electricity

Career Cluster: Transportation, Distribution and Logistics

Articulated Courses of Pathway:Automotive Technology

HOUSATONIC COMMUNITY COLLEGE

Career Cluster:Business Management and Administration

Articulated Courses of Pathway:Accounting

Career Cluster: Human Services

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Health Science

Articulated Courses of Pathway:All health related courses

Career Cluster: Marketing, Sales and Service

Articulated Courses of Pathway:Marketing

MANCHESTER COMMUNITY COLLEGE

Career Cluster:Arts, Audio/Video Technology and Communications

Articulated Courses of Pathway:Video/Film-making, Electronic Publishing, Broadcast/TV Production, Reporting

Career Cluster: Business Management and Administration

Articulated Courses of Pathway: Entrepreneurship, Computer Applications, Web Design

Career Clusters: Education & Training

Articulated Courses of Pathway: Early Childhood Education

Career Clusters: Finance

Articulated Courses of Pathway: Accounting

Career Cluster: Health Science

Articulated Courses of Pathway:All health related courses

Career Cluster: Hospitality & Tourism

Articulated Courses of Pathway:Culinary courses

Career Cluster: Information Technology

Articulated Courses of Pathway:Web Design

Career Cluster: Law, Public Safety, Corrections and Security

Articulated Courses of Pathway:Criminal Justice

Career Cluster: Manufacturing

Articulated Courses of Pathway: Manufacturing

MIDDLESEX COMMUNITY COLLEGE

Career Cluster:Arts, Audio/Video Technology and Communications

Articulated Courses of Pathway:Digital Arts, Computer Graphics, Broadcast Communications

Career Cluster: Business Management and Administration

Articulated Courses of Pathway: Business Computers

Career Clusters: Finance

Articulated Courses of Pathway: Accounting

Career Cluster: Human Services

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Manufacturing

Articulated Courses of Pathway: Manufacturing, CADD

NORWALK COMMUNITY COLLEGE

Career Cluster: Hospitality & Tourism

Articulated Courses of Pathway: Culinary

Career Cluster: Information Technology

Computer Programming

NAUGATUCK VALLEY COMMUNITY COLLEGE

Career Cluster:Architecture and Construction

Articulated Courses of Pathway:Architecture

Career Cluster: Business Management and Administration

Articulated Courses of Pathway: Marketing, Consumer Economics

Career Clusters: Education & Training

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Health Science

Articulated Courses of Pathway:All health related courses

Career Cluster: Hospitality & Tourism

Articulated Courses of Pathway:Culinary courses

Career Cluster:Science, Technology & Mathematics – STEM

Articulated Courses of Pathway: CADD, Computers

QUINEBAUG VALLEY COMMUNITY COLLEGE

Career Cluster:Agriculture, Food and Natural Resources

Articulated Courses of Pathway: Environmental Science

Career Cluster:Architecture and Construction

Articulated Courses of Pathway: Construction, CADD

Career Cluster:Arts, Audio/Video Technology and Communications

Articulated Courses of Pathway:Arts Graphics, Photography

Career Cluster: Business Management and Administration

Articulated Courses of Pathway: Computer Application, Accounting

Career Cluster: Health Science

Articulated Courses of Pathway:Medical Terminology, Health Careers

Career Cluster: Human Services

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Information Technology

Articulated Courses of Pathway: Computer Science, and Software Applications

Career Cluster: Science, Technology, Engineering & Mathematics – STEM

Articulated Courses of Pathway:CADD, Intro Engineering

THREE RIVERS COMMUNITY COLLEGE

Career Cluster:Architecture and Construction

Articulated Courses of Pathway: Architectural Design, CADD

Career Cluster: Business Management and Administration

Articulated Courses of Pathway:Accounting, Marketing, Management

Career Clusters: Finance

Articulated Courses of Pathway: Finance

Career Cluster: Hospitality & Tourism

Articulated Courses of Pathway:Culinary courses

Career Cluster: Human Services

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Information Technology

Articulated Courses of Pathway: Computer Science, Computer Web Design and Software Applications

Career Cluster: Law, Public Safety, Corrections and Security

Articulated Courses of Pathway: Criminal Justice, Fire Technology

Career Cluster: Manufacturing

Articulated Courses of Pathway: Manufacturing

Career Cluster: Marketing, Sales and Service

Articulated Courses of Pathway: Marketing

Career Cluster: Science, Technology, Engineering & Mathematics – STEM

Articulated Courses of Pathway:CADD, Intro Engineering-Fundamentals, Electronics

TUNXIS COMMUNITY COLLEGE

Career Cluster: Business Management and Administration

Articulated Courses of Pathway: Accounting, Marketing

Career Clusters: Education & Training

Articulated Courses of Pathway: Early Childhood Education

Career Cluster: Health Science

Articulated Courses of Pathway:All health related courses

Career Cluster: Information Technology

Articulated Courses of Pathway: Computers, Computer Graphics

CONNECTICUT STATEWIDE CTE ASSESSMENT

All students receiving college credit as a result of the College Career Pathways program were tested in the Connecticut Statewide CTE Assessment.

Here are the results of the 2016 Statewide CTE Assessment as it relates to College Career Pathways students:

Area of Concentration	Concentrators	No. Meeting/Ex	Goal Percentage
Accounting	162	80	49.38
Agriculture Mechanics	0	0	00.00
Animal Science	5	2	40.00
Aquaculture	20	5	25.00
Automotive Technology	9	0	00.00
Business Management	14	7	50.00
Computer Aided Drafting CADD	69	26	37.68
Computer Information Systems	15	1	6.67
Cooperative Work Education	13	4	30.77
Culinary and Food Production	148	68	45.95
Digital Video Production	33	15	45.45
Early Childhood Education	217	156	71.89
Engineering Technology	104	64	61.54
Marketing Education	170	55	32.35
Medical Careers Education	117	80	68.38
Natural Resources/Environ.	10	6	60.00
Nutrition & Food Production	22	5	22.73
Personal Finance	135	62	45.93
Plant Science	6	0	00.00
Textiles & Design	16	7	43.75
Wood Technology	14	2	14.29

#### Summary Statement of College Career Pathway Assessment Data

9.7% of all Connecticut Concentrators in 2016 were students participating in the College Career Pathways program.

**5. During the reporting year, did your state use Perkins funds to support initiatives to facilitate the transition of sub baccalaureate career and technical education students into baccalaureate programs?**

No

**6. During the reporting year, did your state use Perkins funds to support career and technical student organizations?**

Yes

The Connecticut State Department of Education – CTE Unit encourages the full participation of all CTE program areas to participate in the Career and Technical Education Student Organizations (CTSOs).

Through the Connecticut Perkins Grant application, school districts may provide a \$1,500.00 stipend for CTSO advisors. The \$1,500.00 is the maximum a school may use Perkins funds for each organization.

CTSO impact/effectiveness data is collected from the Connecticut Statewide CTE Assessment, evaluating the impact of state conference/competitive event participation on the achievement of CTE concentrators.

For the 4th consecutive year, CTSO membership increased. Here is the 2015-16 totals for the CTSO's in Connecticut:

CTSO	Number of Chapters	Total Membership
SkillsUSA	23	11,277
FFA	20	3,300
DECA	57	2,624
FBLA	55	2,053
HOSA	20	624
TSA	30	450
FCCLA	20	350

**7. During the reporting year, did your state use Perkins funds to support career and technical education programs that offer experience in, and understanding of, all aspects of an industry for which students are preparing to enter?**

Yes

**ALL ASPECTS OF INDUSTRY**

**Connecticut State Performance Standards and Competencies (PS&C)**

The State Department of Education, Academic Office – CTE Unit is committed to the alignment of our State Performance Standards and Competencies with the most current CTE national standards. Every three years the national standards for the program areas of CTE are revised by the national organizations that provide leadership in these CTE program areas. These national organizations include, but are not limited to, the National Association of Agricultural Educators, MBA Research and Curriculum Center, National Business Educators Association, and the American Association of Family & Consumer Sciences. Each of these organizations utilizes business, industry and labor to establishment the highest of industry/profession/career standards that translates into state-of-the-art CTE instruction.

Connecticut applies these National Standards to the 3-year cyclical revision of the Connecticut State Performance Standards and Competencies. The state revision process includes CTE teacher committees in each of the 21 areas of concentration. The statewide CTE teacher committees include Connecticut business and industry representatives. Each committee reviews the national performance standards and competencies and establishes a core package of performance standards and competencies for all Connecticut secondary schools providing CTE courses. The latest revision of the Connecticut PS&C was completed in 2015.

**PERKINS GRANTEES – Requirement to Teach the PS&C**

The secondary schools of Connecticut requesting funds/benefits of the Carl D. Perkins grant are required to provide instruction in the Connecticut State Performance Standards and Competencies. CTE courses, regardless of course title are aligned with 21 areas of concentration. All competencies are taken directly from the national standards from national and state organizations/committees that have direct participation with professionals from business, industry and labor. The mandated instruction of the Connecticut CTE Performance Standards and Competencies leads to the testing of all concentrators in the Connecticut Statewide CTE Assessment.

The Connecticut Statewide CTE ASSESSMENT (2016)

Aligned with INDUSTRY STANDARDS Skill Attainment is a centerpiece of Connecticut Career and Technical Education as it has direct impact on all aspects of improving the quality of teaching and learning in CTE. There is an emphasis placed on the Connecticut Statewide CTE Assessment in all of Connecticut Career & Technical Education because of the need to establish measurable goals for student (concentrator) technical skill attainment in the process of improving the quality of CTE. The statewide assessment is required of every school receiving funding/benefits from the Perkins grant.

The Connecticut Career and Technical Education statewide assessment program was initiated in 2001 after two years of research and testing. For the 2015-16 school year, Version IX of the CTE statewide assessment was implemented, based exclusively on the most recent national performance standards for each area of concentration, assimilated into the 2015 Connecticut State Performance Standards and Competencies. Each CTE competency in each area of concentration is assessed in Connecticut's mandated electronic assessment of every school's concentrators.

Areas of Concentration

The Connecticut "areas of concentration" in Career and Technical Education represent the largest course categories across all school districts in Connecticut. Connecticut has identified 21 areas of concentration, general categories of CTE courses, each aligned to national CTE standards. One additional area of concentration was added for the 2014-15 school year in response to statistical analysis that showed that CTE courses related to "food preparation" fell into two categories those with a focus on nutrition and domestic food preparation and those that were identified with the more sophisticated culinary arts.

**8. During the reporting year, did your state use Perkins funds to support partnerships between education and business, or business intermediaries, including cooperative education and adjunct faculty arrangements at the secondary and postsecondary levels?**

Yes

COOPERATIVE WORK EDUCATION - SECONDARY SCHOOLS

One the seven Connecticut general program areas for CTE operating in the State's secondary schools, requiring State certification is Cooperative Work Education (CWE). This CTE program area, indigenous to Connecticut has been a CTE programmatic option since 1972. The State Department of Education, Academic Office - CTE Unit encourages schools to have a CWE program, despite the additional burdens it places of school districts.

Work-Based Paid Employment (Co-op)

In addition to specific CTE teacher certification for any teacher charged with the coordination of a CWE program, schools are encouraged to provide early release from school for those students enrolled. This is for the work-based, paid employment component of the program. Students must have a structured workplace plan that includes the specific competencies and job responsibilities/tasks that they the student will be required to complete. Based upon the student's performance on these tasks, the employer will provide a brief narrative, culminating in quarterly grade that will appear on the student's report card. The successful completion of all tasks will result in the awarding of credit toward graduation. The certified CWE teacher/coordinator will monitor the employed student on a quarterly basis and conduct an interview with student and employer, to ensure progress at the workplace.

CWE Instruction

Students enrolled in CWE will be required to take the CTE course known as Cooperative Work Education during the school day. Course instruction must be aligned with the Connecticut State Performance Standards and Competencies (2015 edition). Major emphasis will be placed on the instruction of employability skills, personal finance and current labor laws. Each student is required to keep accurate records of their employment while engaged as a CWE employed student.

## Testing as a Concentrator

All CWE students are required to be tested in the Annual Connecticut Statewide CTE Assessment that is implemented the last two weeks in April and the entire month of May.

**9. During the reporting year, did your state use Perkins funds to support the improvement or development of new career and technical education courses and initiatives, including career clusters, career academies, and distance education?**

Yes

The CTE Unit of the State Department of Education encouraged the development of new CTE courses in emerging business, industry and social services areas through the use of the 2015-16 innovation grants.

To move the state forward with new courses and concepts the CTE Unit encouraged secondary schools to work on specific innovation themes that included: Mastery Based Learning Curriculum; CTE Senior (capstone) projects; Embracing Issues in Aging; development of Computer Programming Software; development of Laser Engraving Curriculum; and the development of 3-D Design Curriculum.

The schools that developed and piloted these new CTE course areas were:

Bolton High School: Family & Consumer Sciences, Mastery Based Learning Curriculum

Brookfield High School: All CTE Program Areas, CTE Senior (capstone) projects

Bacon Academy (Colchester): Family & Consumer Sciences, Re-Design of all FCS course curriculum

Danbury High School: Medical Careers, Embracing Issues in Aging

East Hartford High School: Medical Careers, Embracing Issues in Aging

Jonathan Law & Foran High Schools (Milford): business & finance, development of computer programming software

New Britain High School: technology education, development of laser engraving curriculum

Newtown High School: Technology Education, Development of Laser Engraving Curriculum: and Development of 3-D Design Curriculum

E.O. Smith High School, (Storrs): Agriculture, development of agricultural mechanics curriculum

Stratford and Bunnell High Schools: (Stratford), Technology Education, Development of 3-D Design Curriculum

Tourtellotte Memorial High School: All CTE Program Areas, Mastery Based Learning Curriculum, CTE Senior (capstone) projects

Lyman Hall & Sheehan High Schools, (Wallingford): All CTE Program Areas, CTE Senior (capstone) projects

Windsor High School: Business & Finance Education, development of 3-D Design Curriculum, Technology Education, Development of Laser Engraving Curriculum, Business & Finance Education Development of Computer Programming Software

Windsor Locks High School: Technology Education, Development of 3-D Design Curriculum

**10. During the reporting year, did your state use Perkins funds to provide activities to support entrepreneurship education and training?**

Yes

The Connecticut State Department of Education, Academic Office - CTE Unit, stresses the importance of entrepreneurship in all seven program areas of CTE. The utilization of entrepreneurial knowledge and skill allow a CTE student, especially those who reach the threshold of concentrator, to consider the development of their own businesses in the future.

## MARKETING EDUCATION

As part of the mandated state Marketing Education performance standards and competencies, entrepreneurial competency instruction is required for all 52 schools that include marketing education in their local CTE package.

### Entrepreneurship Enhancing Competitive Activities

As part Connecticut's commitment to teaching entrepreneurship in all CTE program areas, all Connecticut career technical student organizations include competitive events focused on entrepreneurship. DECA, marketing education's CTSO, includes six different competitions in entrepreneurship including, Innovation Plan (concepts and creations), Start-Up Business Plan (fundamental techniques of entrepreneurship), Independent Business Plan, International Business Plan, Business Growth Plan, and Franchise Business Plan. The partnership with the Connecticut business community in the planning and implementation of these events is such that there were 39 sole-proprietorship or partnership business owners, serving as judges for these entrepreneurship competitive activities.

### The Agri-Entrepreneurship Education Program

The Agri-Entrepreneurship Education Program is designed to increase the amount of entrepreneurship being taught in local agriculture programs across the country. With this information, students will be better prepared to become entrepreneurs and will begin to perceive entrepreneurship as a viable career choice. The Agri-Entrepreneurship Education Program is designed to increase the amount of entrepreneurship being taught in local agriculture programs across the country. With this information, students will be better prepared to become entrepreneurs and will begin to perceive entrepreneurship as a viable career choice.

## NETWORK FOR TEACHING ENTREPRENEURSHIP (NFTE)

The Network for Teaching Entrepreneurship's (NFTE) is a program for teaching entrepreneurship that is utilized in the New Haven secondary schools. Although no Perkins funds are utilized for this program, NFTE has been a valuable instructional aide to the secondary schools in this major urban area in Connecticut. NFTE is designed to provide programs that inspire young people of low-income communities to remain in school, to recognize business opportunities and to plan for successful futures.

## ENTREPRENEURSHIP in CTSO's

The following other CTSO organizations included various stages of entrepreneurship in their competitions in 2016: FFA, FBLA, SkillsUSA, FCCLA, and HOSA.

**11. During the reporting year, did your state use Perkins funds to improve the recruitment and retention of career and technical education teachers, faculty, administrators, or career guidance and academic counselors, and the transition to teaching from business and industry, including small business?**

No

**12. During the reporting year, did your state use Perkins funds to support occupational and employment information resources?**

No