



Strengthening the Pipeline to College & Careers

**A Strategic Plan for
Career and Technical Education
In the District Of Columbia**

Submitted by the District Career and Technical Education Task Force
to Mayor Vincent Gray, December, 2012



Agencies & Offices Represented on the District Career and Technical Education Task Force

Task Force Chair: Office of the State Superintendent of Education (OSSE)
Deputy Mayor of Education (DME)
District of Columbia Public Schools (DCPS)
District of Columbia Public Charter School Board (PCSB)
Office of the Chairman of the Council's Committee on Economic Development & Housing
Office of the Chairman of the Council's Committee on Jobs & Workforce
University of the District of Columbia - Community College (UDC-CC)
Workforce Investment Council (WIC)

¹The Task Force Chair was supported by a Working Group comprised of staff from OSSE's Postsecondary & Career Education Division.



Table of Contents

Vision Statement	4
Executive Summary	5
Section 1: Where We Are: Assessing the Landscape of CTE in the District	7
Section 2: Strategies to Improve CTE in the District	16
Strategy 1: Align Programs of Study with the District’s Most Promising Occupations	16
Strategy 2: Establish Rigorous CTE Program Quality Requirements	18
Strategy 3: Increase CTE Student Concentration & Completion Rates	20
Strategy 4: Implement a Pilot CTE Transfer Program	24
Strategy 5: Afford Flexibility in Hiring, Scheduling, and Compensating CTE Faculty	25
Strategy 6: Reengage Disconnected Youth Through CTE	26
Strategy 7: Support & Incentivize CTE Course Offerings for Adult District Residents	28
Section 3: Moving Forward: Implementing the Strategic Plan	29
Task Force Members.....	30
Glossary	31
Stakeholders Consulted	33
Resources Consulted.....	34
Appendices.....	36
Appendix A: Methodology Used to Conduct CTE Inventory	36
Appendix B: Eligible Occupations in the District of Columbia	38
Appendix C: Priority Occupations in the District of Columbia	40
Appendix D: Granting Waivers to Charter LEAs.....	41



Vision Statement

The District of Columbia has a vibrant economy with an array of promising career opportunities for its citizens. In order to take advantage of these opportunities, our students must be aware of the occupations that exist, and earn the requisite secondary and postsecondary credentials necessary to compete for them. Career and Technical Education (CTE) in the District of Columbia should serve as a pipeline that connects students to postsecondary education and opportunities for a successful career. The District's Career and Technical Education Task Force envisions CTE as a coordinated series of dynamic and engaging programs, operating in elementary, middle, and high schools, that increase student awareness, support student exploration, and enable student preparation for the array of promising careers in DC. These programs offer high quality curricula, instruction, and assessment and are linked to the business community in ways that promote real-world experiences and state-of-the-art learning.



Executive Summary

Career and Technical Education is a proven strategy for engaging students, effectively connecting them to college and careers, increasing high school graduation rates, and improving labor market outcomes for high school graduates.¹ Recognizing the need for a new, dynamic approach to offering Career and Technical Education (CTE), the Council of the District of Columbia passed the Career and Technical Education Plan Establishment Act on July 10, 2012. The Act called for a Task Force comprised of key education and workforce development stakeholders to develop a city-wide Strategic Plan to improve the quality, structure, and student outcomes of CTE programs administered by DC Public Schools, Public Charter Schools, the University of the District of Columbia Community College, and other institutions receiving local or federal funding for CTE programming. The Task Force agreed that we must increase the number and percentage of CTE-focused students, such that **by 2017, 80 percent of District students concentrating in CTE Programs will complete Programs of Study that lead to a certification, credential, or diploma associated with one of the District's most promising occupations.** With that overarching goal in mind, the Task Force organized this Strategic Plan into the following sections:

Section 1: Where We Are

This Section provides a landscape of Career and Technical Education in the District, and identifies potential areas for improvement. Forty percent of the District's approximately 16,000 public and public charter high school students were enrolled in CTE courses. Additionally, 9 of 16 LEAs (56.3%) and the Community College offered CTE Programs.

Section 2: Strategies to Improve CTE in the District

Using the Career and Technical Education Plan Act as a template, this Section proposes specific ways in which we can improve CTE in the District, such that by 2017, 80% of District students concentrating in CTE Programs will complete Programs of Study that lead to a certification, credential, or diploma associated with one of the District's most promising occupations. These strategies for improvement, which are further detailed in Section 2, can be summarized as follows:

- **Strategy 1:** Ensure that CTE Programs of Study offered by Local Education Agencies (LEAs) and the Community College (UDC-CC) align to the District's most promising occupations.
- **Strategy 2:** Establish rigorous, required standards of program quality, to ensure that students pursuing Career and Technical Education are provided with the access to curriculum, academic experiences, and work-based opportunities that will prepare them to succeed in college or in a career within one of the District's most promising occupational fields.
- **Strategy 3:** Encourage and support LEAs and UDC-CC in establishing innovative, proven programs and systems to ensure that more students interested in completing a CTE Program of Study do so, most importantly by:
 - Implementing a data collection system and process that will inform our educational agencies and institutions of critical input and outcome data for students enrolled in CTE Programs.
 - Promoting systematic career awareness, exploration, and preparation programs beginning in elementary and middle school, and through adult education programs.
 - Engaging the business and community to strengthen CTE Program curricula and internship and placement partnerships.

¹ Center for Advanced Human Resources Studies. (2003). *The Impacts of Career-Technical Education on High School Completion and Labor market Success*. <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1036&context=cahrswp>



- **Strategy 4:** Encourage and support LEAs and UDC-CC in streamlining their finite financial, physical, and human resources by establishing within-LEA and across-LEA partnerships to allow their students to take CTE courses on school campuses other than their own without requiring a change in their full-time enrollment.
- **Strategy 5:** Afford LEAs and UDC-CC flexibility in identifying, hiring, compensating, and scheduling the most effective CTE teachers for their students.
- **Strategy 6:** Reengage the District's Disconnected Youth through CTE Programs that can prepare them for successful careers.
- **Strategy 7:** Increase and improve CTE Program offerings for adult District residents.

Section 3: Moving Forward

The Strategic Plan concludes with a discussion about how to implement these strategies and recommendations. Task Force representatives from OSSE, DCPS, PCSB, UDC-CC, DME, and the WIC are committed to further developing a detailed implementation plan to drive this work.

We are grateful to Mayor Gray and the Council for trusting us with this important and very timely responsibility. We viewed it as a privilege to come together to collectively propose ways in which we can ensure that more District residents are prepared to succeed in college and careers through high quality Career and Technical Education. We are also grateful to the many stakeholders who provided the Task Force with input on the content of, and recommendations contained within, the Strategic Plan. A complete list of these stakeholders is included on page 33.



Section 1

Where We Are: Assessing the Landscape of CTE in the District

This Section of the Strategic Plan aims to provide a snapshot of the District’s current Career and Technical Education landscape in LEAs and UDC-CC.^{2,3,4} In School Year 2010-2011 (SY11), 40% of the District’s approximately 16,000 public and public charter high school students were enrolled in CTE Programs. Nine of 16 LEAs (56.3%) offered CTE Programs. Table 1 lists enrollment data for CTE Programs offered by these 9 LEAs. This suggests that administrators have programmed a significant number of CTE courses and have invested time and resources in the development and implementation of CTE programs. It further suggests that students have interests in the offerings and pursue CTE courses in large numbers.

Table 1: CTE Enrollments & Enrollment Rates

LEA	Total Students Enrolled	Grade Span of CTE Programs	CTE Program Student Enrollment	% Students Enrolled in CTE Programs
DCPS	11,619	9-12	4,060	34.90%
Booker T. Washington PCS	232	10-12	165	71.10%
Carlos Rosario PCS	1,751	Adult	270	15.40%
Cesar Chavez PCS (Public Policy)	838	10-12	819	97.73%
Friendship PCS	1,231	9-12	747	60.70%
Hospitality PCS	153	9-12	153	100.00%
IDEA PCS	301	9-12	183	60.80%
LAYC	N/A	10-Adult	N/A	N/A
Options PCS	271	9-12	180	66.40%
UDC-CC	7,108	Adult	5,686	80.00%

Sources: Public School Enrollment Audit (Total Students Enrolled) and CAR Report (CTE Program Student Enrollment)

² This section addresses section 3.e.1 of the CTE Plan Establishment Act: “[The Strategic Plan Shall Include] A city-wide analysis of CTE programs currently offered at DC Public Schools, DC Public Charter Schools, and the UDC CC to determine their quality, popularity, concentration and completion rates, and whether the career cluster is focused on high-skill, high-wage, or high demand occupations.”

³ While OSSE currently collects data from LEAs and UDC-CC receiving Federal Perkins funding to calculate concentration and completion rates, it is currently revising its data collection mechanism and process to ascertain more accurate calculations. The Task Force does not recommend reporting the most recently collected concentration and completion rates within this Strategic Plan. Instead, we recommend a comprehensive revision of the state’s CTE data collection methodology and scope to establish baseline data, annual benchmarks, and 5-year goals for all of the District’s publicly funded CTE Programs of Study, as is discussed further in Section 3 of this Strategic Plan.

⁴ More information on the methodology used to construct this inventory of CTE Programs is available in Appendix A.



Program Offerings:

During School Year 2010-2011, a wide variety of CTE Programs were offered to District students. Figure 1 highlights the 12 Career Clusters offered in at least one LEA or postsecondary institution in the District:

Figure 1: Career Clusters Offered in the District

AMC	Arts, Media, & Communication
BES	Biotechnology & Environmental Science
BFM	Business, Finance, & Marketing
CD	Construction & Design
ENG	Engineering
HMS	Health & Medical Sciences
HSE	Human Services & Education
HT	Hospitality & Tourism
IT	Information Technology
LPSS	Law, Public Safety, & Security
MS	Mortuary Sciences
TRANS	Transportation



Figure 2 lists the Career Clusters offered at LEAs and UDC-CC during the School Year 2010-2011. Within a year, these Career Clusters will be transitioning in name and content to the National Association of the State Directors of Career & Technical Education's (NASDCTEc) National Career Clusters™ Framework⁵.

Figure 2: Career Clusters Offered At Each LEA & UDC-CC

	DCPS	Booker T. Washington PCS	Carlos Rosario PCS	Cesar Chavez PCS (Public Policy)	Friendship PCS	Hospitality PCS	IDEA PCS	LAYC PCS	Options PCS	UDC-CC
AMC	X				X					X
BES	X									X
BFM	X								X	X
CD	X	X						X		X
ENG	X				X					X
HMS	X		X		X					X
HSE	X								X	X
HT	X		X			X			X	X
IT	X	X	X		X		X			X
LPSS	X			X	X					X
MS										X
TRANS	X									

⁵ NASDCTEc. (2012). *The 16 Career Clusters™*. <http://www.careertech.org/career-clusters/glance/careerclusters.html>



Program Quality

While determining Career and Technical Education program quality can often be a subjective process, the Task Force identified two categories of proxy measures that can collectively indicate the quality of CTE programs offered across the District. These two categories of program quality, Teacher Quality and Curriculum and Instructional Quality, have been commonly used to inform conversations on program quality within respected CTE research.⁶

Teacher Quality:

The Task Force used the following three categories of LEA/Institutional policies as a collective proxy for CTE teacher quality:

- 1. Credentials:** According to the National Research Center for Career and Technical Education (NRCCTE),⁷ high-quality CTE teachers typically hold a postsecondary degree or industry-recognized credential. Table 2 captures which LEAs/Institutions require CTE teachers to hold at least one of these credentials. When reviewing this table, it is important to keep in mind that not all credentials carry equal weight in the labor market, and that some require significantly greater investment of time and resources than others.⁸
- 2. Experience:** Table 2 also lists which LEAs/Institutions require CTE teachers to have a specific number of years of experience teaching, teaching CTE courses, or working in the industry in which they are teaching. The selection of these proxy measures was informed by research from the American Youth Policy Forum (AYPF) stressing the link between CTE teacher experience and quality.⁹
- 3. Focused Teaching Responsibilities:** Finally, we hypothesized that CTE teachers deployed to teach non-CTE courses were potentially being spread too thin to be able to succeed in their CTE teaching responsibilities. This rationale is supported by the research of Darling-Hammond and Bransford (2008),¹⁰ which encourages teachers' responsibilities to be focused on the subject areas within their expertise. As such, Table 2 lists which LEAs/Institutions allow their CTE teachers to instruct any non-CTE courses.

⁶ AYPF. (2008). Supporting high quality career and technical education through federal and state policy.

<http://www.aypf.org/documents/CTEMeetingPaper.pdf>

⁷ NRCCTE. (2010). Professional development for secondary career and technical education: Implications for change.

http://136.165.122.102/UserFiles/File/Tech_Reports/Professional_Development_Joint_2010.pdf

⁸ U.S. Department of Labor. (2010). *Training and Employment Guidance Letter No. 15-10*. <http://wdr.doleta.gov/directives/attach/TEGL15-10acc.pdf> For definitions of credential types, refer to: <http://wdr.doleta.gov/directives/attach/TEGL15-10a2.pdf>

⁹ AYPF. (2008). Supporting high quality career and technical education through federal and state policy.

<http://www.aypf.org/documents/CTEMeetingPaper.pdf>

¹⁰ Darling-Hammond, L., & Bransford, J. (Eds.) (2008). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass



Table 2: Teacher Qualifications at LEAs & UDC-CC

Teacher Requirements

	Degree or Industry Credential	Teaching Experience	CTE Teaching Experience	Industry Experience	Other Courses Taught
DCPS ¹	BA/BS or Professional Certification	0	0	0	YES
Booker T. Washington PCS ²	BA or Industry Certification	0	0	0	NO
Carlos Rosario PCS ²	Industry Certification	1 Year	0	2 Years	NO
Cesar Chavez PCS ²	BA or BS	0	0	0	YES
Friendship PCS ¹	BA and Professional Certification	3	3	3	YES
Hospitality PCS ¹	BA/BS or Professional Certification	0	0	0	YES
Options PCS ¹	Industry Certification	0	0	1 Year	NO
IDEA PCS ¹	BS	0	0	0	NO
LAYC PCS ²	Industry Certification	1 Year	3 Years	3 Years	NO
UDC-CC ²	BA/BS or Industry Certification	2 Years	2 Years	3 Years	NO

¹ Source: 2012 CTE Inventory Survey

² Participants and Concentrators: SY 2010 – 2011 Consolidated Annual Report, Accountability & Financial Status

Policies related to teacher qualifications vary across LEAs and disciplines. While some LEAs rely on industry specialists to teach courses, others employ CTE generalists. Most LEAs do not require teachers to have general teaching experience nor experience in teaching CTE specifically. Similarly, most LEAs do not require teachers to have experience in industry as a prerequisite to hiring.

Curriculum & Instructional Quality:

Based on the findings of AYPF (2008), which identified curricular characteristics associated with high-quality CTE programs, the Task Force selected the following five measures as proxies for curricular and instructional quality:

- **Career Cluster Assessments Lead to Industry-Recognized Certification:** Within many CTE programs, students may take approved external examinations that test technical skills, which, upon successful completion, lead to an industry-recognized certificate or license. Such certification can enhance students' employability or qualifications to pursue a postsecondary degree or credential.¹¹ Table 3 lists which programs offer assessment opportunities that may lead to industry-recognized certification. Because not all credentials carry equal weight in the labor market.¹² Table 3 does not comment on the quality or perceived value of the credentials it reports.
- **LEAs/Institutions Utilize Industry-Recognized Curricula:** Certain industries associated with Career Clusters have developed curricula to help prepare students for careers in their field. Table 4 lists which LEAs/Institutions utilize industry-recognized curricula.

¹¹ Virginia Department of Education. (2012). *The Path to Industry Certification: High School Industry Credentialing*. http://www.doe.virginia.gov/instruction/career_technical/path_industry_certification/index.shtml

¹² U.S. Department of Labor. (2010). *Training and Employment Guidance Letter No. 15-10*. <http://wdr.doleta.gov/directives/attach/TEGL15-10acc.pdf> For definitions of credential types, refer to: <http://wdr.doleta.gov/directives/attach/TEGL15-10a2.pdf>



- **Career Cluster's Curricula Includes Experiential Learning:** Experiential learning is a broad term that includes a number of educational opportunities such as service- learning, field-based experiences, study abroad, and internships.¹³ It is a form of active learning, or learning by doing, and is considered a best practice within CTE programming.¹⁴ Table 5 lists which Career Clusters offer experiential learning opportunities.
- **Career Cluster's Curricula Includes Work-Based Learning:** Work-Based Learning allows students to learn through hands-on career development experiences. Under the guidance of adult mentors, students learn to work in teams, solve problems, and meet employers' expectations. Through Work-Based Learning, students have the opportunity to see how classroom instruction connects to the world of work and future career opportunities.¹⁵ Table 6 lists which Career Clusters offer Work-Based Learning opportunities.
- **Career Cluster's Curricula Includes Dual Enrollment Opportunities:** A dual enrollment program enables high school students to enroll in college courses, and to simultaneously earn high school and college credit. Students who participate in dual enrollment opportunities are more likely to complete high school, and enroll and persist through college.¹⁶ Table 7 lists which Career Clusters offer dual enrollment opportunities.

Table 3: Career Cluster Assessments Lead To Industry-Recognized Certification (SY 2010-2011)

Career Cluster Assessments Lead to Industry-Recognized Certification

	DCPS	Booker T. Washington PCS	Carlos Rosario PCS	Cesar Chavez PCS (Public Policy)	Friendship PCS	Hospitality PCS	IDEA PCS	LAYC PCS	Options PCS	UDC-CC
AMC	X									X
BES	X									X
BFM	X									X
CD	X	X						X		X
ENG	X									X
HMS	X		X		X					X
HSE	X									X
HT	X		X			X			X	X
IT	X	X	X		X		X			X
LPSS	X									X
MS										X
TRANS	X									

AMC - Arts, Media & Communication • BES Biotechnology & Environmental Science • BFM - Business, Finance and Marketing • CD - Construction & Design • ENG - Engineering • HMS - Health & Medical Sciences
HSE - Human Services & Education • HT - Hospitality & Tourism • IT - Information Technology • LPSS - Law, Public Safety & Security • MS - Mortuary Science • TRANS - Transportation

¹³ George Mason University. (2012). Experiential Learning. cte.gmu.edu/Teaching/experiential_learning.html

¹⁴ NRCCTE. (2011). Programs of study: A cross-study examination of programs in three states. <http://www.senatormabini.com/wp-content/uploads/2012/01/cross-study-examination-of-programs-in-three-states.pdf>

¹⁵ Utah State Office of Education. (2012). *Work-Based Learning Program*. <http://schools.utah.gov/cte/wbl.html>

¹⁶ Karp et. al. (2007). *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States*. New York, NY: Community College Research Center, Teachers College, Columbia University.



Table 4: LEAs/Institutions Utilize Industry-Recognized Curricula (SY 2010-2011)

LEAs/Institutions Utilize Industry-Recognized Curricula

	DCPS	Booker T. Washington PCS	Carlos Rosario PCS	Cesar Chavez PCS (Public Policy)	Friendship PCS	Hospitality PCS	IDEA PCS	LAYC PCS	Options PCS	UDC-CC
AMC	X									X
BES	X									X
BFM	X								X	X
CD	X	X						X		X
ENG	X									X
HMS	X		X		X					X
HSE	X									X
HT	X		X			X			X	X
IT	X	X	X		X		X			X
LPSS	X			N/A						X
MS										X
TRANS	X									

AMC - Arts, Media & Communication • BES Biotechnology & Environmental Science • BFM - Business, Finance and Marketing • CD - Construction & Design • ENG - Engineering • HMS - Health & Medical Sciences
HSE - Human Services & Education • HT - Hospitality & Tourism • IT - Information Technology • LPSS - Law, Public Safety & Security • MS - Mortuary Science • TRANS - Transportation

Table 5: Career Cluster's Curricula Includes Experiential Learning (SY 2010-2011)

Career Cluster's Curricula Includes Experiential Learning

	DCPS	Booker T. Washington PCS	Carlos Rosario PCS	Cesar Chavez PCS (Public Policy)	Friendship PCS	Hospitality PCS	IDEA PCS	LAYC PCS	Options PCS	UDC-CC
AMC	X				X					
BES	X									
BFM	X				X				X	
CD	X	X						X		
ENG	X				X					
HMS	X		X		X					X
HSE	X									X
HT	X		X			X			X	
IT	X	X	X		X		X			
LPSS	X			X						X
MS										
TRANS	X									

AMC - Arts, Media & Communication • BES Biotechnology & Environmental Science • BFM - Business, Finance and Marketing • CD - Construction & Design • ENG - Engineering • HMS - Health & Medical Sciences
HSE - Human Services & Education • HT - Hospitality & Tourism • IT - Information Technology • LPSS - Law, Public Safety & Security • MS - Mortuary Science • TRANS - Transportation



Table 6: Career Cluster's Curricula Includes Work-Based Learning (SY 2010-2011)

Career Cluster's Curricula Includes Work-Based Learning

	DCPS	Booker T. Washington PCS	Carlos Rosario PCS	Cesar Chavez PCS (Public Policy)	Friendship PCS	Hospitality PCS	IDEA PCS	LAYC PCS	Options PCS	UDC-CC
AMC	X									P
BES	X									P
BFM					X					P
CD	X							X		P
ENG										P
HMS	X				X					P
HSE	X									P
HT	X		X			X				P
IT	X		X		X					P
LPSS	N/A			X						P
MS										P
TRANS	X									

AMC - Arts, Media & Communication • BES Biotechnology & Environmental Science • BFM - Business, Finance and Marketing • CD - Construction & Design • ENG - Engineering • HMS - Health & Medical Sciences
HSE - Human Services & Education • HT - Hospitality & Tourism • IT - Information Technology • LPSS - Law, Public Safety & Security • MS - Mortuary Science • TRANS - Transportation

P- Pending

Table 7: Career Cluster's Curricula Includes Dual Enrollment Opportunities (SY 2010-2011)

Career Cluster's Curricula Includes Dual Enrollment Opportunities

	DCPS	Booker T. Washington PCS	Carlos Rosario PCS	Cesar Chavez PCS (Public Policy)	Friendship PCS	Hospitality PCS	IDEA PCS	LAYC PCS	Options PCS	UDC-CC
AMC	P				X					
BES	X									
BFM	X									X
CD	P							X		
ENG	X									X
HMS	X				X					X
HSE										X
HT	X		P			X				X
IT	P	X			X		X			X
LPSS	P			X						X
MS										
TRANS	X									

AMC - Arts, Media & Communication • BES Biotechnology & Environmental Science • BFM - Business, Finance and Marketing • CD - Construction & Design • ENG - Engineering • HMS - Health & Medical Sciences
HSE - Human Services & Education • HT - Hospitality & Tourism • IT - Information Technology • LPSS - Law, Public Safety & Security • MS - Mortuary Science • TRANS - Transportation

P- Pending



Many of the CTE programs offered in the District utilize industry-recognized curricula and prepare students to take and pass industry-approved assessments upon program completion. Similarly, many of the programs also include experiential or work-based learning components as well as dual enrollment opportunities. Unfortunately, most LEAs are either not collecting data on these program quality elements, or are in nascent stages of data collection. Consequently, valid and reliable data on the number of students completing programs based on industry-approved curricula, taking and passing industry-approved assessments, completing experiential or work-based internships, or participating in dual enrollment programs are not available. Moreover, while many of the program offerings lead to high wage, high demand occupations, no mechanism is in place across LEAs to ensure a coordinated effort to support programs that lead to college and/or high wage and high demand occupations.

Room for Improvement: In summary, Career and Technical Education in the District of Columbia is a decentralized enterprise. Our inventory suggests that several high quality CTE programs currently operate in the city. However, the inventory also suggests that additional programs exist which operate well in some areas and have challenges in others. As a result of this inventory process, the Task Force developed the following strategies for improvement:

- **Strategy 1:** Ensure that CTE Programs of Study offered by LEAs and UDC-CC align to the District's most promising occupations.
- **Strategy 2:** Establish rigorous, required standards of program quality, to ensure that students pursuing Career and Technical Education are provided with the access to curriculum, academic experiences, and work-based opportunities that will prepare them to succeed in college or in a career within one of the District's most promising occupational fields.
- **Strategy 3:** Encourage and support LEAs and UDC-CC in establishing innovative, proven programs and systems to ensure that more students interested in completing a CTE Program of Study do so, most importantly by:
 - Implementing a data collection system and process that will inform our educational agencies and institutions of critical input and outcome data for students enrolled in CTE Programs.
 - Promoting systematic career awareness, exploration, and preparation programs beginning in elementary and middle school, and through adult education programs.
 - Engaging the business community to strengthen CTE Program curricula and internship and placement partnerships.
- **Strategy 4:** Encourage and support LEAs and UDC-CC in streamlining their finite financial, physical, and human resources by establishing within-LEA and across-LEA partnerships to allow their students to take CTE courses on school campuses other than their own without requiring a change in their full-time enrollment.
- **Strategy 5:** Afford LEAs and UDC-CC flexibility in identifying, hiring, compensating, and scheduling the most effective CTE teachers for their students.
- **Strategy 6:** Reengage the District's Disconnected Youth through CTE Programs that can prepare them for successful careers.
- **Strategy 7:** Increase and improve CTE Program offerings for adult District residents.



Section 2

Strategies to Improve CTE in the District

Strategy 1: Align Programs of Study with the District's Most Promising Occupations

Most CTE programs are organized around a Program of Study, or a sequence of courses that prepares students for careers. If CTE is to serve as a pipeline that connects District students to college and career, it is essential that Programs of Study align with the District's high demand and high wage occupations. Moreover, Programs of Study that lead to these most promising careers should be supported with resources and industry connections that will enable them to flourish.

Determining Program of Study Eligibility:¹⁷

The Task Force recommends that Program of Study eligibility be determined by the Program of Study's alignment with high-skill, high-wage, or high-demand occupations in the District. We propose the following definitions of high-skill, high-wage, and high-demand occupations, which were developed in consultation with the Workforce Investment Council (WIC) and the Department of Employment Services (DOES):¹⁸

- **High-Skill Occupations:** Those occupations with education or training requirements of: long-term on-the-job training lasting 1 or more years; work experience in a related occupation; industry recognized certification or credential; postsecondary career and technical training; associate's degree; bachelor's degree; master's degree; doctoral degree; or first professional degree (e.g., M.D. J.D).
- **High-Wage Occupations:** Those occupations that pay or lead to positions paying at least the median hourly wage OR the median annual wage for all occupations in the District of Columbia.
- **High-Demand Occupations:** Those occupations with a projected ten-year growth rate above that for all occupations AND having at least 50 or more total annual openings (growth + replacement) in the District of Columbia.

The Task Force collaborated with the WIC and DOES to identify a list of occupations that meet the high-skill, high-wage, or high-demand definitions (Eligible Occupations – see full list in Appendix B). Programs of Study associated with at least one Eligible Occupation will be eligible to be offered in the District. Beginning in School Year 2013-2014, LEAs must only offer Programs of Study associated with Eligible Occupations within their CTE Programs.¹⁹ To facilitate compliance, OSSE, DCPS, PCSB, and UDC-CC will collaborate to establish a process to ensure that all Programs of Study meet these requirements. Every ten years, following the release of the Bureau of Labor Statistics' Quarterly Census of Employment and Wages, the WIC, DOES, OSSE, DCPS, PCSB, and UDC-CC will reconvene and update the list of Eligible Occupations.

¹⁷ This Section addresses sections 3.e.6. & 3.e.7 of the CTE Plan Establishment Act. Section 3.e.6: "[The Strategic Plan shall Include] A process for determining the eligibility of career clusters that includes consultation with the WIC and review of labor market data to ensure the field of study is focused on high- skill, high-wage, or high-demand occupations." Section 3.e.7: "[The Strategic Plan shall Include] An analysis of whether any new career clusters should be added to fill a gap in course offerings and a determination as to which institution would be best equipped to develop and offer that career cluster."

¹⁸ Development of definitions also informed by definitions adopted by Florida, Illinois, and Massachusetts.

¹⁹ LEAs must organize all Programs of Study into Career Clusters aligned with the NASDCTEc National Career Clusters Framework.



Prioritizing Programs of Study

The Task Force further proposes prioritizing a subset of Eligible Programs of Study associated with the District’s most promising occupational fields. Representatives from the WIC, DOES, OSSE, DCPS, PCSB, and UDC-CC developed a list of Prioritized Occupations that were informed by the Task Force’s high wage/high demand criteria, as well as the District’s economic development priorities²⁰ (Occupational Ranking Process). Having conducted an initial Occupational Ranking Process, the Task Force recommends nearly 70 Priority Occupations within the following 12 Career Sectors:

Figure 3: Priority Career Sectors in the District of Columbia²¹

Science, Engineering, Math, & Technology	Information Technology	Business Management & Administration	Architecture & Construction
Law, Public Safety, Corrections, & Human Services	Marketing	Transportation, Distribution, & Logistics	Finance
Education & Training	Health Science	Arts, AV Technology, & Communications	Hospitality & Tourism

The Task Force is encouraged by the alignment between these Priority Occupations and the occupational fields identified within Mayor Gray’s Five-Year Economic Development Plan. Priority Programs of Study will be supported with funding, professional development, partnerships with networks and Industry Councils or District trade associations, and connections to postsecondary institutions and articulation/dual enrollment opportunities. Non-prioritized Programs of Study are not eligible to receive these benefits and supports. Going forward, Prioritized Programs of Study must meet all Program Quality Requirements summarized in Section 3 of this Strategic Plan. The WIC, DOES, OSSE, DCPS, PCSB, UDC-CC, and the DME will convene at least annually to conduct a Program of Study approval and review process, in which Programs of Study will be reviewed to ensure that they meet all Quality & Occupational Ranking Requirements. To facilitate compliance, this group will collaborate to establish a process to ensure that all Programs of Study meet these requirements. Additionally, the WIC, DOES, OSSE, DCPS, PCSB, UDC-CC, and the DME will convene at least every five years to update the list of Priority Programs of Study.

Creating New Priority Programs of Study

Priority Programs of Study can be created to align with any promising occupational fields identified during the Occupational Ranking Process with no association to a Program of Study currently offered in the District (New Priority Program of Study). An LEA or UDC-CC creating a New Priority Program of Study shall receive additional support, in the form of extra professional development, technical assistance, partnerships with networks and Industry Councils or District trade associations, connections to postsecondary institution and articulation/dual enrollment opportunities. The WIC, DOES, OSSE, DCPS, PCSB, UDC-CC, and the DME will convene at least annually to conduct a Program of Study approval & review process, in which Programs of Study will be reviewed to ensure that they meet all Quality & Occupational Ranking Requirements. To facilitate compliance, this group will collaborate to establish a process to ensure that all Programs of Study meet these requirements.

²⁰ Office of the Deputy Mayor for Planning & Economic Development (2012). The Five-Year Economic Development Strategy for the District of Columbia. <http://dmped.dc.gov/DC/DMPED/Programs+and+Initiatives/The+Five-Year+Economic+Development+Strategy+for+DC/Economic+Development+Strategy+Full+Report>

²¹ A more detailed list of Prioritized Occupations is available in Appendix C.



Strategy 2: Establish Rigorous CTE Program Quality Requirements

High quality CTE programs are essential if students are to realize the benefits of career and technical education programming.²² As indicated in Section 1, 40 percent of students in DC public and charter schools take CTE courses and 9 of the 16 LEAs and the Community College offer CTE programs. All Programs of Study offered in the District should adhere to rigorous standards of program quality, to ensure that students pursuing Career and Technical Education are provided with the access to curriculum, academic experiences, and work-based opportunities that will prepare them to succeed in college or in a career within one of the District's most promising occupational fields. To that end, the Task Force recommends the following Program Quality Requirements for Programs of Study offered by public and public charter schools or UDC-CC:^{23,24}

1. Curricula for Eligible Programs of Study must:
 - a. Consist of a non-duplicative, sequential course of study consisting of 3 credits or more;²⁵
 - b. Incorporate the Common Career Technical Core and Career Ready Practices & Standards and rigorous, college-preparatory academic coursework into CTE courses, to ensure that completers and graduates are prepared for a range of postsecondary options without having to take remedial coursework;
 - c. Offer work-based learning experiences, including industry-relevant internships or work-study placements;
 - d. Assess students' skills and employability to facilitate their employment in a relevant industry;
 - e. Align with recognized industry standards informed by a relevant local Industry Council or trade Association;²⁶ and
 - f. Include, where appropriate, opportunities for students to pursue dual enrollment courses (as is defined in DCMR Title 5-A, 2400: District of Columbia Dual Enrollment Regulations), or early-college programs, occupational programs, or opportunities established through articulation agreements with local colleges, universities, postsecondary institutions, or apprenticeship programs;
2. Eligible Programs of Study must be organized into Career Clusters aligned with the NASDCTEc National Career Clusters Framework;
3. Eligible Programs of Study must result in an industry-recognized credential, certificate, or degree, or college credit; and
4. LEAs and UDC-CC must meaningfully consult with relevant local Industry Councils or District trade associations in the following additional areas:
 - a. Identifying internship and job opportunities for students and graduates of Programs of Study;

²² AYPF. (2008). Supporting high quality career and technical education through federal and state policy.

<http://www.aypf.org/documents/CTEMeetingPaper.pdf>

²³ This section addresses section 3.e.2 of the CTE Plan Establishment Act: "[The Strategic Plan Shall Include] Specific requirements of all CTE programs..."

²⁴ The legislation's definition of "career cluster" ("a non-duplicative, sequential CTE course of study recognized by the U.S. Department of Education and approved by the Office of the State Superintendent of Education and the respective industry council") closely aligns with the definition of a Program of Study. As such, unless otherwise noted, this Strategic Plan will focus on Programs of Study within Career Clusters as its unit of analysis and discussion.

²⁵ Note: UDC-CC Workforce courses (certificate and licensure courses) are currently not credit-bearing, and are thus waived from this requirement. That said, the Task Force encourages the University of the District of Columbia to award academic credit to students successfully completing these courses, as both recognition of their effort and success, and as an incentive to further their pursuit of a postsecondary degree or credential.

²⁶ LEAs or UDC-CC have the option to establish and facilitate their own industry council(s) as long as the industry council is approved by OSSE or WIC. Requests for approval should be submitted jointly to OSSE's Director of Career and Technical Education and the Executive Director of the WIC, who will meet on an as-needed basis to approve such requests.



- b. Establishing industry-relevant professional development opportunities for Program of Study faculty that will enable them to have opportunities to refresh their knowledge of industry;
- c. Developing outcome measures to ensure that Program of Study graduates are college or career ready, which should focus on the extent to which Program of Study completers: 1) Successfully secure and retain jobs in a related occupation, 2) Pursue a postsecondary credential/degree in a relevant field or major, and 3) Complete a postsecondary credential/degree in a relevant field or major;
- d. Aligning curricula with recognized industry standards;
- e. Supporting and providing guidance to LEAs and UDC-CC in ensuring that CTE classrooms and equipment meet industry standards in order to successfully prepare students for industry certification and postsecondary technical learning; and
- f. Developing clear criteria utilized for selecting, training, evaluating, compensating, and scheduling CTE staff and faculty.

To support LEAs and UDC-CC in achieving the aforementioned Program Quality Requirements, the Task Force recommends that OSSE undertake the following new responsibilities:

- Identify or develop, in consultation with the WIC, Industry Councils or District trade associations for each of the career clusters associated with Priority Programs of Study; and
- Develop, in consultation with Industry Councils or District trade associations, LEAs, and UDC-CC, CTE faculty quality standards, which may be used by OSSE to establish a framework for future CTE faculty certification.

Beginning in School Year 2014-2015, LEAs and UDC-CC must only offer Programs of Study that meet these Program Quality Requirements. The WIC, DOES, OSSE, DCPS, PCSB, UDC-CC, and the DME will convene at least annually to conduct a Program of Study approval & review process, in which Programs of Study will be reviewed to ensure that they meet all Quality & Occupational Ranking Requirements. To facilitate compliance, OSSE, DCPS, PCSB, UDC-CC, and the DME will collaborate to establish a process to ensure that all Programs of Study meet these requirements. The WIC, OSSE, DCPS, PCSB, UDC-CC, and the DME will convene at least every five years to update the Program Quality Requirements for Programs of Study.



Strategy 3: Increase CTE Student Concentration & Completion Rates

The purpose of strong, relevant CTE programming is to graduate students prepared to succeed in college or careers. Research has demonstrated that CTE course-taking increases high school graduation rates and improves labor market outcomes.²⁷ Increasing the number of Concentrators, who indicate though their course selection and passing grades their intent to complete a CTE Program of Study, and Program of Study Completers is one of the Task Force's primary goals. Doing so will have direct, positive impacts on both the District's overall graduation rate as well as on the lives of our students, by enhancing their ability to succeed in college or careers. This section highlights the strategies the Task Force proposes to significantly and sustainably improve the District's CTE student Concentration and Completion rates.

CTE Data Collection System & Process:

Beginning in School Year 2013-2014, the State CTE Collection Tool will annually capture and update the State Longitudinal Education Database (SLED) with the following key data points²⁸ on CTE students enrolled in all Programs of Study within LEAs/UDC-CC:²⁹

- Course-taking patterns and transcripts/records for all CTE students (raw student data)^{30,31}
- CTE Enrollees, Participants, Concentrators, & Completers³²
- Postsecondary enrollment, retention, & completion³³
- Employment data³⁴

OSSE may use school/campus data aggregated to the LEA/institution level for reporting and analysis.³⁵

Strategies to Increase CTE Concentration & Completion Rates:^{36,37,38}

²⁷ Center for Advanced Human Resources Studies. (2003). *The Impacts of Career-Technical Education on High School Completion and Labor market Success*. <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1036&context=cahrswp>

²⁸ The Task Force recommends that the OSSE CTE Office submit these revised definitions to OVAE for adoption for the School Year 2013-2014 CAR Report collection process.

²⁹ OSSE will work with LEAs not receiving Perkins Funds on participating in this data collection process.

³⁰ Source: LEA Student Information System (SIS)

³¹ OSSE's analysis of raw student data should be used as the primary data source of reports; LEA/UDC-CC calculations of enrollees, participants, concentrators, and completers should be used for cross-checking purposes.

³² Source: LEA Analysis

³³ Source: National Student Clearinghouse

³⁴ OSSE is entering a data sharing agreement with the University of Baltimore's Jacob France Institute to provide wage and earning data on DC high school graduates.

³⁵ We recommend setting the minimum subgroup *N* size for the 5-year Concentration and Completion Goals at 25 but will produce other data reports based on a minimum subgroup *N* size of 10.

³⁶ This section addresses section 3.e.3 of the CTE Plan Establishment Act: "[The Strategic Plan shall Include] A strategy to significantly increase the District's concentration and completion rates of the relevant CTE curriculum as outlined in subparagraph (A) of this subsection with annual benchmarks and a 5-year goal that every CTE program achieve at least a completion rate and a concentration rate that meet or exceed the national averages."

³⁷ While the legislation calls for the Task Force to set benchmarks in relation to national CTE concentration and completion rates, such rates are not publicly reported by the US Department of Education, because states use different methodologies to develop these calculations.

³⁸ While OSSE collects data from LEAs and UDC-CC receiving Federal Perkins funding to calculate concentration and completion rates, it is revising its data collection mechanism and process to ascertain more accurate calculations. That said, the Task Force does not recommend that we use the most recently collected and reported concentration and completion rates as baseline data within this Strategic Plan. Instead, we recommend a revision of the state's CTE data collection methodology and scope to establish baseline data, annual benchmarks, and 5-year goals for all of the District's publicly funded CTE Program of Study.



Informed by effective programs currently in practice in other states and best practices highlighted by research and policy experts, the Task Force developed the following recommended strategies and programs to significantly improve concentration and completion rates among CTE students in the District.

- **Establishing Goals to Improve Participation, Concentration, & Completion among CTE Students:** The participation, concentration, and completion rates collected during the SLED CTE data collection process in School Year 2013-2014 will serve as baseline data for Programs of Study within schools or campuses at LEAs/UDC-CC. At this time (School Year 2013-2014), OSSE will also establish 5-year goals to achieve concentration and completion among students enrolled in school/campus Programs of Study.³⁹ For each Program of Study, 75% of Participants are expected to become Concentrators (5-Year Concentration Goal), and 80% of Concentrators are expected to become Completers (5-Year Completion Goal).⁴⁰ OSSE will provide LEAs/UDC-CC with individualized, ongoing technical assistance and support, including assistance in establishing annual benchmarks, to drive progress to the 5-Year Concentration & Completion Goals. Any Program of Study that does not meet the 5-Year Concentration & Completion Goal by School Year 2018-2019 will not be eligible to receive the benefits made available to Priority Programs of Study.⁴¹
- **Offering Sequential Programs of Study:** LEAs/UDC-CC should schedule their CTE Program of Study coursework such that students can seamlessly persist through CTE Program of Study course sequences, without encountering gaps in progression.
- **Develop Strategic Communications & Outreach Campaign:** The Task Force proposes the establishment of a strategic communications and outreach campaign to promote awareness of and information about pathways to the District's Priority Career Sectors and Priority Programs of Study. The goal of this campaign would be to inform District students and their families, Disconnected Youth, and unemployed/underemployed adult residents of CTE Program offerings, how they link to careers, and the benefits associated with pursuing and completing CTE Programs of Study. We suggest a broad and far reaching information campaign that would appear in print, utilize social media, and target locations such as elementary, middle, and high schools, community and recreation centers, libraries, as well as the agencies and organizations serving Disconnected Youth, and unemployed/underemployed adult residents. As a part of this outreach campaign, LEAs & UDC-CC programs receiving Federal Perkins funds should ensure notice that all CTE programming is offered on a non-discriminatory basis. Moreover, LEAs and UDC-CC should take effort to conduct targeted outreach to groups of students traditionally underrepresented in CTE programming.
- **Promote Early Awareness & Career Exploration:** As we develop and strengthen CTE programs in the District, it is essential that students have the opportunity to identify and develop their career interests before they encounter the choice of entering into a CTE Program of Study. Career development is a lifelong process that begins as early as elementary school. Students should have the necessary resources to explore the world of work, to identify what careers are of interest, and to understand skills that are valued in the workplace. As such, the Task Force recommends that LEAs develop and implement a pipeline of career education awareness and exploration opportunities for students in grades 4-8 (e.g. mandatory summer programs for middle school students). The Task Force further recommends that LEAs work to ensure that families are engaged with their children in the career

³⁹ OSSE will work with new Programs of Study to establish a 5-year goal setting plan.

⁴⁰ The Task Force does not recommend a 5-year goal guiding participation rates.

⁴¹ Beginning in School Year 2015-2016, LEAs/UDC-CC may submit a request to OSSE to consider modifying its 5-year Concentration and/or Completion Goal for individual schools/campuses, along with a performance improvement plan, including revised annual benchmarks, and highlighting current and proposed strategies to reach targets. LEAs/UDC-CC may only submit one modification request for a Program of Study within a school or campus.



awareness and exploration process. To support this effort, OSSE should compile and disseminate to LEAs best practices of early career education. Additionally, a primary goal of the Strategic Communications and Outreach Campaign should be to promote early awareness of CTE programs and career opportunities to the District's elementary and middle school students.

- **Offer & Administer Skills & Career Interest Assessments:** LEAs and UDC-CC should offer skills and career interest assessments to empower students to make informed Program of Study and career choices.
- **Offer Collaborative Training & Professional Development Opportunities:**
 - OSSE should collaborate with Industry Councils or District trade associations to offer Program of Study-specific professional development and training opportunities to CTE Instructors from DCPS, PCSB, and UDC-CC to support them in successfully preparing their students for industry certification and postsecondary learning.
 - OSSE should offer CTE-specific professional development for DCPS and PCSB middle and high school counselors and UDC-CC Student Success Specialists so that they can effectively advise their students on secondary and postsecondary Priority Program of Study opportunities across the District.
- **Provide Academic & Career Development Advising to CTE Students:** LEAs and UDC-CC should ensure that CTE students are receiving the academic and career development advising and supports they need to ensure that they are prepared to succeed in college and career. OSSE should collaborate with LEAs and UDC-CC to ensure that their counselors receive the professional development and technical assistance to provide these services to students.
- **Improve Rigorous Academic Integration Into CTE Courses:**
 - LEAs and UDC-CC should continue to incorporate the Common Career Technical Core and Career Ready Practices & Standards into CTE Program of Study curricula. OSSE should provide Professional Development to facilitate this process.
 - LEAs and UDC-CC should further incorporate rigorous, college-preparatory academic coursework into CTE courses, to ensure that completers and graduates are prepared for a range of postsecondary options without having to take remedial coursework.
- **Improve Alignment Between CTE Programs & Workplace Opportunities:**
 - DCPS, individual Charter LEAs, and OSSE should collaborate with DOES' Summer Youth Employment Program (SYEP) to establish and implement a process through which CTE students can pursue summer jobs that align with occupations associated with their Programs of Study.
 - LEAs and UDC-CC should explore opportunities for its students to pursue internships that align with occupations associated with their Programs of Study.⁴²
 - LEAs, UDC-CC, and OSSE should collaborate with local Industry Councils or District trade associations to establish and pilot:
 - "Occupational Programs," which will enable CTE students to take college-level courses at business or workplace sites in the District;
 - Site visit programs, which will enable CTE students to directly experience the occupations associated with their Programs of Study; and/or
 - Mentorship programs, which will match CTE students with individuals employed in an occupation associated with the student's Program of Study.

⁴² Such internships may be designed to allow participants to earn their required community service hours, similar to DOES' "One City High School Internship Program."



- **Improve Alignment Between CTE Programs & Postsecondary Opportunities:** LEAs should collaborate with UDC-CC, UDC, and other postsecondary institutions in the region (with a preference for institutions in the District) to create formal dual enrollment or early college partnerships and programs for CTE students.
- **Streamline CTE Offerings & Resources:** LEAs & UDC-CC should collaborate to implement pilot program(s) that would allow students to complete CTE coursework at various secondary and postsecondary schools across the District without requiring a change in full-time enrollment. This recommendation is addressed more fully in the Strategy 4 section of this document.
- **Use Quantitative & Qualitative Data to Inform Retention & Completion Improvement Strategies:**
 - LEAs, UDC-CC, and OSSE should incorporate, or continue to incorporate, into their accountability and reporting systems measures capturing CTE student progress (e.g. concentration and completion rates), and outcomes (e.g. earn an industry-recognized credential, certificate, or degree).⁴³
 - OSSE should establish new or amend existing data sharing agreements with LEAs & UDC-CC to facilitate exchange of data from educational records that is necessary to incorporate CTE measures into accountability and reporting systems.
 - LEAs & UDC-CC should conduct surveys and/or exit interviews to ascertain why students cease to persist in or complete CTE Programs of Study, and use their findings to inform future retention and completion improvement efforts.
- **Provide Appropriate Student Supports:** LEAs and UDC-CC should examine their practices to ensure that students with IEPs, English Language Learners, and other students with special needs are receiving the appropriate supports to successfully access, persist through, and complete CTE Programs of Study.
- **Support Career & Technical Education Student Organizations (CTSOs):** LEAs, UDC-CC, and OSSE should support, through funding and staff support, CTSOs, which offer student leadership and career development opportunities that complement their participation in Programs of Study.⁴⁴
- **Promote CTE Awareness Month:** CTE Month is recognized nationally in February each year. This national recognition presents an opportunity to highlight Career and Technical Education as a pipeline to college and careers, to promote career awareness and exploration, and to showcase local outstanding CTE programs. Activities planned during the month can increase student awareness of the career pathways and CTE programs leading to these pathways, strengthen student engagement and commitment to school, increase family engagement and awareness of CTE programs, and expose students to postsecondary opportunities. The Task Force recommends that OSSE and LEAs collaborate to present a series of activities during the month of February to engage students and their families in CTE programs.
- **Offer Seamless Pipeline of High-Level Supports, Policies, Funding, and Technical Assistance:** OSSE should create and provide to LEAs and UDC-CC a seamless pipeline of supports, policies, funding, technical assistance, and professional development to promote the multiple pathways District students and adults may take to successfully prepare for and complete a postsecondary degree or credential.

⁴³ More information on the PCSB's Adult Performance Management Framework accountability and reporting system is available in Appendix D.

⁴⁴ Utah State Office of Education (2010). Career and Technical Student Organizations. <http://schools.utah.gov/cte/ctso.html>



Strategy 4: Implement a Pilot CTE Transfer Program

According to the data collected for the Task Force’s Inventory of CTE Programs in the District, many LEA and UDC-CC campuses are utilizing their finite financial, physical, and human resources to offer many of the same Programs of Study. It is difficult for students across LEAs and within multi-campus LEAs to take CTE courses on school campuses other than their own without requiring a change in their full-time enrollment. Moreover, anecdotal reports suggest that the quality of Programs of Study and course offerings vary across LEAs and within multi-campus LEAs. As such, the Task Force encourages LEAs and UDC-CC to streamline their financial, physical, and human resources to offer high-quality, highly-resourced CTE Program Hubs that are open for students within LEA campuses to attend all or some of their CTE coursework.

Enabling District Students to Complete CTE Coursework Within LEAs/UDC-CC⁴⁵

To move forward in developing these “CTE Hubs,” multi-campus LEAs should consider establishing systems and processes addressing the following potential barriers to student access and success:

- Per pupil funding allocation
- Teacher and student scheduling
- Compensation for CTE teachers serving multiple schools
- Grading and transcript implications
- Accountability mechanisms
- Transportation
- Attendance/truancy
- Student safety
- Specialized education services to students with Individualized Education Plans
- Services to English Language Learners
- Facilitating transfer for students enrolled at multi-campus LEAs

Enabling District Students to Complete CTE Coursework Across LEAs/UDC-CC

Additionally, we encourage separate LEAs to consider establishing partnerships to allow their students to take CTE courses on school campuses other than their own without requiring a change in their full-time enrollment. As such, the Task Force recommends that representatives from DCPS, PCSB or individual Charter LEAs, and the DME convene a Working Group to move forward on implementing such a transfer pilot.

⁴⁵ This section addresses section 3.e.5 of the CTE Plan Establishment Act: “[The Strategic Plan shall Include] An implementation plan for a pilot program that would accept students into CTE programs from other District of Columbia public or charter schools for the sole purpose of completing CTE specific course-work without requiring a change in full-time enrollment.”



Strategy 5: Afford LEAs & UDC-CC Flexibility in Hiring, Scheduling, Assessing, & Compensating CTE Faculty

To ensure that the District employs the highest quality CTE teachers with industry experience and backgrounds, and utilizes faculty to expand the range and quality of CTE offerings, the Task Force recommends that LEAs and UDC-CC consider determining, where appropriate and in conjunction with their relevant Industry Councils or District trade associations, appropriate guidelines for hiring, scheduling, assessing, and compensating CTE faculty in accordance with federal and local law and collective bargaining agreements.^{46,47}

Develop Adjunct Teaching Models

The Task Force recommends that OSSE, LEAs, and UDC-CC explore establishing policies and partnerships that would allow industry experts to teach, or co-teach CTE courses. Such models may include, but are not limited to creating an adjunct CTE faculty model that would allow industry experts who are not certified to teach to jointly instruct CTE courses alongside a certified classroom teacher.

Support Teachers Serving Multiple Schools or CTE Sites

To further support the implementation of pilot CTE Transfer Programs (Strategy 4), Disconnected Youth CTE Programs (Strategy 6), and Adult CTE Programs (Strategy 7), the Task Force encourages OSSE, PCSB, DCPS, and UDC-CC to establish a series of supports for CTE teachers serving multiple schools or sites. To facilitate this process, the inter-agency group should identify and pool funds to support teachers' compensation, schedules, and professional development, all of which are necessary to create and preserve a sustainable CTE faculty sharing models, and to promote recruitment and retention of the most talented CTE teachers.

⁴⁶ This section addresses section 3.e.9 of the CTE Plan Establishment Act: "[The Strategic Plan shall Include] An analysis of whether CTE programs should receive additional flexibility in determining, in conjunction with their relevant industry councils, appropriate guidelines for hiring, scheduling, assessing, and compensating CTE faculty in accordance with federal and local law and collective bargaining agreements, and, if so, a process for granting and administering such flexibility."

⁴⁷ None of the recommendations in this section may supersede the existing policies and requirements guiding faculty hiring and UDC-CC.



Strategy 6: Reengage Disconnected Youth With CTE Programs

Recent research estimates that approximately 10,000 of the District's 16-24 year olds are disconnected from school and work.⁴⁸ In order to successfully reconnect these youth to programs that will prepare them to be successful in careers or in college, we must create models and pilot programs that acknowledge and address the specific barriers these students often face.⁴⁹ Informed by local organizations serving Disconnected Youth, as well as by research on Disconnected Youth populations, the Task Force identified four strategies that it encourages CTE programs serving Disconnected Youth to incorporate into their models. The list below highlights these characteristics as well as strategies or models LEAs or UDC-CC may use to implement them:

- Alternative Pathways to Completion:
 - Offer year-round, intensive course offerings to expedite Program of Study and degree completion.
 - Offer competency-based credit opportunities, for which students earn credit for demonstrated mastery of required knowledge and skills, rather than awarding credit following a minimum number of hours of instruction.
 - Adapt and offer condensed curricula that allow students to complete Programs of Study within an abbreviated period of time.
 - Offer opportunities that allow Disconnected Youth to take evening and/or weekend courses.
- Connected paid employment opportunities:
 - Offer paid, potentially credit-bearing, work-based learning opportunities.
 - Partner with DOES' SYEP to match students to employment opportunities aligned with their Program of Study.
- Extensive support services:
 - Address students' academic and non-academic barriers to learning and success, by providing and/or providing assistance to obtain supports in any or all of the following areas:
 - Child care
 - Transportation
 - Tutoring
 - Mental health and wellness services
 - Personal care services
 - Housing assistance
 - Legal assistance
 - Financial literacy
 - Financial aid, where applicable

DCPS and PCSB's adult education and/or alternative schools currently serve many residents who have dropped out of high school or had difficulties in traditional school settings. In order to reengage Disconnected Youth, the Task Force encourages the adult education and/or alternative schools, including the STAY schools, to incorporate CTE Programs, in the form of Priority Programs of Study, into curricular offerings.

⁴⁸ Brookings Institute Metropolitan Policy Program. (2011). Strengthening Educational and Career Pathways for D.C. Youth: http://www.brookings.edu/~media/research/files/papers/2011/10/05%20dc%20youth%20work%20ross/1005_dc_youth_work_ross

⁴⁹ This section addresses section 3.e.4 of the CTE Plan Establishment Act: "[The Strategic Plan shall Include] An outreach and engagement strategy for students who may consider participating in CTE programs, including specific consideration as to how CTE programs can be used to re-engage youth, between the ages of 16-24 years, who are currently disconnected from school, do not have a high school diploma or equivalency, and who are not employed."



It is also important that those who serve Disconnected Youth, or students at risk of dropping out of high school, are made aware of these CTE program offerings. As such, the Task Force encourages LEAs/UDC-CC to proactively inform and engage any or all of the following groups of their unique CTE programs for Disconnected Youth:

- Members of the Raise DC Disconnected Youth & Youth Employment Change Networks
- Department of Employment Services (DOES)
- Department of Youth & Rehabilitation Services (DYRS)
- High School Counselors
- DCPS Office of Youth Engagement
- DC Child and Family Services Agency (CFSA)
- Criminal Justice Networks
- Parole Officers
- WIC
- OSSE
- Citywide Truancy Taskforce

In addition to improving and/or modifying existing systems, structures, and programs, the Task Force also recommends the development of new, innovative models and approaches to serving Disconnected Youth through CTE programming. New York City⁵⁰ and Los Angeles⁵¹ especially have promising re-engagement center models which provide Disconnected Youth with the supports and services they need to complete high school, attain the skills they need to successfully pursue a postsecondary education or career.

In order to successfully implement these strategies, OSSE, LEAs, & UDC-CC should utilize their data systems to establish a process to identify Disconnected or Over-age Undercredited Youth so that interventions, supports, and programs can be effectively targeted to them.

Finally, OSSE should also explore amending the per-pupil funding formula for LEAs providing alternative education to adult CTE students, so that the LEAs have the funds they need to adequately support disconnected youth in connecting to multiple pathways such as CTE.

⁵⁰ New York City Department of Education. (2012). Additional Ways to Graduate. <http://schools.nyc.gov/NR/rdonlyres/287B38D6-CC92-414A-BA47-BBBC52BCEFA3/0/aaa00876.pdf>

⁵¹ City of Los Angeles Workforce Investment Board. (2012). Services for Youth Job Seekers. <http://www.wiblacity.org/services/youth.html>



Strategy 7: Support & Incentivize CTE Course Offerings for Adult District Residents

The unemployment rates for DC residents 25 years and over with less than a high school diploma or without any postsecondary education are 18.6 % and 18.8%, respectively. Unemployment rates for District adults with some college (13.6%) or a postsecondary degree (3.8%) are noticeably lower.⁵² According to recent research, by 2018, 71% of District jobs will require some postsecondary training or coursework.⁵³ The Task Force believes that CTE programs can serve as an effective link between adult District residents and careers in Priority Sectors, and recommends four synchronized strategies to incentivize and support adult district residents in pursuing CTE programs.⁵⁴

- UDC-CC should continue to offer many of its workforce courses for adult students during the evenings and weekends. It should additionally pilot adult student support programs to address identified persistent barriers to access and success among adult students, which include, but are not limited to:
 - Child care responsibilities
 - Access to transportation
 - Tutoring and academic support services
 - Mental health and wellness services
- LEAs should establish formal memoranda of understanding with UDC-CC and other adult-serving CTE programs allowing their institutions or programs to utilize their facilities during evening and/or weekend hours.
- To streamline resources, ensure that the District employs the highest quality CTE teachers with industry experience & backgrounds, and encourage LEAs and UDC-CC to utilize faculty to expand the range and quality of CTE offerings, LEAs and UDC-CC should consider, where appropriate, split-funding CTE teachers able and willing to serve both day and evening/weekend programs.
- OSSE should also explore amending the per-pupil funding formula for LEAs serving adult CTE students, so that the LEAs have the funds they need to adequately support these students.

⁵² DOES Labor Market Data (Dr. I. Rainer, personal communication, November 5, 2012)

⁵³ Georgetown University Center on Education and the Workforce (2010). Help Wanted: Projections of Job and Education Requirements Through 2018(State Level Analysis). <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/State-LevelAnalysis-web.pdf>

⁵⁴ This section addresses section 3.e.10 of the CTE Plan Establishment Act: "[The Strategic Plan shall Include] A strategy to support and incentivize CTE programs to provide night or weekend CTE course offerings to adult District residents."



Section 3

Moving Forward: Implementing the 5-Year CTE Innovation Plan

To facilitate the implementation of the major recommendations contained within the Strategic Plan, the Task Force is developing a 5-Year CTE Implementation Plan, which will identify strategies that can be implemented without significant additional resources, and which strategies require resources, in the form of funds, staffing, or professional development. The Task Force recommends that OSSE convene and facilitate an Inter-Agency Team comprised of leaders from DCPS, PSCB/Charter LEAs, DME, and UDC-CC to:

- Identify and resolve obstacles to achieve the goals set forth in the Strategic Plan.
- Relay to the Mayor and Council funding needs for successful CTE programming and outreach.
- Establish sustainable, inter-agency processes to implement the Task Force recommendations.
- Lead, in conjunction with the relevant Raise DC Change Networks, a city-wide postsecondary and career awareness campaign, targeted to elementary and middle school students.
- Update the Plan's recommendations, as appropriate, to align to the City's priorities and economic growth patterns.

Expected Outcomes: If the recommendations set forth in this Strategic Plan, including the creation of an Inter-Agency Team, are implemented and funded, the following outcomes can be expected by 2017:

- 80% of District students concentrating in CTE Programs will complete Programs of Study that lead to a certification, credential, or diploma associated with one of the District's most promising occupations. Using current student enrollment data, this equates to approximately 1,000 high school graduates annually.
- 100% of CTE programs will be aligned with the District's high wage and high demand occupations, meet the quality requirements outlined in this Strategic Plan, and lead to industry recognized certification, credential, or postsecondary diploma associated with one of the District's most promising careers.
- 100% of middle school students will have structured opportunities to learn about and explore career pathways.
- The District's Disconnected Youth and Adult student populations will have access to CTE programs that effectively meet their needs and prepare them for successful careers.
- District LEAs will collaborate to eliminate duplication of programs and pool resources so that students have increased options for CTE programming.
- CTE teachers will meet teacher quality standards recognized by the state and LEAs will be encouraged to ensure that classes are taught by individuals who have state-of-the-art knowledge of industry.



Task Force Members⁵⁵

OSSE (Task Force Chair)

Emily Durso, Assistant Superintendent, Postsecondary & Career Education

City Council

Council Member Kenyan McDuffie, Chair of Committee on Jobs & Workforce

Ronan Gulstone, Legislative Aide to Council Member Kenyan McDuffie

Kilin Boardman Schroyer, Legislative Director to Council Member Michael Brown

DCPS

Dan Gordon, Deputy Chief Academic Officer

DME

Eshauna Smith, Senior Education Policy Advisor

PCSB

Naomi DeVeaux, Deputy Director

Dr. Jackie Boddie, Specialist, School Quality and Accountability

UDC-CC

Kim Ford, Interim Dean, Workforce Development

WIC

Allison Gerber, Executive Director

⁵⁵ The Task Force Working Group Members included Dr. Antoinette Mitchell, Dr. Erin Ward Bibb, Tony D. Johnson, Kim Goodman-Celay, and Niranjana Murali of OSSE's Postsecondary & Career Education Division. The Task Force also owes its very special thanks to Bert Taylor, of bert.taylor.design, who provided the graphics for this Plan.



Glossary

- **Articulation Agreements:** ⁵⁶ Articulation agreements are formal memoranda of understanding between postsecondary and secondary institutions that are designed to provide a seamless process that joins secondary and postsecondary Career and Technical Education (CTE) Programs of Study.
- **Career Cluster:** ⁵⁷ A grouping of occupations/career specialties used as an organizing tool for curriculum design and instruction. Occupations/career specialties are grouped into Career Clusters based on the fact that they require a set of common knowledge and skills for career success.
- **Completion Rate:** The percentage of Concentrators who, within four years, have completed a three or four course sequence CTE Program of Study.
- **Concentration Rate:** The percentage of Participants who have completed two courses of a three-sequence CTE Program of Study, or three courses of a four-sequence Program of Study.
- **CTE Enrollee:** A student who has completed the first course of a three or four-sequence CTE Program of Study, but whom has not persisted further in the Program of Study.
- **CTE Participant:** A student who has completed the first course, and enrolled in the second course of a three or four-sequence CTE Program of Study.
- **CTE Concentrator:** A student who has completed two courses of a three-sequence CTE Program of Study, or three courses of a four-sequence Program of Study.
- **CTE Completer:** A student who has completed a three or four course sequence CTE Program of Study.
- **Disconnected Youth:** DC residents aged 16-24 years who are not in school and not working. ⁵⁸
- **Dual Enrollment:** A dual enrollment program enables high school students to enroll in approved college courses, taken on a college campus, and earn both high school and college credit (as is defined in DCMR Title 5-A, 2400: District of Columbia Dual Enrollment Regulations).
- **Early College:** ⁵⁹ Early college programs are designed so that students can earn both a high school diploma and an Associate's degree or up to two years of credit toward a Bachelor's degree.
- **Industry Councils:** Industry Councils are groups of experts in a given industry sector with extensive experience or an extensive network of business and industry contacts, and who are committed to sharing industry expertise, technical assistance, networks, and support to CTE Programs of Study. Industry Councils must be recognized by the WIC. Supports that Industry Councils may provide include, but are not limited to:
 - Assistance identifying job opportunities and associated skill requirements in the target industry
 - Assistance identifying or developing curricula or credentials in the target industry

⁵⁶ Public Schools of North Carolina. (nd). North Carolina High School to Community College Articulation Agreement.

<http://www.ctpnc.org/articulation/>

⁵⁷ NASDCTEc. (2012). Definitions. <http://www.careertech.org/career-clusters/glance/resources/definitions.html>

⁵⁸ The Task Force acknowledges that Disconnected Youth in the District typically fall into three categories: 1) Those who do not have a high school diploma or equivalent, who likely need support connecting to ABE/GED/Diploma, employment/training, and further education; 2) Those who have a high school diploma or equivalent, who likely need support connecting to employment/training and or further education; and 3) Those who have high school diploma or equivalent and some college, who likely need support connecting to employment/training and or further education.

⁵⁹ Early College High School Initiative. (2007). Overview. <http://www.earlycolleges.org/overview.html#basics1>



- In-kind educational materials or instructors
- Work-based learning opportunities
- Job-shadowing opportunities
- Mentorship
- Job placement opportunities and assistance
- **Industry-Recognized Credential:**⁶⁰ An industry recognized credential is sought or accepted by businesses within the industry or sector as a recognized, preferred, or required credential for recruitment, screening, or hiring purposes, and that is endorsed by a nationally recognized trade association or organization representing a significant part of the industry or sector, where appropriate.
- **Local Education Agency:**⁶¹ A public board of education or other public authority legally constituted within a State for either administrative control or direction of, or to perform a service function for, public elementary schools or secondary schools in a city, county, township, school district, or other political subdivision of a State, or of or for a combination of school districts or counties that is recognized in a State as an administrative agency for its public elementary schools or secondary schools.
- **Occupational Programs:** Occupational Programs enable CTE students to take college-level courses at business or workplace sites in the District.
- **Over-age, Under-credited Youth:** DC residents aged 16-24 years who do not have the appropriate number of credits for their age and intended grade.
- **Participant Rate:** The percentage of Enrollees who enroll in the second course of a three or four-sequence CTE Program of Study.
- **Program of Study:**⁶² A sequence of instruction (based on recommended standards and knowledge and skills) consisting of coursework, co-curricular activities, work-site learning, service learning and other learning experiences. This sequence of instruction provides preparation for a career.
- **Work-Based Learning:**⁶³ Work-Based Learning experiences are a continuum of activities, both in and outside the classroom, that provide opportunities for students to connect what they are learning in the classroom to the world of work; to learn about careers and the education and training requirements for occupations within and across industries; to identify career interests and aptitudes, and to use the workplace for both learning and applying college and career readiness skills and knowledge.

⁶⁰ National Skills Coalition (2011). The Strengthening Employment Clusters to Organize Regional Success Act of 2011. http://www.nationalskillscoalition.org/federal-policies/sector-partnerships/sectors-documents/nsc_sectors_2011_sectionbysection_2011-04.pdf

⁶¹ No Child Left Behind (NCLB) Act of 2001, 20 U.S.C. § 6301 *et seq.*

⁶² NASDCTEc. (2012). Definitions. <http://www.careertech.org/career-clusters/glance/resources/definitions.html>

⁶³ National Academy Foundation (NAF). (2012). Guide to Work-Based Learning. https://www.dropbox.com/s/xmzn07oz2z3i1/WorkBasedLearningGuide2012_sm.pdf



Stakeholders Consulted

- **District Educators**⁶⁴
 - **Academy of Hope:** Leicester Johnson (Executive Director)
 - **Booker T. Washington Public Charter School:** Dr. Hope Asterilla (Principal)
 - **Carlos Rosario Public Charter School:** Jennifer Lehman (Washington @ Work Coordinator)
 - **Dunbar High School:** Stephen Jackson (Principal)
 - **Friendship Public Charter School:** Diane Harris (Director, Allied Health) & Dr. Arsallah Shairzay (Dean, Early College)
 - **Hospitality Public Charter School:** Michael Cucciardo (Hospitality Administrator)
 - **IDEA Public Charter School:** John Goldman (Executive Director)
 - **Latin American Youth Center:** Nicole Hanrahan (Chief Strategy Officer)
 - **McKinley Technological High School:** David Pinder (Principal)
 - **Roosevelt STAY High School:** Dr. Sean Yisrael (Principal)
 - **Phelps ACE High School:** Ola Teyibo (CTE Coordinator)
 - **Washington Teachers Union:** Taylor Lewis (Field Services Specialist)
- **Local Economic Self-Sufficiency Groups**
 - **Byte Back:** Kelly Ellsworth (Executive Director)
 - **DC Central Kitchen:** Mirianne Ali (Director of Job Training) & Sarah Riley (Recruitment Coordinator)
 - **DC Jobs Council:** Marina Streznewski (Executive Director)
 - **Goodwill:** Catherine Meloy (President and CEO)
 - **N Street Village:** Ann McCreedy (Director of Programs)
 - **New Futures:** Julene Jarrot (Director of Student Programs)
 - **Perry Street:** Paul McElligott (Executive Director)
 - **So Others Might Eat (SOME):** Emily Price (Director of Center for Employment Training)
- **Local Industry, Workforce, and Policy Leaders**
 - **Blue Cross, Blue Shield:** Tonya Vidal-Kinlow (Vice President of Government Affairs)
 - **Community Foundation:** Sarah Oldmixon (Director of Workforce Initiatives)
 - **DC Alliance of Youth Advocates:** Anne Abbott (Policy Analyst)
 - **DC Appleseed:** Dr. Judy Berman (Deputy Director)
 - **DC Department of Employment Services:** Liz DeBarros (Deputy Chief of Staff), Gerren Price (Associate Director of Youth Programs), Dr. Ilia Rainer (Associate Director, Labor Market Research)
- **Local & National CTE Experts**
 - **Brookings Institution:** Martha Ross (Deputy Director, Metropolitan Policy Program)
 - **Education Commission of the States:** (Jennifer Dounay Zinth, Senior Policy Analyst)
 - **National Academy Foundation:** (Dr. David Moore, Senior Vice President of Programs)
 - **Southern Regional Education Board:** Dr. Gene Bottoms (Senior Vice President)
- **Additional DC Stakeholders**
 - **DC State Board of Education:** Patrick Mara (Member)
 - Walter Pinkney, Community Advocate

⁶⁴ The PCSB and the Task Force Working Group invited all Charter LEAs to a focus group to discuss Career and Technical Education and the proposals contained within the Strategic Plan. However, because only one Charter representative RSVP'd for the meeting, the focus group was cancelled, and members of the Working Group met individually with that representative at the Charter school. For an electronic copy of the invitation, please contact Naomi DeVeaux, Deputy Director of PCSB, at ndeveaux@dcpcsb.org.



Resources Consulted

During the process of researching and writing the Strategic Plan, we consulted with the following state, local, and policy and research organization resources:

- **“Career and Technical Education’s Role in Dropout Prevention and Recovery”:**⁶⁵ The Association for Career and Technical Education (ACTE) developed this report to highlight research and statistics on high school dropouts and disconnected youth, as well as state and local solutions that used CTE as one strategy to prevent dropout and reengage disconnected youth.
- **“Enterprising Pathways: Toward a National Plan of Action for Career & Technical Education”:**⁶⁶ This report, presented at the September 2012 Opportunity Nation Summit, highlights innovative state, local, and national policies and practices that have improved CTE program quality and student outcomes.
- **Florida Career & Professional Education Act of 2007:**⁶⁷ This legislation was established to provide a statewide planning partnership between the business and education communities to foster greater connections between the needs of the state economy and the talent pipeline in career and technical education.
- **Maryland Career and Technology Education Task Force Final Report:**⁶⁸ This report proposes recommendations to expand and improve CTE Programs associated with occupations that support Maryland’s critical infrastructure needs.
- **National Academy Foundation:**⁶⁹ NAF has developed an educational model which includes industry-focused curricula, work-based learning experiences, and business partner expertise embedded in five types of NAF Academies: Finance, Hospitality & Tourism, Information Technology, Engineering, and Health Sciences.
- **“National Career Clusters Framework”:** In 2011, the National Association of State Directors of Career Technical Education Consortium (NASDCTEc) developed the National Career Clusters Framework, which is comprised of 16 Career Clusters.⁷⁰ In 2012, the District of Columbia signed on to transition to this cluster system as the basis of its CTE programming. Forty-two other states are also transitioning to these 16 Clusters.
- **“Preparation for Tomorrow: Joining a College-Ready Academic Core with Intellectually Demanding Career/Technical Courses”:**⁷¹ This Southern Regional Education Board report summarizes the Preparation for Tomorrow (PFT) initiative, which aims to develop intellectually demanding CTE courses in high-demand, high-skill, high-wage career fields, leading students to several options beyond high school, including an entry-level job, advanced training, industry certification, a two-year college certificate or associate’s degree, and a bachelor’s degree.

⁶⁵ Association for Career and Technical Education. (2007). Career and Technical Education’s Role in Dropout Prevention and Recovery. https://www.acteonline.org/uploadedFiles/Publications_and_Online_Media/files/Dropouts.pdf

⁶⁶ Civic Enterprises. (2012). Enterprising Pathways: Toward a National Plan of Action for Career & Technical Education. <http://www.civicenterprises.net/MediaLibrary/Docs/Enterprising%20Pathways%20CTE%20Final%202012.pdf>

⁶⁷ Florida Department of Education. (2007). Florida Career & Professional Education Act of 2007. http://www.fldoe.org/board/meetings/2007_12_11/1003-491.pdf

⁶⁸ Available Upon Request to CTE Task Force Working Group.

⁶⁹ National Academy Foundation. (2012). National Academy Foundation <http://naf.org/>

⁷⁰ NASDCTEc. (2012). The 16 Career Clusters™. <http://www.careertech.org/career-clusters/glance/careerclusters.html>

⁷¹ Southern Regional Education Board. (2012). Preparation for Tomorrow: Joining a College-Ready Academic Core with Intellectually Demanding Career/Technical Courses. http://publications.sreb.org/2012/pft_trifold_10042012_cropped.pdf



- **“Reconnecting Disconnected Youth in Washington, DC”:**⁷² The DC Alliance of Youth Advocates produced this comprehensive landscape of public policy and funding for Disconnected Youth in the District.
- **South Carolina’s Education & Economic Development Act of 2005:**⁷³ The legislation calls for education reforms to improve student academic preparation and job-specific skills they need to compete in the local workforce.
- **“Strengthening Educational and Career Pathways for D.C. Youth”:**⁷⁴ This report by Martha Ross makes specific recommendations on how the District can leverage its current structures and assets to ensure that more District students can earn a postsecondary credential and obtain full-time work.
- **U.S. Department of Education Blueprint for Transforming Career & Technical Education:**⁷⁵ This document proposes a framework to improve the rigor and quality of CTE programs through improved alignment, collaboration, accountability, and innovation efforts.

⁷² DC Alliance of Youth Advocates. (2011). Reconnecting Disconnected Youth in Washington, DC. <http://www.dcaia.org/sites/default/files/content/Rockefeller%20Report.pdf>

⁷³ South Carolina Commission on Higher Education. (nd). South Carolina’s Education & Economic Development Act of 2005. <http://www.che.sc.gov/AcademicAffairs/EEDA/EEDA.htm>

⁷⁴ Brookings Institute Metropolitan Policy Program. (2011). Strengthening Educational and Career Pathways for D.C. Youth. http://www.brookings.edu/~media/research/files/papers/2011/10/05%20dc%20youth%20work%20ross/1005_dc_youth_work_ross

⁷⁵ US Department of Education, Office of Vocational & Adult Education. (2012). Investing in America’s Future: A *Blueprint for Transforming Career and Technical Education*. <http://www2.ed.gov/about/offices/list/ovae/pi/cte/transforming-career-technical-education.pdf>



Appendices

Appendix A: Methodology Used to Conduct CTE Inventory (Section 1)

Because the data required in the CTE analysis does not currently exist in a single, central location, the CTE Working Group utilized multiple strategies to collect it. The data included in this inventory report were collected from five separate sources.

1. **LEA/Institutional Surveys:** Data on CTE program offerings, enrollments, popularity, and quality were drawn from surveys completed by LEAs and the Community College. The Working Group developed these surveys⁷⁶ as a mechanism to gather both the quantitative and qualitative information required by the legislation for inclusion in the CTE analysis. Surveys were submitted in July to all Local Education Agencies (LEAs) offering CTE programs and the Community College. Responses were received from DCPS, Hospitality PCS, Friendship PCS, Options PCS, and the Community College. Several follow ups were made to the remaining LEAs offering CTE Programs, but responses were not received.
2. **Consolidated Annual Performance Report (CAR Report):**⁷⁷ Data on program concentration rates were drawn from the 2011 Consolidated Annual Report submitted by the District's Office of the State Superintendent of Education (OSSE) to the U.S. Department of Education's Office of Vocational and Adult Education (OVAE). OVAE requires states receiving funds from the Carl D. Perkins Career and Technical Education Act of 2006 to submit an annual report (CAR Report) detailing key performance indicators of current CTE Programs.⁷⁸ OSSE's Career and Technical Education Office contracted consultants from MRP Associates to conduct the analysis for the CAR Report. The Report contains information on the four LEAs (DCPS, Booker T. Washington PCS, IDEA PCS, and Friendship PCS) and the postsecondary institution (UDC-CC), which received Perkins funds in Academic Year 2010-2011. Additional information on the specific methodology used to conduct the analysis for the CAR Report is available in the endnotes section of this document.
3. **Public School Enrollment Audit:** Data on LEA enrollments were drawn from the 2011-2012 D.C. Public School Enrollment Audit. The DC Official Code § 38-1804.02 (d) (2) requires an audit that evaluates the accuracy of the fall student enrollment count of the DCPS and DCPCS. An independent auditing firm is contracted by OSSE to conduct the count.⁷⁹

⁷⁶ Sample survey available upon request. Email erin.bibo@dc.gov.

⁷⁷ To determine the number of participants and concentrators for the Consolidated Annual Performance, Accountability, & Financial Status Report for State-Administered Career-Technical Education Programs, PY 2010 – 2011 (CAR Report), consultants from MRP Associates collected participant and concentrator data directly from the three Perkins-funded charter schools, Booker T., Friendship, and IDEA. In response to a similar request for this information, DCPS submitted a list of courses that DCPS CTE students took; the list did not indicate whether the students were concentrators or completers. To make this determination, the consultants used a list of courses by cluster with the corresponding course name and number to identify upper level concentrator courses and to sort the data. Students were counted as either participants or concentrators, depending on whether the courses taken were upper level courses in the course sequence.

⁷⁸ United States. Dept. of Education. Office of Vocational and Adult Education. *Consolidated Annual Report (CAR) for the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) (as reauthorized by P. L. 109-270)*.: GPO, 1977. cte.ed.gov/docs/.../p4-car-fy0713-omb-apprd-050525.doc

⁷⁹ OSSE. (2012). Enrollment Audit Data. <http://osse.dc.gov/service/data>



4. **WIC Analysis:** Analysis on career cluster alignment with high-skill, high-wage, and high-demand occupations is being conducted jointly by the WIC and the Working Group. The Working Group collaborated with Allison Gerber, Executive Director of the Workforce Investment Council (WIC) to develop definitions for the terms “high-skill,” “high-wage,” and “high-demand.” These definitions were informed by current District labor market statistics and trends, which were provided by the DC Department of Employment Services.
5. **LEA Online Annual Reports:** In a few cases, we drew data directly from LEA’s annual online reports.



Appendix B: Eligible Occupations in the District of Columbia

Construction Managers	AC	Photographers	AR	Business Teachers, Postsecondary	ED
Architectural and Engineering Managers	AC	Camera Operators, Television, Video, and		Computer Science Teachers, Postsecondary	ED
Architects, Except Landscape and Naval	AC	Motion Picture	AR	Mathematical Science Teachers, Postsecondary	ED
Landscape Architects	AC	Film and Video Editors	AR	Engineering Teachers, Postsecondary	ED
Drafters, All Other	AC	Media and Communication Equipment Workers,		Biological Science Teachers, Postsecondary	ED
Graphic Designers	AC	All Other	AR	Chemistry Teachers, Postsecondary	ED
Interior Designers	AC	Administrative Services Managers	BM	Physics Teachers, Postsecondary	ED
Set and Exhibit Designers	AC	Compensation and Benefits Managers	BM	Anthropology and Archeology Teachers,	
First-Line Supervisors of Construction Trades and		Human Resources Managers	BM	Postsecondary	ED
Extraction Workers	AC	Property, Real Estate, and Community Association		Economics Teachers, Postsecondary	ED
Electricians	AC	Managers	BM	Psychology Teachers, Postsecondary	ED
Plumbers, Pipefitters, and Steamfitters	AC	Managers, All Other	BM	Sociology Teachers, Postsecondary	ED
Construction and Building Inspectors	AC	Chief Executives	BM	Social Sciences Teachers, Postsecondary, All Other	ED
Elevator Installers and Repairers	AC	General and Operations Managers	BM	Health Specialties Teachers, Postsecondary	ED
First-Line Supervisors of Mechanics, Installers,		Purchasing Agents, Except Wholesale, Retail, and		Criminal Justice and Law Enforcement Teachers,	
and Repairers	AC	Farm Products	BM	Postsecondary	ED
Telecommunications Equipment Installers and Repairers,		Claims Adjusters, Examiners, and Investigators	BM	Law Teachers, Postsecondary	ED
Except Line Installers	AC	Compliance Officers	BM	Art, Drama, and Music Teachers, Postsecondary	ED
Electrical and Electronics Repairers, Commercial and		Human Resources, Training, and Labor Relations		History Teachers, Postsecondary	ED
Industrial Equipment	AC	Specialists, All Other*	BM	Philosophy and Religion Teachers, Postsecondary	ED
Control and Valve Installers and Repairers, Except		Management Analysts	BM	Preschool Teachers, Except Special Education	ED
Mechanical Door	AC	Compensation, Benefits, and Job Analysis		Elementary School Teachers, Except Special	
Heating, Air Conditioning, and Refrigeration		Specialists	BM	Education	ED
Mechanics and Installers	AC	Business Operations Specialists, All Other*	BM	Secondary School Teachers, Except Special and	
Industrial Machinery Mechanics	AC	Operations Research Analysts	BM	Vocational Education	ED
Electrical Power-Line Installers and Repairers	AC	Survey Researchers	BM	Teachers and Instructors, All Other*	ED
Maintenance and Repair Workers, General	AC	Sales Representatives, Wholesale and Manufacturing,		Archivists	ED
First-Line Supervisors of Production and		Technical and Scientific Products	BM	Curators	ED
Operating Workers	AC	Real Estate Sales Agents	BM	Librarians	ED
Prepress Technicians and Workers	AC	First-Line Supervisors/Managers of Office and		Instructional Coordinators	ED
Food Scientists and Technologists	AG	Administrative Support Workers	BM	Teacher Assistants	ED
Conservation Scientists	AG	Library Assistants, Clerical	BM	Financial Managers	FN
Communications Teachers, Postsecondary	AR	Receptionists and Information Clerks	BM	Cost Estimators	FN
Art Directors	AR	Executive Secretaries and Administrative		Accountants and Auditors	FN
Artists and Related Workers, All Other	AR	Assistants	BM	Appraisers and Assessors of Real Estate	FN
Producers and Directors	AR	Training and Development Managers	ED	Budget Analysts	FN
Broadcast News Analysts	AR	Education Administrators, Elementary and		Credit Analysts	FN
Reporters and Correspondents	AR	Secondary School	ED	Financial Analysts	FN
Editors	AR	Education Administrators, Postsecondary	ED	Personal Financial Advisors	FN
Technical Writers	AR	Education Administrators, All Other	ED	Financial Examiners	FN
Writers and Authors	AR	Training and Development Specialists	ED	Loan Officers	FN
Media and Communication Workers, All Other	AR	Educational, Vocational, and School Counselors	ED	Financial Specialists, All Other	FN
Broadcast Technicians	AR	Health Educators	ED	Actuaries	FN

CLUSTER ABBREVIATION KEY AG Agriculture, Food & Natural Resources AC Architecture and Construction AR Arts, A/V Technology & Communications BM Business Management & Administration ED Education & Training FN Finance GV Government & Public Administration HL Health Science HT Hospitality & Tourism HU Human Services IT Information Technology LW Law, Public Safety, Corrections & Security MN Manufacturing MK Marketing ST Science, Technology, Engineering & Mathematics TD Transportation, Distribution & Logistics



Economists	FN	Occupational Health and Safety Specialists	HL	Public Relations and Fundraising Managers	MK
Securities, Commodities, and Financial Services	FN	Home Health Aides	HL	Market Research Analysts and Marketing Specialists*	MK
Sales Agents	FN	Medical Assistants	HL	Public Relations Specialists	MK
Bookkeeping, Accounting, and Auditing Clerks	FN	Medical Secretaries	HL	Sales and Related Workers, All Other	MK
Sociologists	GV	Meeting, Convention, and Event Planners*	HT	Industrial Production Managers	MN
Urban and Regional Planners	GV	Cooks, Institution and Cafeteria	HT	Purchasing Managers	MN
Anthropologists and Archeologists	GV	Cooks, Restaurant	HT	Logisticians	MN
Historians	GV	Food Preparation Workers	HT	Boilermakers	MN
Political Scientists	GV	Combined Food Preparation and Serving Workers, Including Fast Food	HT	Print Binding and Finishing Workers	MN
Social Scientists and Related Workers, All Other	GV	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	HT	Stationary Engineers and Boiler Operators	MN
Social Science Research Assistants	GV	Maids and Housekeeping Cleaners	HT	Natural Sciences Managers	ST
Medical and Health Services Managers	HL	Hairdressers, Hairstylists, and Cosmetologists	HT	Mathematicians	ST
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	HL	Hotel, Motel, and Resort Desk Clerks	HT	Statisticians	ST
Biological Scientists, All Other	HL	Social and Community Service Managers	HT	Aerospace Engineers	ST
Medical Scientists, Except Epidemiologists	HL	Industrial-Organizational Psychologists	HU	Biomedical Engineers	ST
Environmental Scientists and Specialists, Including Health	HL	Child, Family, and School Social Workers	HU	Chemical Engineers	ST
Clinical, Counseling, and School Psychologists	HL	Healthcare Social Workers	HU	Civil Engineers	ST
Psychologists, All Other	HL	Social Workers, All Other	HU	Computer Hardware Engineers	ST
Dentists, General	HL	Social and Human Service Assistants	HU	Electrical Engineers	ST
Optometrists	HL	Clergy	HU	Electronics Engineers, Except Computer	ST
Pharmacists	HL	Child Care Workers	HU	Environmental Engineers	ST
Anesthesiologists	HL	Personal and Home Care Aides	HU	Industrial Engineers	ST
Family and General Practitioners	HL	Computer and Information Systems Managers	HU	Marine Engineers and Naval Architects	ST
Internists, General	HL	Computer and Information Research Scientists	IT	Mechanical Engineers	ST
Obstetricians and Gynecologists	HL	Computer Systems Analysts	IT	Nuclear Engineers	ST
Psychiatrists	HL	Computer Programmers	IT	Engineers, All Other	ST
Surgeons	HL	Software Developers, Applications	IT	Electrical and Electronics Engineering Technicians	ST
Physicians and Surgeons, All Other	HL	Software Developers, Systems Software	IT	Engineering Technicians, Except Drafters, All Other	ST
Physician Assistants	HL	Database Administrators	IT	Astronomers	ST
Podiatrists	HL	Network and Computer Systems Administrators*	IT	Physicists	ST
Registered Nurses*	HL	Computer Support Specialists	IT	Atmospheric and Space Scientists	ST
Occupational Therapists	HL	Information Security Analysts, Web Developers, and Computer Network Architects	IT	Chemists	ST
Physical Therapists	HL	Computer Occupations, All Other*	IT	Physical Scientists, All Other	ST
Radiation Therapists	HL	Lawyers	IT	Forensic Science Technicians	ST
Recreational Therapists	HL	Arbitrators, Mediators, and Conciliators	LW	Transportation, Storage, and Distribution Managers	TD
Speech-Language Pathologists	HL	Paralegals and Legal Assistants*	LW	Retail Salespersons	TD
Veterinarians	HL	First-Line Supervisors of Correctional Officers	LW	Demonstrators and Product Promoters	TD
Audiologists	HL	First-Line Supervisors of Police and Detectives	LW	Billing and Posting Clerks and Machine Operators	TD
Health Diagnosing and Treating Practitioners, All Other	HL	Correctional Officers and Jailers	LW	Customer Service Representatives	TD
Medical and Clinical Laboratory Technologists	HL	Detectives and Criminal Investigators	LW	Office Clerks, General	TD
Dental Hygienists	HL	Police and Sheriff's Patrol Officers	LW	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	TD
Cardiovascular Technologists and Technicians	HL	Security Guards	LW	Air Traffic Controllers	TD
Diagnostic Medical Sonographers	HL	Legal Secretaries	LW	Taxi Drivers and Chauffeurs	TD
Nuclear Medicine Technologists	HL	Advertising and Promotions Managers	MK	Transportation Inspectors	TD
Radiologic Technologists and Technicians*	HL	Marketing Managers	MK		
Licensed Practical and Licensed Vocational Nurses	HL	Sales Managers	MK		

CLUSTER ABBREVIATION KEY AG Agriculture, Food & Natural Resources AC Architecture and Construction AR Arts, A/V Technology & Communications BM Business Management & Administration ED Education & Training FN Finance GV Government & Public Administration HL Health Science HT Hospitality & Tourism HU Human Services IT Information Technology LW Law, Public Safety, Corrections & Security MN Manufacturing MK Marketing ST Science, Technology, Engineering & Mathematics TD Transportation, Distribution & Logistics



Appendix C: Priority Occupations in the District of Columbia

Information Technology

- Computer Hardware Engineers
- Information Security Analysts
- Computer Systems Analyst
- Software Developers, Systems Software
- Software Developers, Applications
- Computer and Information Systems Managers
- Network and Computer Systems Architects
- Database Administrators
- Computer Programmers
- Computer Support Specialists
- Computer Occupations, all other

Health Science

- Family and General Practitioners
- Surgeons
- Dental hygienists
- Registered nurses
- Internists, General
- Health Educators
- Health Specialties Teachers, Postsecondary
- Medical and Health Service Managers
- Health Diagnosing and Treating Practitioners
- Veterinarians
- Psychiatrists
- Pediatricians, general

Hospitality & Tourism

- Meeting and Convention Planners
- Sales Managers
- Chefs and Head Cooks

Law, Public Safety, Corrections/Human Services

- Lawyers
- Paralegals and Legal Assistants
- Social and Community Services Managers
- Detectives and Criminal Investigators

Business Management and Administration

- Operations Research Analysts
- Management Analysts
- General and Operations Managers
- Managers, All others

- Administrative Services managers
- Business Operations Specialists, All Other

Marketing

- Marketing Managers
- Market Research Analysts and Marketing Specialists

Education and Training

- Business Teachers, Postsecondary
- Education Administrators, Postsecondary
- Instructional Coordinators
- Education Administrators, All Others
- Training and Development Specialists
- Training and Development Managers
- Elementary School Teachers, Except Special Ed
- Teachers and Instructors, All Others

Science, Math, Engineering, and Technology

- Statisticians
- Economists
- Engineers, All Other
- Industrial Engineers
- Electronics Engineers, Except Computer
- Engineering Managers
- Natural Sciences Managers
- Biological Scientists, All Other

Finance

- Financial Examiners
- Financial Analysts
- Financial Managers
- Securities, Commodities, and Financial Services Sales
- Budget Analysts
- Actuaries

Architecture and Construction

- Architects, Except Landscape and Naval
- Construction and Building Inspectors

Arts, AV, Technology and Communications

- Public Relations Managers
- Public Relations Specialists
- Marketing Managers
- Operations Research Analysts

Transportation, Distribution, & Logistics

- Automotive Service Technicians and Mechanics
- Automotive Body and Related Services



Appendix D: Granting Waivers to Charter Schools⁸⁰

To afford Public Charter Schools the autonomy they are granted in the DC School Reform Act,⁸¹ the Task Force recommends that policy be developed to allow individual public charter schools to apply to the PCSB for a waiver from the CTE standards set forth in this Strategic Plan. As such, charters that meet the CTE standards set forth in this plan are eligible to receive Perkins Funding from OSSE, or other benefits afforded to schools offering Priority Programs of Study (e.g. funding, professional development, partnerships with networks and Industry Councils or District trade associations, and connections to postsecondary institutions and articulation/dual enrollment opportunities). Charters that do not meet these standards may request from the PCSB a waiver from the requirements of the CTE standards identified in the Strategic Plan. Charters receiving a waiver will not receive the aforementioned funding, professional development, and other benefits.

Currently, the PCSB is piloting a Performance Management Framework for Adult Education (Adult PMF) that measures the performance of charter schools offering adult education and CTE along most of the metrics contained in the legislation, including the percentage of students who earn an industry-recognized certificate, student academic outcomes, and student employment outcomes. The Adult PMF is being piloted during SY 2012-2013 with all adult education charter schools and will, after modifications, be implemented in SY 2013-2014 as PCSB's principal accountability system for all charter schools offering adult education and/or CTE programs. All public charter schools, regardless of whether they submit waivers from the standards identified in this Strategic Plan, will be held accountable by the Adult PMF or the High School PMF.

The PCSB is additionally planning to incorporate CTE-related indicators into its Performance Management Framework for charter LEAs serving traditionally aged students that offer CTE Programs of Study.

The PCSB will make public a report on each charter school offering CTE. This report will include the school's score on the Adult PMF along with quantitative outcomes of the components of the Adult PMF. Additionally, PCSB will send OSSE, on an annual basis, the results of the PMFs. Further, PCSB will consider closure of any charter school that consistently scores poorly on the CTE portion of the PMF.

In addition to using the PMFs to evaluate charter school performance, PCSB conducts high stakes qualitative site reviews (QSRs) at least once every five years. QSRs include scheduled and unscheduled school site visits. If the school scores in the bottom tier of a PMF or is recognized by OSSE as a Focus or Priority School, PCSB will conduct a QSR in the following year. In addition, PCSB conducts annual compliance reviews and monitors attendance and discipline. The QSR, Compliance, and any other accountability reports PCSB creates will take into account a school's CTE Program of Study offerings, quality, and outcomes.

⁸⁰ This section addresses section 3.e.11 of the CTE Plan Establishment Act: "[The Strategic Plan shall Include] A policy allowing individual public charter schools to apply to the PCSB for a waiver from the CTE standards set forth in the plan as long as the PCSB has found that the particular charter school has a compelling justification for such a waiver and has established an alternative set of standards and outcome measures for the particular charter school that will be communicated to the OSSE and monitored by the PCSB.

⁸¹ District of Columbia School Reform Act of 1995. D.C. Official Code § 38-1800.