



Career Equity Resource Center

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University's Center for Women and Work



Career and Technical Education Issue Brief: North Jersey

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Introduction

Career and Technical Education (CTE) is an excellent opportunity for advancing students' college and career readiness, yet not all students enter CTE with the same advantages. Persistent and significant gaps in achievement still exist in our schools and CTE programs. Particular subpopulations of students often face additional barriers to success. Through the Career Equity Resource Center (CERC), the NJ Department of Education, Office of Career Readiness has set out to provide a high-level overview of the state of equity in NJ's Perkins-funded career and technical education programs. The information included in this brief uses data from the 2019-20 school year and is meant to inform stakeholders at the local level about equity gaps in high skill, high wage, in-demand CTE programs, and outline how these programs align with regional workforce needs and economic priorities. The specific questions that were used to guide this brief are:

1. What are the key industry sectors in Northern New Jersey, and how are they aligned with overall student enrollment in Perkins-approved CTE programs?
2. Do all students have access to the Perkins-funded CTE programs that are expected to prepare them for the key industry sectors in Northern New Jersey? Where are the biggest inequities/disparities/gaps in enrollment?

Perkins Special Populations:

- Individuals with disabilities
- Individuals from economically disadvantaged families, including low-income youth and adults
- Individuals preparing for nontraditional fields*
- Individuals with limited English proficiency
- Single parents, including single pregnant women
- Out-of-workforce individuals
- Homeless individuals
- Youth who are in, or have aged out of, the foster care system
- Youth with a parent who is a member of the armed forces and is on active duty

Northern NJ Demographic Data and Student Information

Northern NJ is comprised of the following counties: Bergen, Essex, Hudson, Morris, Passaic, Sussex, and Warren. These seven counties have a total population of 3,656,656 as of the ACS 2019, US Census Bureau¹. The demographics of all the counties combined are 66.8% White, 18.5% Hispanic/Latinx, 15.4% Black/African American, 6.6% Asian, 0.2% Native American, and 0.1% Pacific Islander. There is great disparity in how the population in these counties is distributed however, with the most people concentrated on the eastern border in Bergen (936,692) and Essex (799,767) counties, and the least amount of people located on the western border counties including Warren (105,779) and Sussex (140,799).

Given its proximity to the NY metro area, it's not surprising that Northern NJ is the most populous of the three regions in NJ, as well as the one that produces the highest levels of economic output and greatest expected job growth in the next 5 years². Northern NJ contains the state's largest major airport, most active train station, and entry into the world's busiest motor vehicle bridge³, the George Washington Bridge.

¹ American Community Survey 2019, US Census Bureau

² NJLWD Labor Profiles, Local Area Unemployment Statistics, June 2019

³ <https://www.americanmanufacturing.org/blog/whats-the-worlds-busiest-motor-vehicle-bridge/>

The overall high school student population in Northern NJ for the 2019-2020 school year was approximately 153,954. Of that number, 10,242 students (about 6.6%) were enrolled in Perkins-approved secondary CTE courses and/or programs. The following tables demonstrate the demographic breakdown for both these populations (overall HS students and CTE HS students).

Enrollment by Race/Ethnicity	Overall HS Population	CTE HS Population
White	64,692 (41%)	3,131 (30.5%)
Black	20,257 (13.1%)	1,7961 (17.5%)
Hispanic/Latinx	52,578 (34.1%)	4,166 (40.6%)
AAPI	14,405 (9.3%)	1053 (10.3%)
Multiple/Other	2,022 (1.3%)	96 (1%)

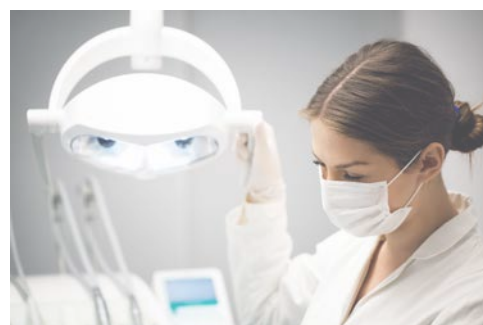
Enrollment by Gender	Overall HS Population	CTE HS Population
Male	78,297 (50.8%)	4,978 (48.6%)
Female	75,651(49.1%)	5,264 (51.3%)

Additional Demographics	Overall HS Population	CTE HS Population
Students with Disabilities	23,456 (15.2%)	1223 (11.9%)
Economically Disadvantaged Students	53,020 (34.4%)	4447 (43.4%)

Industry profile for Northern New Jersey

In June 2012 New Jersey’s State Employment and Training Commission passed a resolution establishing sector strategies as the framework for New Jersey’s workforce system. Adopting this key industry/ sector focus serves as the organizing principle of New Jersey’s workforce development system that drives policy development, system planning, performance oversight, and resource investments⁴. The nine key industry sectors that have been identified as key drivers of NJ’s overall economy are listed below. Subsequent sections in this brief will outline how local Perkins-funded CTE programs are aligned with the key industries represented in northern NJ:

- Biopharmaceuticals & Life Sciences
- Transportation, Distribution, and Logistics (TDL)
- Financial Services
- Retail Trade
- Manufacturing
- Healthcare
- Technology
- Construction and Energy
- Leisure and Hospitality



⁴ <https://www.nj.gov/njsetc/industry>

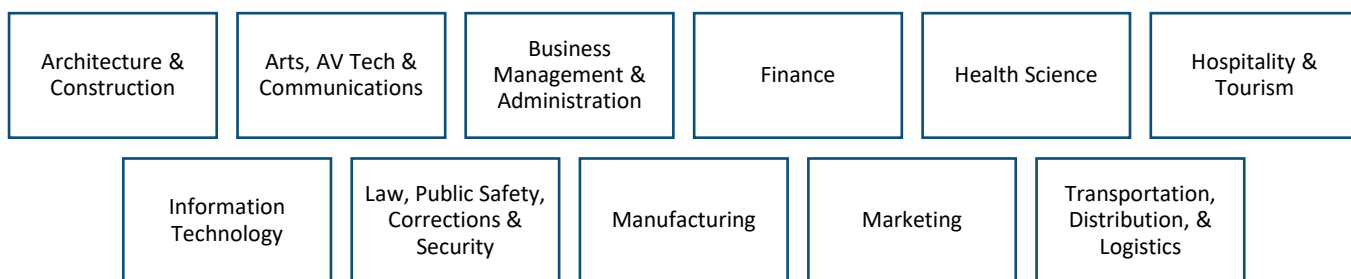
According to the NJ Department of Labor and Workforce Development (NJLWD), the top five key industries that were expected to grow in this region between 2016 and 2026 included healthcare; leisure and hospitality; transportation, distribution, and logistics (TDL); technology; and retail trade, in that order⁵. Within these five industries, the three that had jobs paying the highest range of salaries (on average) are 1) technology, 2) transportation, distribution, and logistics, and 3) healthcare. As such, these are the three career clusters we will focus on for the remainder of this brief.

Industry Title (ranked by projected job growth)	Projected Job Growth (2016-2026)	Average Salary Ranges
1 - Healthcare	40,850	Range: \$54-60K
2 - Leisure and Hospitality	23,300	Range: \$16-28K
3 - Transportation, Dist., & Logistics	12,950	Range: \$59-89K
4 - Technology/Life Sciences	12,250	Range: \$62-198K
5 - Retail Trade	1,550	Range: \$29-40K

The average salary range for technology jobs in Northern NJ in 2018 were \$72,890-\$135,220/year⁶. During this same time period, TDL jobs paid between \$59,100 - \$89,620⁷, and healthcare jobs paid approximately \$51,920 - \$60,140⁸. While jobs in leisure and hospitality were expected to grow significantly and appear to be a substantial economic driver in the region, they represent the lowest wages in any industry sector at about \$16,690-\$28,320/year⁸.

How do these career clusters alignment with high-skill, high-wage, or in-demand industries?

There were 98 Perkins-approved CTE programs in Northern New Jersey, and a total of 10,242 students were enrolled in these programs during the 2019-20 school year. These programs were categorized into 11 (out of 16 possible) career clusters:



The career clusters with the highest number of students were Hospitality & Tourism (2,715), Business Management & Administration (1,749), and Finance (1,314). The CTE programs within these clusters included Cooking & Related Culinary Arts, Culinary Arts/Chef Training, Administrative Assistant & Secretarial Science, Business Administration & Management, General Finance, and Accounting.

⁴ NJLWD labor profiles/Local Area Unemployment Stats 2018

⁵ 6/7 counties reporting

⁶ 6/7 counties reported

⁷ 4/7 counties reported

⁸ 5/7 counties reported

However, with the exception of Hospitality and Tourism, these programs do not reflect the industry sectors that are expected to see the most growth in this region over the next several years. As mentioned above, when wage information from the top five North Jersey sectors is factored in, the three with the highest earning potential were Information Technology; Transportation, Distribution, and Logistics (TDL); and Healthcare. The Health Science cluster, which aligns with NJ’s Healthcare industry sector, had 1,192 students enrolled in 15 programs across the region. Transportation, Distribution, & Logistics had 32 students in 3 programs, and Information Technology had 418 students across 4 programs.

Enrollment in Programs that Align with North Jersey’s Top 3 Growth Industries		Programs with the Top 3 Highest Enrollment Numbers in North Jersey	
Information Technology	418	Hospitality & Tourism	2,715
Transportation, Distribution, and Logistics	32	Business Management & Administration	1,749
Health Science	1,192	Finance	1,314

Only 16% percent of students were in the top 3 key industries expected to grow and pay higher salary ranges. The majority (84%) of students enrolled in Perkins-funded CTE programs were not in those industries. At the same time, there were higher numbers of students enrolled in programs that align with the lowest paid sector - Leisure & Hospitality - than in the top three highest paying sectors combined. This suggests that there is more work to be done to get students enrolled in clusters that are aligned with expected high growth industries and higher salary ranges.

16% of CTE students are enrolled in the one of career clusters feeding into the top three key industries in Northern New Jersey (Health Science, TDL, and Information Technology)

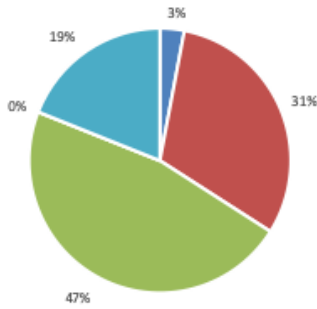
Of these three clusters, Health Sciences had by far the highest number of students. The Transportation, Distribution, Logistics cluster had the least students, with enrollment as low 5 students in one of the programs. With only 3 programs, access to the TDL cluster was fairly limited throughout Northern NJ but the fact that existing programs have low enrollment suggests there may be challenges in overall recruitment.

Do all students have access to the Perkins-funded CTE programs that are expected to prepare them for the key industry sectors in Northern New Jersey?

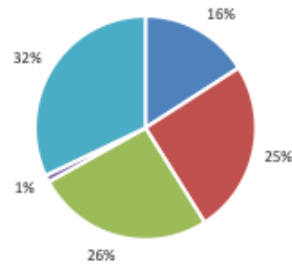
Student Enrollment by Race/Ethnicity

Assessing the three clusters by student enrollment by race/ethnicity, we identified several notable demographic patterns. First, the cluster with the highest percentage of Black students was Transportation, Distribution, and Logistics (31%), and the cluster with the lowest percentage of Black students was Information Technology (13%). On the flip side, the most Hispanic or Latinx students were in Information Technology (66%), and the fewest were in Healthcare (26%).

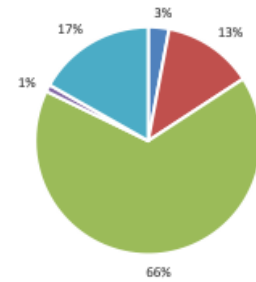
Transportation Cluster by Race/Ethnicity
(Total Enrollment= 32)



Healthcare Cluster by Race/Ethnicity
(Total Enrollment= 1,192)



Technology Cluster by Race/Ethnicity
(Total Enrollment= 418)

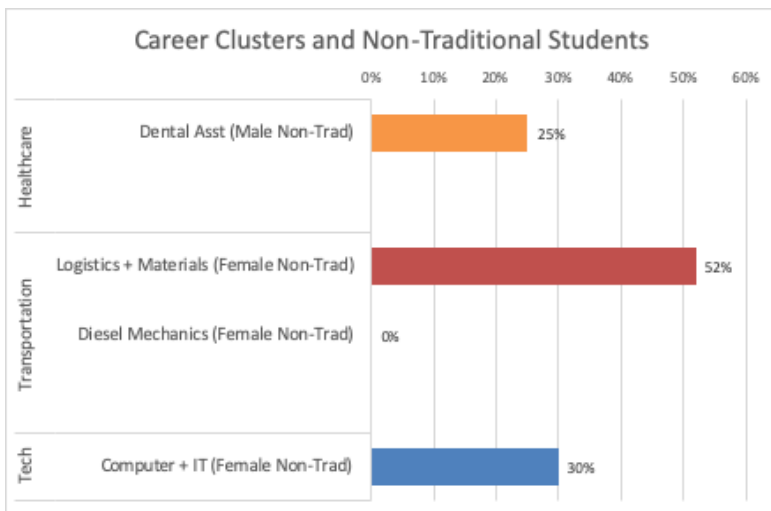


- AAPI
- Black or African American
- Hispanic or Latinx
- Other
- White

Next, the Technology cluster had the most disproportionate representations across the board, likely due to the fact that there were only 4 programs in the region. While Hispanic/Latinx students made up 40.6% of the CTE population, there were 66% enrolled in this cluster – the majority of them in only 2 of the 4 programs. As indicated below, there was a similar trend for students who were classified as economically disadvantaged, which represent 43.4% of the CTE population, but were enrolled in technology programs at a rate of 61%. For all other racial/ethnic groups, White, Black, and AAPI, as well as students with disabilities, there was an underrepresentation in technology programs.

Student Enrollment in Nontraditional Programs

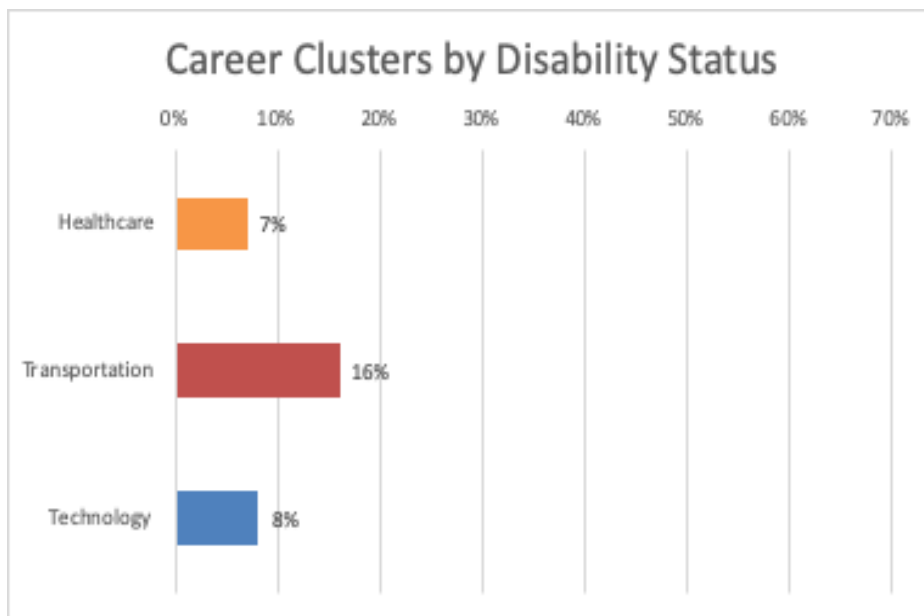
CTE Programs considered to be “nontraditional” are those connected to occupations or fields of work in which individuals from one gender comprise less than 25 percent of the individuals employed in those occupations or fields of work. Overall, the highest percentages of nontraditional students were in Logistics and Materials programs (52%). The lowest percentages were in Diesel Mechanics programs, a very small set of programs (32 students total) in which there were no female students enrolled.



Across the three clusters, generally 25% or more of students enrolled were nontraditional, which suggests that recruitment efforts have been generally successful. However, the exception was Diesel Mechanics, where there needs to be additional attention in order to ensure availability to all students.

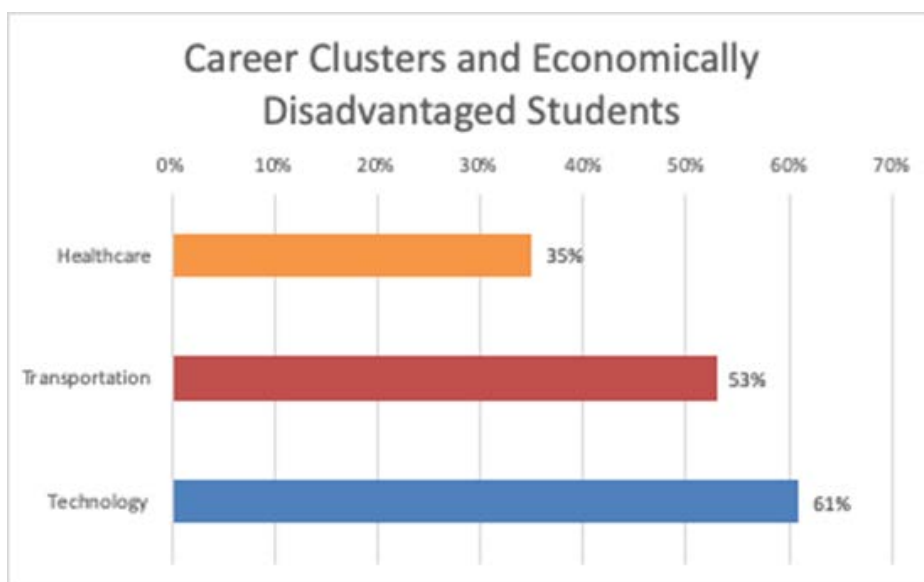
Student Enrollment for Students with Disabilities

There were relatively low percentages of students with disabilities enrolled in the three clusters. Overall, students with disabilities made up 15.2% of the overall high school population but only 11.9% of the CTE population. Although they appeared to be well represented in the Transportation, Distribution, & Logistics cluster at 16%, this was only 5 students out of a total of 32. The percentages of students with disabilities in healthcare and technology were very low, at 7% and 8% respectively.



Student Enrollment for Economically Disadvantaged Students

Among the top three career clusters, the highest percentages of economically disadvantaged students were in technology (61%), and the lowest percentages of economically disadvantaged students were in healthcare (35%).



Summary of Major Findings

Overall, findings indicated that there may be a need for more attention to be paid to the alignment between Perkins-approved CTE career cluster student enrollment and the industries considered to be high-skill, high-wage, and in-demand for Northern New Jersey. In addition, there were some important demographic patterns in student enrollment across the three career clusters by race/ethnicity, gender, and disability status that point to areas for additional attention.

Specifically, of the three clusters that this brief focused on, the Health Science cluster had the most access and variety of programs for Northern Jersey. These programs had an adequate representation of White, Black, and AAPI students, but an underrepresentation of Hispanic students – 26% out of 40.6% enrollment. At this juncture, it appeared to be the career cluster with the most stable foundation for producing equitable outcomes in employment for this region.

The small number of TDL and Information Technology programs means that the majority of CTE students in this region lack access to two-thirds of the highest paid, high growth sectors. However, high percentages of Hispanic/Latinx students, economically disadvantaged students, and female students in technology demonstrate that this is a promising area of growth for traditionally underrepresented groups.

At the same time, there was an overabundance of programs in the Hospitality & Tourism cluster, all of which represented cooking and culinary related occupations. Though overall jobs in this industry are expected to grow, they are also the lowest paid of all the key sector industries in NJ. This suggests that many of the region's CTE students may end up in lower paid occupations.

Directions for Future Research/Attention

This brief represents an important step forward toward improving our understanding of the state of equity in Perkins-approved Career and Technical Education programs in Northern New Jersey. However, more research is needed. For example, data beyond enrollment rates are needed to provide the complete picture of CTE participants vs. concentrators or completers. Further research into each of these categories along specific demographic groups would present a more comprehensive view and offer insights into where additional challenges lie with respect to recruitment, retention, and overall access.

At the same time, a few areas for future attention and research stand out. First, in light of the low number of students enrolled in TDL programs, further attention to this industry may be needed in order to determine how to add/expand potential programs throughout the region and how to develop better marketing/recruitment strategies. Second, given the expected growth rate of jobs in this industry for Northern NJ, which may be even greater in a post-COVID society, adding more technology programs in CTE will be an important area for consideration. The high enrollment numbers in existing programs also indicates that there is great interest in this cluster, making an even greater case for adding more programs.

Lastly, additional research in this area could also include qualitative components such as surveys, interviews, and/or focus groups to further examine challenges and opportunities at the district/program level. An analysis of best practices throughout the region, as well as identifying the barriers or limitations in CTE program development would help administrators address some of the root causes. These steps would also help to lay the groundwork for leveraging resources in order to meet the needs of their student populations.

Notes on Methodology

Data for this assessment came from the New Jersey Department of Education's (NJDOE) Office of Career Readiness, which collects information from secondary school districts, county vocational school districts with adult programs and community colleges on students enrolled in NJ Perkins-approved CTE programs. This information, which is provided by the schools, is revised on a yearly basis to more completely meet the data requirements of the Strengthening Career and Technical Education for the 21st Century Act (Perkins V).

Data used for this assessment were from the year 2019-2020. For the purposes of this assessment, only programs that are considered "Perkins approved" as of January 7, 2021 (in that they operate based on Perkins V funding) were included. In addition, in order to be included in this assessment, programs needed to be considered likely to lead to jobs considered to be "high-skill, high-wage, and in-demand" by the State of New Jersey.

This assessment used the following race/ethnicity categories: Asian or Pacific Islander (AAPI), Black or African American, Hispanic or Latinx, Other, and White. The Asian and Pacific Islander category includes students classified by NJDOE as Asian, Native Hawaiian, or Pacific Islander. The Other category includes students classified as American Indian, Alaskan Native, or Multiple Race/Ethnicity.

This assessment follows the federal definition of a *nontraditional program: "A program is considered nontraditional if the underrepresented gender comprises less than 25 percent of individuals employed in the occupation or field of work. Nontraditional fields are determined on a national level and not on the local level."

Students with disabilities includes any student who meet the disability eligibility criteria under section 3 of the Americans with Disabilities Act of 1990 (42 U.S.C. 12102).

Students were considered to be economically disadvantaged based on having received free or reduced lunch on the most recent School Performance Report.

About the Career Equity Resource Center:

The Career Equity Resource Center (CERC) is a program funded by the NJ Department of Education, Office of Career Readiness. CERC provides data-informed, research based professional development and technical assistance to secondary schools and county colleges operating or planning to operate career and technical education (CTE) programs.

The aim of CERC is to assist schools in building their own internal capacity to broaden access and opportunity to prepare special populations to high-skill, high-wage, or in-demand CTE careers.

CERC services are offered through a partnership with Rutgers University, Center for Women and Work (CWW). All requests for services and/or technical support concern equity in CTE can be submitted through CERC@doe.nj.gov.