



## Career Equity Resource Center

funded by the NJ Department of Education,  
Office of Career Readiness, housed at Rutgers  
University's Center for Women and Work



# *Career and Technical Education Issue Brief: South 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 Southern 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 Southern 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

## Southern NJ Demographic Data and Student Information

Southern NJ is comprised of the following counties: Atlantic, Burlington, Cape May, Camden, Cumberland, Gloucester, and Salem. These seven counties had a total population of about 1,811,077 as of the ACS 2019<sup>1</sup>. The demographics of all the counties combined are approximately 63% White, 14% Hispanic/Latinx, 17% Black/African American, 5% Asian, and less than 1% Native American. During this time period, Salem County had the smallest population of any New Jersey county with only 62,385 residents, and Cumberland County had the lowest per capita income in Southern NJ at \$25,694. By contrast, Camden County had the largest population at 506,471, followed by Burlington County with 445,349 residents. Burlington County also had the lowest rate of persons living in poverty, 5.7%, and the highest median household and per capita income at \$87,416 and \$43,187, respectively<sup>2</sup>.

Overall Southern NJ is the least populous of the three regions in NJ and much of the area is considered part of the Philadelphia metropolitan area<sup>3</sup>. Burlington and Atlantic counties house most of the state's cranberry bogs and blueberry bushes, making NJ among the top 5 producers of these crops nationally<sup>4</sup>. Southern NJ is also home to Atlantic City, the largest casino gambling market on the East Coast<sup>5</sup>, and the second largest in the country.

<sup>1</sup> American Community Survey 2019

<sup>2</sup> American Community Survey 2019

<sup>3</sup> <https://www.bls.gov/bls/omb-bulletin-13-01-revised-delineations-of-metropolitan-statistical-areas.pdf>

<sup>4</sup> <https://www.njfarmland.org/>

<sup>5</sup> McGowan, Richard A. (2008). *The Gambling Debate*. Westport, CT: Greenwood Press. ISBN 9780313340680

The overall high school student population in Southern NJ for the 2019-2020 school year was approximately 84,892. Of that number, 5,555 students (about 6.5%) 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	45,206 (53.2%)	2,501 (45.0%)
Black	15,565 (18.3%)	1,201 (21.6%)
Hispanic/Latinx	16,560 (19.5%)	1,421 (25.5%)
AAPI	721 (0.8%)	244 (4.3%)
Multiple/Other	2340 (2.7%)	185 (3.3%)

Enrollment by Gender	Overall HS Population	CTE HS Population
Male	43,342 (51%)	2,653 (47.7%)
Female	41,547 (49%)	2,902 (52.2%)

Additional Demographics	Overall HS Population	CTE HS Population
Students with Disabilities	4,622 (5.0%)	697 (1.2%)
Economically Disadvantaged Students	24,111 (28.4%)	2,338 (42%)

## Industry profile for Southern 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 investments<sup>6</sup>. 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



<sup>6</sup> <https://www.nj.gov/njsetc/industry>

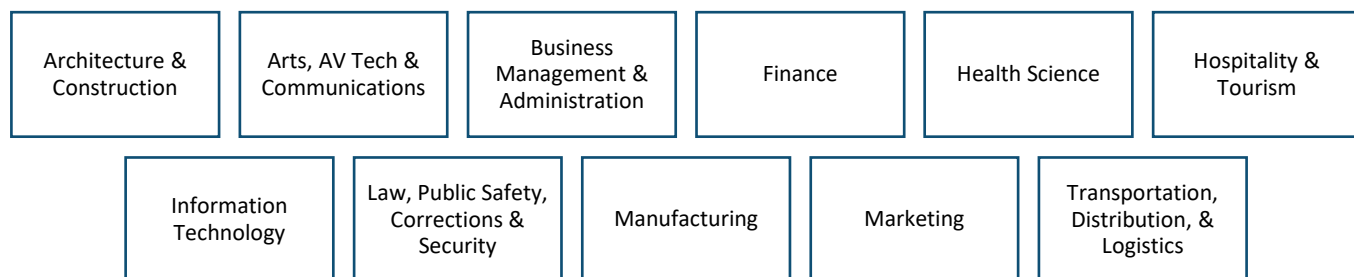
According to the NJ Department of Labor and Workforce Development (NJLWD) the top five key industries that were expected to grow in this region between 2016 and 2026 included healthcare, leisure and hospitality, construction and energy, transportation, distribution, and logistics (TDL); and manufacturing, in that order<sup>7</sup>. Within these five industries, the three that had jobs paying the highest range of salaries (on average) are: **1) construction and energy, 2) manufacturing, 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	19,400	Range: \$48-60K
2 - Leisure and Hospitality	16,500	Range: \$15-30K
3 - Construction and Energy	4,550	Range: \$51-70K
4 - Transportation, Dist., & Logistics	4,200	Range: \$45-56K
5 - Manufacturing	3,900	Range: \$34-82K

The average salary range for construction and energy jobs in Southern NJ in 2018 were \$51,050 – \$70,150/year. During this same time period, manufacturing jobs paid between \$34,410 - \$82,730<sup>9</sup>, and healthcare jobs paid approximately \$53,200 - \$60,100<sup>10</sup>. 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 \$15,710-\$28,020/year<sup>11</sup>.

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

There were 70 Perkins-approved CTE programs in Southern New Jersey, and a total of 5,555 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 (1,195), Health Science (1,144), and Architecture and Construction (1,010). The CTE programs within these clusters included Cooking & Related Culinary Arts, Culinary Arts/Chef Training, Health Services/Allied Health/Health Sciences/General, Dental Assistant, Athletic Training, Architectural Drafting and CAD, Electrician, and Plumbing.

<sup>7</sup> NJLWD labor profiles/Local Area Unemployment Stats 2018

<sup>8</sup> 2/7 counties reported

<sup>9</sup> 7 counties reported

<sup>10</sup> 4/7 counties reported

<sup>11</sup> 7 counties reported

All these programs reflect industry sectors that are expected to see the most growth in this region over the next several years. However, as mentioned above, when wage information from the top five South Jersey sectors is factored in, the three with the highest earning potential were Architecture and Construction, Manufacturing, and Healthcare.

Programs with the Top 3 Highest Enrollment Numbers in North Jersey		Enrollment in Programs that Align with North Jersey's Top 3 Growth Industries	
Hospitality & Tourism	1,195	Architecture & Construction	1,010
Health Science	1,144	Manufacturing	46
Architecture & Construction	1,010	Health Science	1,144

The Architecture and Construction cluster, which aligns with NJ's Construction & Energy industry sector, had 1,010 students enrolled in 16 programs across the region. Manufacturing had 46 students in 2 programs, and Health Science had 1,1144 students across 11 programs. These clusters contained a variety of programs such as Electrical, Plumbing, Architectural Drafting, CAD Drafting/Design Technology, Manufacturing Engineering Technology, Dental Assistant, Athletic Training, and General Allied Health.

**40%**

of CTE students are enrolled in the one of career clusters feeding into the top three key industries in Southern New Jersey (Construction, Manufacturing, and Healthcare)

Overall, 40% percent of students were in the top 3 key industries expected to grow and pay higher salary ranges. The majority (60%) of students enrolled in CTE programs were not in those industries. At the same time, the highest number of students were enrolled in programs that align with the sector with the lowest average salary range, Leisure & Hospitality. 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.

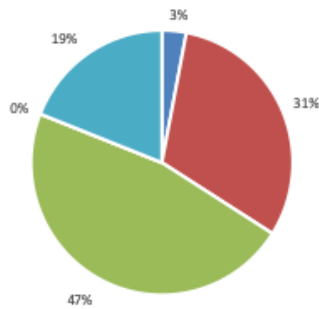
Of these three clusters, Architecture and Construction and Health Science had similar enrollment numbers, whereas Manufacturing had far fewer students by comparison. With only 2 Manufacturing programs in the region, there may be challenges with both access and recruitment in this area.

**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?**

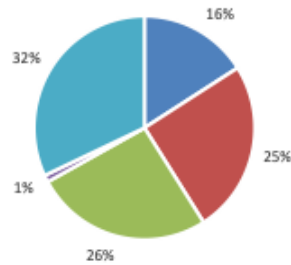
***Student Enrollment by Race/Ethnicity***

When assessing student enrollment by race/ethnicity, we identified several important patterns. First, the career cluster with the highest percentage of Black students was construction (17%), while the cluster with the lowest percentage of Black students was manufacturing (11%). A somewhat higher percentage of Hispanic or Latinx students were in construction and healthcare (both 27%), but again the cluster with the lowest percentage of Hispanic or Latinx students was manufacturing (11%).

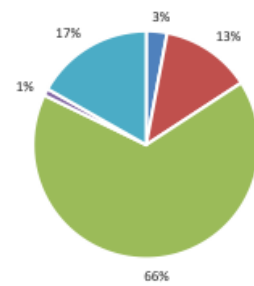
Transportation Cluster by Race/Ethnicity  
(Total Enrollment= 32)



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



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



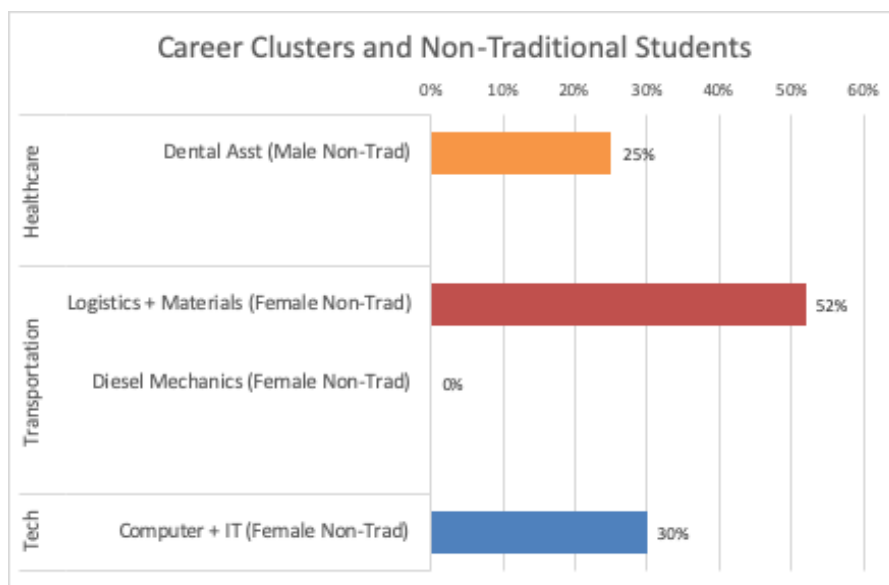
- AAPI
- Black or African American
- Hispanic or Latinx
- Other
- White

Overall, the Manufacturing cluster had the most disproportionate representation across the board, likely because there were only two programs in the region. While White students made up 45% of the overall CTE student population, there were 71% enrolled in this cluster, and Black, Hispanic or Latinx, and AAPI students were underrepresented.

**Student Enrollment in Nontraditional Programs**

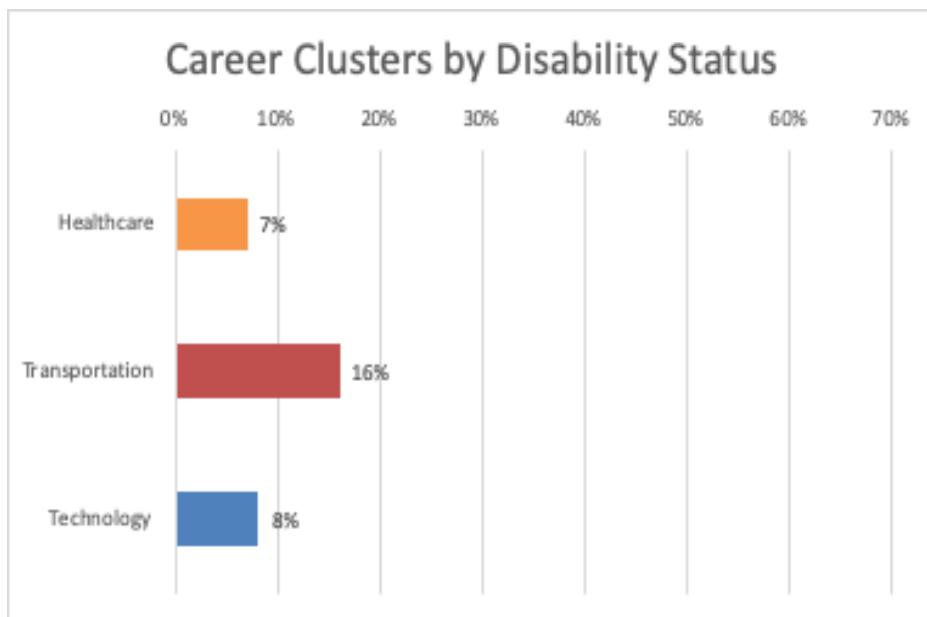
CTE Programs considered to be “nontraditional” are those connected to occupations or fields of work in which individuals from one gender comprise less than 25 percent of the individuals employed in those occupations or fields of work. Overall, the highest percentages of nontraditional students were in Architectural Drafting (21%), and the lowest percentages were in Plumbing (3%).

Across the three clusters, none of the programs had enrolled at least 25% nontraditional students, which suggests that additional attention may be needed in order to ensure that these programs are available to all students.



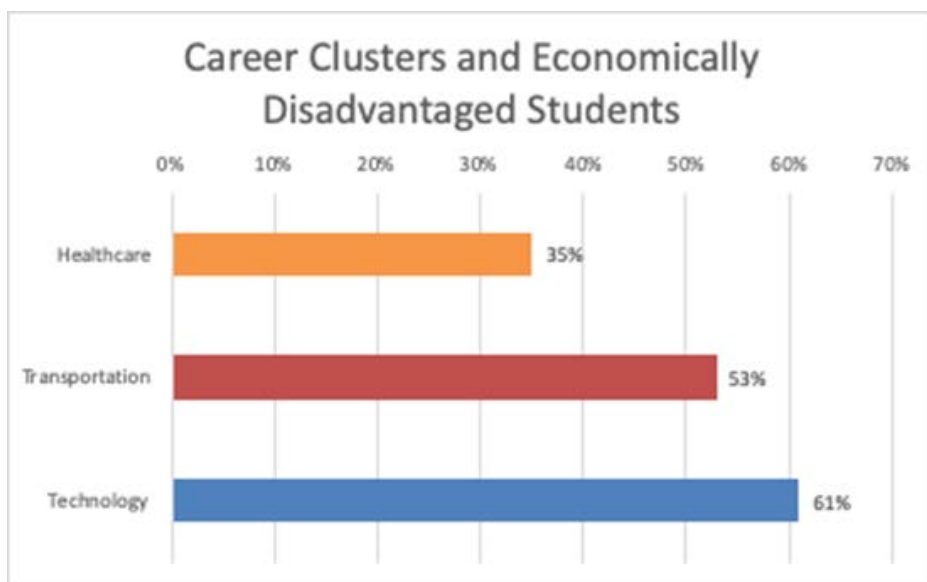
### ***Student Enrollment for Students with Disabilities***

There was substantial variation in the percentages of students with disabilities enrolled in the three clusters. The highest percentages of students with disabilities were in manufacturing (41%). Although they appeared to be well represented, this cluster had relatively low student enrollment overall, with a total of 46 students. The lowest percentages of students with disabilities were in healthcare, where 38 out of the 1,144 students enrolled were students with disabilities (3%).



### ***Student Enrollment for Economically Disadvantaged Students***

In contrast to the wide variation in the percentages of students with disabilities in the top three career clusters, the percentages of economically disadvantaged students across the three clusters were quite similar. The highest percentages of economically disadvantaged students were in healthcare (37%), followed by manufacturing (35%), and then construction (34%).



## 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 Southern New Jersey. In addition, there were some striking demographic patterns in student enrollment across the three career clusters - Architecture and Construction, Manufacturing, and Health Science - by race/ethnicity, gender, and disability status that point to areas for additional attention.

With respect to access, the data show higher percentages of students in this region were enrolled in Architecture & Construction and Health Science programs, and the lowest percentages were enrolled in Manufacturing programs. For these first two clusters, the percentages of White students enrolled were similar to the percentages of White students in CTE programs overall, , while Manufacturing had a much higher proportion at 71%. Conversely, despite making up over 20% of the CTE populations in Southern Jersey, Black students were underrepresented in all three clusters, pointing to overall recruitment issues for this population. Hispanic/Latinx were only underrepresented in Manufacturing programs, whereas the representation of AAPI students varied greatly amongst all programs.

Though economically disadvantaged students were underrepresented in all three clusters, they were the group with the least fluctuations in enrollment numbers across the board. Enrollment for students with disabilities varied greatly among the programs, with Manufacturing having the highest concentration of students from this population and Health Science having the lowest.

Except for Health Science, almost every single CTE program in the top three career clusters was nontraditional for female students. Overall, none of the CTE programs enrolled at least 25% nontraditional students. Architecture & Construction had variation in the percentages of nontraditional students enrolled, with Architectural Drafting programs having the highest percentage of nontraditional students.

Aside from the top three clusters examined in this brief, there was high student enrollment in 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 on average of all the key sector industries in NJ. This is an important point to be considered in light of NJ's workforce development strategy of supporting training for industries considered to be high-skill, high-wage, and in-demand.

## 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 Southern 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, with limited access and low numbers of students enrolled in Manufacturing 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, further research on the underrepresentation of Black students and the inconsistent numbers of students with disabilities in high-skill, high-wage, and in-demand programs would help inform schools/districts on how to better serve these populations.

Lastly, additional research 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 (API), 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](mailto:CERC@doe.nj.gov).