HANOVER RESEARCH

ADVANCED TRAINING CENTER NEEDS ASSESSMENT

Prepared for Lebanon Valley Chamber of Commerce
January 2024

TABLE OF CONTENTS

3 / Executive Summary

21 / Lebanon County Demographics
- ATC Target Population

34 / Lebanon County Top Occupations & Skills
- Top Industries & Occupations
- Top Roles & Skills
- Community Perceptions: Top Occupations & Skills

49 / Lebanon County Training Centers
- Lebanon County Career and Technology Center
- Harrisburg Area Community College

63 / Employer Perceptions: Skills Gaps & Training Needs

68 / Training Center Models
- Lancaster County Career and Technology Center
- Pittsburgh Technical College
- Thaddeus Stevens College of Technology
- Triangle Tech
- YTI Career Institute

99 / Appendix

EXECUTIVE SUMMARY

INTRODUCTION & PROJECT OBJECTIVES

The Lebanon Valley Chamber of Commerce (LVCC) serves the business community of Lebanon County, PA, through a variety of programs and member benefits: educational workshops, networking events, governmental advocacy programs, and economic/workforce/community development initiatives.

Lebanon County is the second fastest growing county by population in the state. While it is home to a four-year college, a branch campus of Harrisburg Area Community College, and the Career & Technology Center, LVCC hypothesizes that there is a still an unmet need for skills training in Lebanon County for the current and developing workforce. This hypothesis is based partially on feedback from employers in the county.

To meet the current and future occupational training needs for these employers and the growing population, LVCC has tasked Hanover with conducting a comprehensive needs assessment to determine the need for a new Advanced Training Center (ATC) in Lebanon County. The results will either support the need for the development of a new training center, justify a different approach such as an expansion of the existing adult training and education resources/offerings currently available in the community, or indicate that our existing training is meeting current and potential future needs.

This study was broken into three phases:

During **Phase I** (completed in March 2023) Hanover collected demographic, educational attainment, and labor market data on Lebanon County and surrounding region as well as information on adult education programs currently available there. *Hanover determined there is a significant target population for the ATC. That population is underserved by the current skills training opportunities in the county. Certification and training programs for the top occupations in Lebanon county are severely lacking, indicating the demand for an ATC exists.*

During **Phase II**, (completed in July 2023) Hanover conducted qualitative interviews with Lebanon County employers sourced by LVCC from a mix of companies in target industries (e.g., Manufacturing, Healthcare & Social Services, Distribution & Supply Chain, and Education). *Phase II identified the themes in hiring challenges experienced by employers and confirmed their strong appetite for a local training center and the curricula it should offer.*

During **Phase III**, (completed in November 2023) Hanover analyzed the curricula and programs at other training centers in Pennsylvania and conducted interviews with leaders at LCCTC and HACC. *Phase III identified how these other training centers develop their programs, partner with local business and educational institutions to fulfill their mission, and different ways they fund their programs. This study confirmed that partnerships with local businesses are a critical part of delivering vocations curricula and increasing students' readiness to participate in the workforce.*

Important note: LVCC recognizes that the ATC could potentially have a regional draw and impact. However, this study is intended to produce findings that benefit the businesses and residents of Lebanon County specifically.

INTRODUCTION & PROJECT OBJECTIVES

PHASE I RESEARCH QUESTIONS

1. What is the demographic makeup of Lebanon County? Current state AND the anticipated future state based on trends in the data.
    - Total population by age, household income, sex, language, educational attainment, employment status, and industries

2. What are the primary industries in Lebanon County?
    - What are the top industries?
    - Who are the top employers?
    - What skill sets do these industries and employers look for in a workforce?

3. What post-secondary education and skills trainings are currently available to adults in Lebanon County?
    - What are the institutions that offer these programs?
    - What degrees, certifications, and curricula do they offer?
    - How in demand are these programs?
        - What does enrollment look like? How is enrollment trending?
    - Are the programs truly available?
        - Verify current capacity and availability. While some organizations state they offer courses, they may not be offered currently, be held in another community or in some cases, discontinued.

4. Can the workforce get the skills employers want through existing training and education programs offered in Lebanon County?
    - Where do major gaps exist in educational offerings?

INTRODUCTION & PROJECT OBJECTIVES

PHASE II RESEARCH QUESTIONS

1. What are the skills and training needs – both current and future - of Lebanon County employers?
   - What skills do local employees have?
   - What skills are currently lacking in the local workforce?
2. What are the perceptions of Lebanon County employers on the current workforce, training, and hiring needs?
   - What are the common pain points or challenges faced by employers when hiring?
     - Current/near future?
     - Longer-term expectations?
   - What are the unmet needs of employers in terms of workforce development and training?
3. What is the source of training for employees/job candidates in Lebanon County?
   - Which institutions are providing the necessary training?
   - Are these institutions located within the county?
   - What are the strengths and weaknesses of these training programs?
4. What is the extent of hiring of candidates from Lebanon County by Lebanon County employers?
   - Living in the county?
   - Educated/trained in the county?
   - What drives employers to hire candidates from outside the county?

INTRODUCTION & PROJECT OBJECTIVES

PHASE III RESEARCH QUESTIONS

1

Part 1: Workforce Training Partner Interviews

What job-placement trends are the current education providers in Lebanon County (HACC and LCCTC) observing?

What drives the choice of programming they offer at their Lebanon County locations?

What are their challenges and unmet needs?

How could the ATC best partner with these stakeholders to complement their strengths and supplement their needs?

2

Part 2: Workforce Training Center Models

What are successful workforce training/development centers models in other communities?

- What curricula and certifications do they offer?
- What are their industries of focus?

What job-placement programs/services do they offer?

- What are representative job-placement success rates?

What partnership programs do they utilize?

- Government Agencies, NGOs, Unions, Industry Leaders, and Local Employers, etc.?

How are similar training centers and organizations funded?

- Funding Source: Federal and State level programs and grants? Non-profit organizations? Private Foundations? Subsidized Tuition? Taxation?
- What are the goals of the organizations (both public and private) that fund these programs?

METHODOLOGY

The recommendations presented on the following slides are based on findings from secondary, quantitative, and qualitative research.

Secondary Research

Extensive secondary research into the population, job market, and current training centers in Lebanon County , as well as training centers in other parts of Pennsylvania.

Market Modeling

Hanover estimated the market size for the ATC target population.

Data Sources: U.S. Census, Brookings Institute, Pew Research, Education Data Initiative

In-depth Interviews

Ten interviews from:

- **Local Employers** in manufacturing, retail/distribution, and healthcare industries *(n=8)*
- **Education Partners** employed at LCCTC and HACC *(n=2)*

Hanover collected all the above data from March through December 2023.

RECOMMENDATION #1

ESTABLISH AN ADVANCED TRAINING CENTER IN LEBANON COUNTY

RECOMMENDATION #1

Hanover identified a need for an Advanced Training Center in Lebanon County based on population growth and employer perceptions of current resident skills.

- In 2021, the ATC target population, defined as the population aged 18-44 with a high school or associate's degree, was 25,000 people. **By 2033, Hanover estimates that LVCC's proposed ATC must accommodate a population between 23,000 and 32,000**, varying based on the population growth and educational attainment.

Highest Degree Attained: High School or Associate's	Low Population Scenario	High Population Scenario
2021	25,137	25,137
2033 Low Scenario	23,143	25,638
2033 Mid Scenario	25,997	28,778
2033 High Scenario	28,811	31,917

  - Educational Attainment Scenarios: In 2021, **~47% of the 18-44 age population had a maximum educational attainment of a high school degree and ~8% had an associate's degree.** These percentages were used to estimate the 2033 mid-scenario.
  - Population Growth Scenarios: Hanover forecasts Lebanon County's total **18-44 age population to reach between 42,700 and 52,300 (3.3% to 14.5% growth from 2021-33, respectively)**, depending on the proportion of people migrating into and out of the county. These numbers are used as base values for the low and high populations.

- **Those with a high-school degree as their highest level of educational attainment are in line with their peers in surrounding counties** (Lancaster, Berks, and Dauphin) and better off than their peers in the rest of Pennsylvania, as represented by the (1) unemployment rate and (2) median earnings.

	Lebanon	Lancaster	Berks	Dauphin	Pennsylvania
Unemployment Rate	3.1%	3.0%	3.9%	3.8%	4.3%
Median Household Income	$66,164	$73,688	$69,272	$66,480	$67,587

RECOMMENDATION #1

- **Despite Lebanon County's strong performance in the labor market compared to surrounding areas, workers and job seekers face challenges in acquiring specific skillsets required for in-demand roles due to the lack of adult training centers within the county.**
  - Without training opportunities within Lebanon county, prospective employees do not have the skills needed for various jobs in the county. The county's workforce population is not sufficient to fill all open positions. Many job candidates do not have prior work experience, which limits the pool of candidates for non-entry level roles. Additionally, for some roles, there is a lack of awareness and interest in pursuing training.
  - These challenges are further compounded by issues with scheduling, affordability, language barriers, as well as commute times and competition from neighboring counties. The training center should be centrally located and offer flexible scheduling, tuition assistance programs, and diverse language options to combat these challenges.

Scheduling	Affordability	Language Barriers	Competition & Commute
There is a need for training centers to offer flexible scheduling to accommodate busy schedules. If current employees need access to training, it is not feasible to find time in the work schedule if the programs are in another county.	Training centers must also be more affordable to assist individuals with various financial situations. Employers noted that many employees are unable to afford programs and would benefit from tuition assistance options.	A significant portion of the workforce is native Spanish speakers, and the Spanish speaking population is growing in Lebanon and surrounding counties. Therefore, diversifying language offerings at the training center would create greater opportunities for the workforce.	Employers face competition from companies in neighboring counties that offer training programs and desirable job opportunities. Employees are often unwilling to commute if there are comparable job opportunities available within their own county.

RECOMMENDATION #1

- **Furthermore, current training centers in Lebanon County, LCCTC and HACC, do not cover the anticipated employer needs.**
  - LCCTC currently has the potential to serve approximately 1,400 high school students per year; however, classes only reach 76% of max capacity on average. Course enrollment and capacity have remained generally flat-to-down and below capacity despite a general growth in population within both the county and region, except in welding.
  - While employers believe LCCTC programs fit their needs, there are not enough students graduating from the programs to fill job positions, particularly in nursing. Additionally, certain courses (such as electrician training) are not offered at LCCTC.
  - HACC does not offer many technical training opportunities at the Lebanon Campus. Phlebotomy is the only training course, and it can serve a maximum of 28 students per year. Programs that align with the top technical occupations consist of studies in healthcare, driving, as well as maintenance and mechanics.

RECOMMENDATION #2

TAILOR ATC PROGRAMS TO IN-DEMAND SKILLS

RECOMMENDATION #2

Tailor ATC programs to teach the specific skillsets that align with the top technical occupations in the county and employers' most in demand skills.

- **The top technical occupations in Lebanon County, defined as those that Hanover and LVCC believe would be a target group for the proposed advanced training center** are categorized by transportation and material moving, healthcare, maintenance and repair, and construction and extraction:

Top Technical Occupations in Lebanon County	
Laborers and Freight, Stock, and Material Movers, Hand	Industrial Truck and Tractor Operators
Heavy and Tractor-Trailer Truck Drivers	Light Truck Drivers
Home Health and Personal Care Aides	Licensed Practical and Vocational Nurses
Maintenance and Repair Workers, General	Electricians
Miscellaneous Assemblers and Fabricators	First-Line Supervisors of Mechanics, Installers, and Repairers
Nursing Assistants	

RECOMMENDATION #2

- **The most significant skills that align with top technical occupations and that employers want to see taught in a Lebanon County-based training center fit into the following categories:** mechanical aptitude, electrical & electronics, machine operation, computer systems, forklift & crane operations, welding, plumbing, and nursing.

Manufacturing	Retail/Distribution	Healthcare
• Automation Controls & Systems • Electrical System Maintenance & Repair • Math • Testing of Materials • Welding • Forklift & Crane Operation	• Mechatronics • Machine Operation, Repair, & Maintenance • Computer Systems • Distribution & Processing	• LPN • Nursing Assistant • Medical Assistant • Other Trades: Food Service, Maintenance, Hospitality

- Historical challenges in hiring in the manufacturing segment continue to accelerate, as companies enhance plant technology and automation, which requires more advanced electronic skills.
- Employers in the retail/distribution segment are generally satisfied with the current workforce pool; however, employers express a need for advanced forklift and crane operation training, as well as English as a Second-Language (ESL) opportunities.
- There is high demand for healthcare staff, including clinical roles, such as LPNs, nursing assistants, and medical assistants, as well as non-clinical healthcare workers, such as food service, maintenance, and hospitality.

RECOMMENDATION #2

- **Programs that align with these skills** consist of studies in healthcare, driving, as well as maintenance and mechanics.

Manufacturing / Mechanics / Computer Systems	Maintenance / Automotive	Healthcare
Electro-Mechanical / Mechatronics Electronics Engineering Robotics Mechanical Engineering Precision Machining Metal Fabrication Welding Equipment Operation Computer Aided Design / Computer Integrated Machining Computer Software Engineering Computer and Data Management	Plumbing HVAC/R Electrical/Electrician Technology Automotive Technology Diesel Technology Collision Repair Technology CDL Training	Practical Nursing (LPN) Nursing Assistant Home Health Aide Medical Technology Health Careers Health Information Management Medical Assistant Phlebotomy Medical Coding Surgical Technology

RECOMMENDATION #3

MAINTAIN CONSISTENT COMMUNICATION WITH THE EDUCATION & BUSINESS COMMUNITIES

RECOMMENDATION #3

Maintain regular outreach and open communication with the local business and education community to spread awareness about job opportunities in the county as well as ensure a comprehensive understanding of current industry trends and community needs for future program development.

- **Employers believe that job candidates face difficulty receiving proper training for in-demand skills due to a lack of awareness of and interest in available jobs in the county. This highlights the need for increased education about employment opportunities at local training centers and high schools.**

Through partnerships with businesses, institutions can offer more career development opportunities to spread awareness of potential career paths in the county.

  - Institutions provide a range of career services, such as job interview and resume assistance, workshops, career fairs, informational sessions, and networking events. These outreach solutions facilitate connections between students and potential employers to spread awareness of career opportunities.
  - Additionally, employers express a need for training programs to incorporate experience in the field to expand students' knowledge of potential careers. Partnerships with local businesses can enhance program offerings and provide practical, industry-relevant experiences for students at the ATC. Internships, co-op programs, and apprenticeships are some examples of programs to educate students on jobs in the county and skill requirements.

Consistent communication between local businesses and education institutions is essential in addressing challenges of sustaining business engagement. To facilitate engagement, LVCC should consider implementing structured collaboration programs with clear expectations and benefits for businesses.

  - This could involve regular meetings, opportunities for businesses to provide input on curriculum development, or initiatives that allow businesses to invest in the institution by providing equipment or other resources.

RECOMMENDATION #4

NEXT STEPS FOR PROGRAM DEVELOPMENT & FUNDING

RECOMMENDATION #4

Next steps include further program development, such as logistics planning and establishing consistent with the community, as well as determining a funding model.

Program Development

- **Needs assessment, demand, and program selection are the first steps of program development. Next steps include logistics planning and consistent community input.**
  - At HACC and LCCTC **logistics planning** includes,
    - Where could we house them?
    - What equipment do we need to get?
    - How much money is this going to cost?
  - And, **community input** consists of,
    - Occupational Advisory Council or committees with industry representatives meet twice a year
    - Contact employers and complete datums in various areas to ensure the new curriculum meets the needs of the industry

Funding

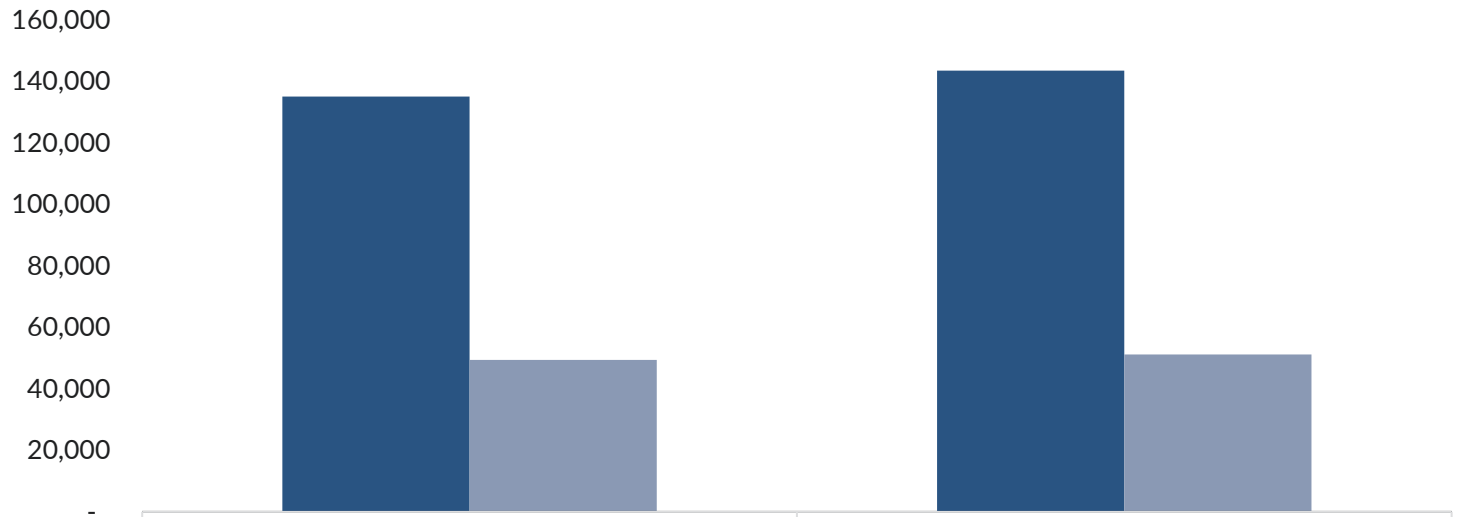
- **Diversify funding models by seeking grants, partnering with foundations, and initiating targeted fundraising campaigns.**
  - Private institutions typically rely on tuition, fees, and grants, while public institutions receive local, state, and federal aid.
  - Some schools leverage support from foundations and the business community that contribute through donations, funding, awards, awareness campaigns, and partnerships, providing additional resources and opportunities for students.

LEBANON COUNTY DEMOGRAPHICS

POPULATION

From 2012 to 2021, Lebanon County's population grew by 8,493 overall and by 1,817 within the 15-44 age group. In 2021, the population of the 15-44 age group totaled 51,227.

LEBANON COUNTY POPULATION CHANGE, 2012-2021



	2012	2021
Total Population	135,000	143,493
Population 15-44	49,410	51,227

Source: U.S. Census

POPULATION, SEX, AND LANGUAGE

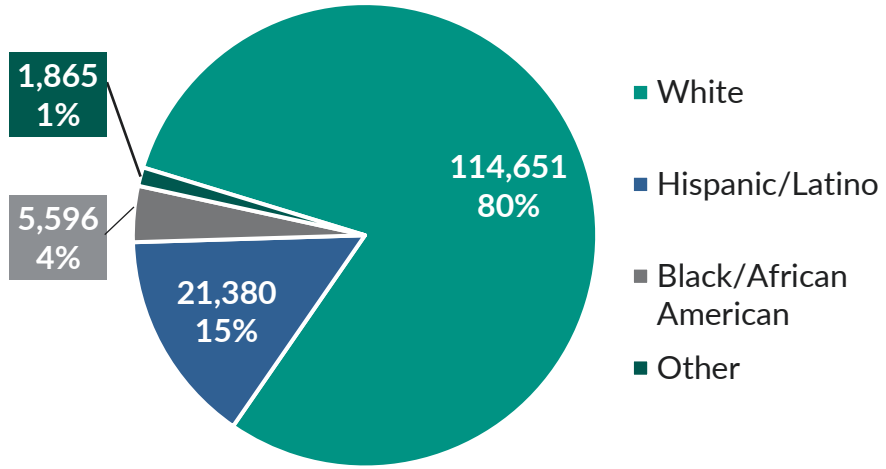
The majority (80%) of Lebanon County is White, followed by Hispanic or Latino (15%). The population of Lebanon County is 50.5% female and 49.5% male.

POPULATION BY SEX

Source: U.S. Census

The population of Lebanon County is almost evenly split between male and female, with a difference of 1%.

POPULATION BY RACE



Source: U.S. Census

- Based on the 2021 Census, 80% of Lebanon County residents are white, 15% are Hispanic or Latino, and 4% are Black.
- There is a rising population of Latinos and Hispanics in Lebanon County, specifically in Lebanon City. Spanish is the 2nd most common spoken language in the county.
- The Hispanic population in Pennsylvania has doubled since 2010, with Reading, a nearby county to Lebanon, having the highest percentage of Spanish speaking residents.

EMPLOYMENT

Lebanon County's workforce participation and unemployment rate is similar to surrounding counties. Notably, Lebanon County has a significantly lower unemployment rate than the Pennsylvania average.

EMPLOYMENT DATA BY COUNTY

	Lebanon		Lancaster		Berks		Dauphin		Pennsylvania	
Civilian Labor Force	74,700		287,800		212,400		148,600		6,492,000	
Employed	72,400	96.9%	279,200	97.0%	204,100	96.1%	143,000	96.2%	6.21M	95.7%
Unemployment	2,300	3.1%	8,600	3.0%	8,300	3.9%	5,600	3.8%	0.28M	4.3%

Source: U.S. Bureau of Labor Statistics; PA Department of Labor & Industry
Note: Employment data is from Jan 2023

INCOME & EARNINGS

Compared to surrounding counties, Lebanon has a lower median household income, but similar total median earnings. However, when considering only individuals that have a high school diploma as their highest level of educational attainment and individuals with some college or an associates degree, Lebanon has higher median earnings than some surrounding counties and the Pennsylvania median.

MEDIAN INCOME & EARNINGS BY COUNTY & EDUCATIONAL ATTAINMENT

	Lebanon	Lancaster	Berks	Dauphin	Pennsylvania
Median Household Income	$66,164	$73,688	$69,272	$66,480	$67,587
Total Median Earnings (25+)	$45,568	$45,220	$46,746	$45,981	$37,800
Less than high school graduate	$35,244	$36,926	$29,461	$25,494	$21,900
High school graduate (includes equivalency)	$38,542	$36,213	$39,738	$37,186	$30,200
Some college or associate's degree	$47,715	$42,423	$45,092	$42,553	$35,500
Bachelor's degree	$57,686	$54,746	$62,536	$56,741	$50,700
Graduate degree	$64,881	$74,942	$74,557	$71,792	$67,300

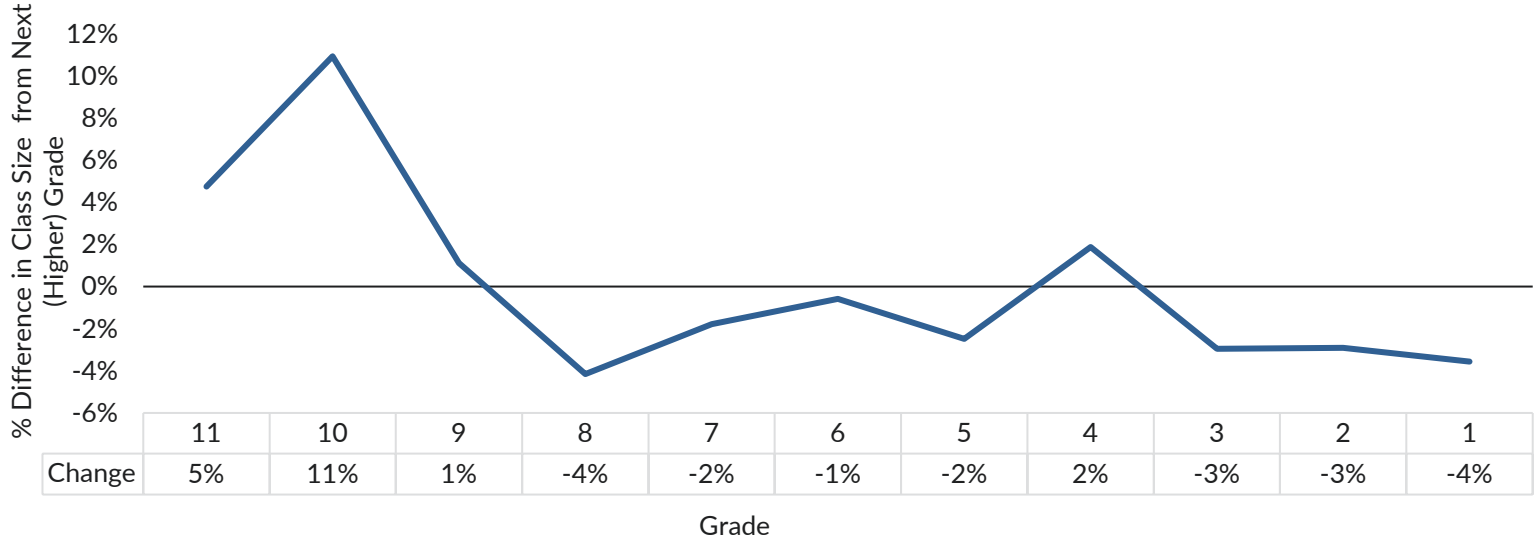
Source: U.S. Census Bureau, 2021 ACS 1-Year Estimates, ACS 5-Year Estimates
Note: 2021 Median Earnings in past 12 months, Population 25+ with earnings

PUBLIC HIGH SCHOOL ENROLLMENT

Approximately 18,000 students will graduate from Lebanon County's public schools between 2021 and 2033. Assuming current enrollment in each grade remains constant, Lebanon County's high school senior class will increase for the next three years before falling for all but one of the remaining eight years.

Grade	1-2	3-6	7-8	9-12	Total
Enrollment	2,809	6,009	3,102	6,094	**18,014**

CHANGE IN PUBLIC SCHOOL ENROLLMENT LEBANON COUNTY, BY GRADE



	11	10	9	8	7	6	5	4	3	2	1
Change	5%	11%	1%	-4%	-2%	-1%	-2%	2%	-3%	-3%	-4%

Source: Pennsylvania Department of Education

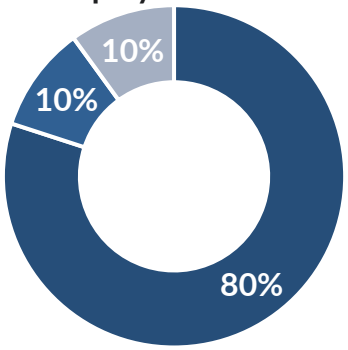
LEBANON COUNTY WORKFORCE POPULATION

The majority of employees and new hires (past 5 years) across all industries currently live in Lebanon County; however, many of them were not born and raised in the county.

- There is a large Spanish speaking population in the workforce. Many employees in the manufacturing and distribution industries in the county are originally from Puerto Rico and were educated and trained there.
- Most employees that live in surroundings counties commute from Berks or Lancaster County.

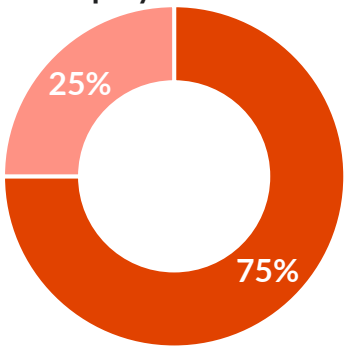
"A lot of employees that now live in the county were not raised there, maybe moved to the area in the last 5 to 10 years. So their education was not here." – P2

Manufacturing Employee Locations



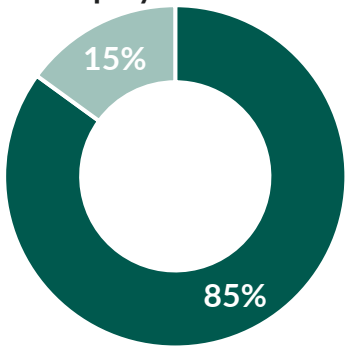
"Not a noticeable difference in employees, but there is some inability to come to work, quality or performance at the site which has to be trained on the job." – P5

Distribution Employee Locations



"People [from Puerto Rico] come here to work, no issues as far as complaints and schedule changes. For employees that are in the county, we have a lot more turnover and attendance issues." – Wilson

Healthcare Employee Locations



"Of nurses that have training vast majority were trained in the county and a small percentage is Lancaster and Burkes. LPNs and maintenance staff are trained at the LCCTC program." – P3

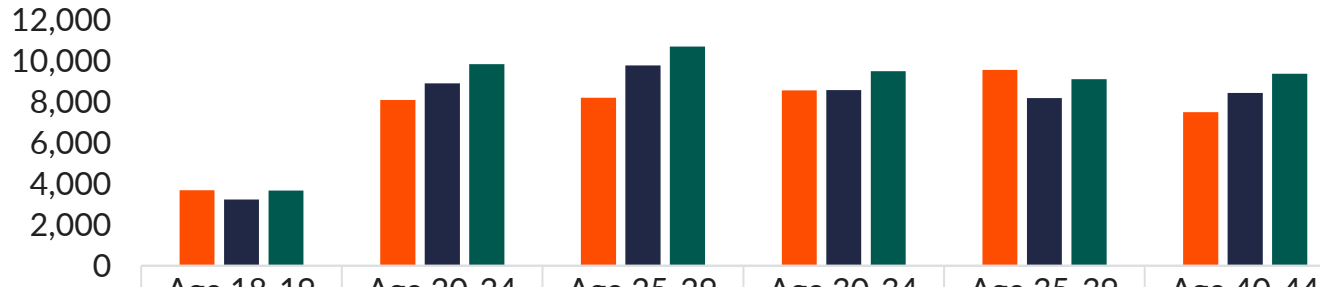
ATC TARGET POPULATION

ATC TARGET POPULATION

POPULATION IN TARGET AGE GROUP

Hanover forecasts Lebanon County's 18-44 year-old population to grow at least 10.6% by 2033. If 18-44 year-olds follows historical net migration trends in Lebanon County, their population will increase to 47,200 (10.6% growth over 2021). If the rate of 18-44 year-olds moving in is twice that of those moving out, the population will grow to 52,300 (22.5% growth over 2021).

LEBANON COUNTY POPULATION BY AGE GROUP, 20-44 FORECAST



	Age 18-19	Age 20-24	Age 25-29	Age 30-34	Age 35-39	Age 40-44	Totals
2021	3,693	8,111	8,217	8,576	9,584	7,522	45,703
2033 Low* Scenario	3,234	8,934	9,798	8,592	8,207	8,465	47,231
2033 High** Scenario	3,682	9,862	10,727	9,521	9,136	9,394	52,323

Source: U.S. Census, Brookings Institution, Hanover Research

*Assumes that 854 of the 1,707 people projected to be added Lebanon County between 2021 and 2033 are within the 18-44 age group. This is based on data from the U.S. Census that shows that Lebanon County added 569 people between 2016 and 2020 and that during that period 18-44 year olds made up just over 50 percent of **gross inward** migration to Lebanon County.

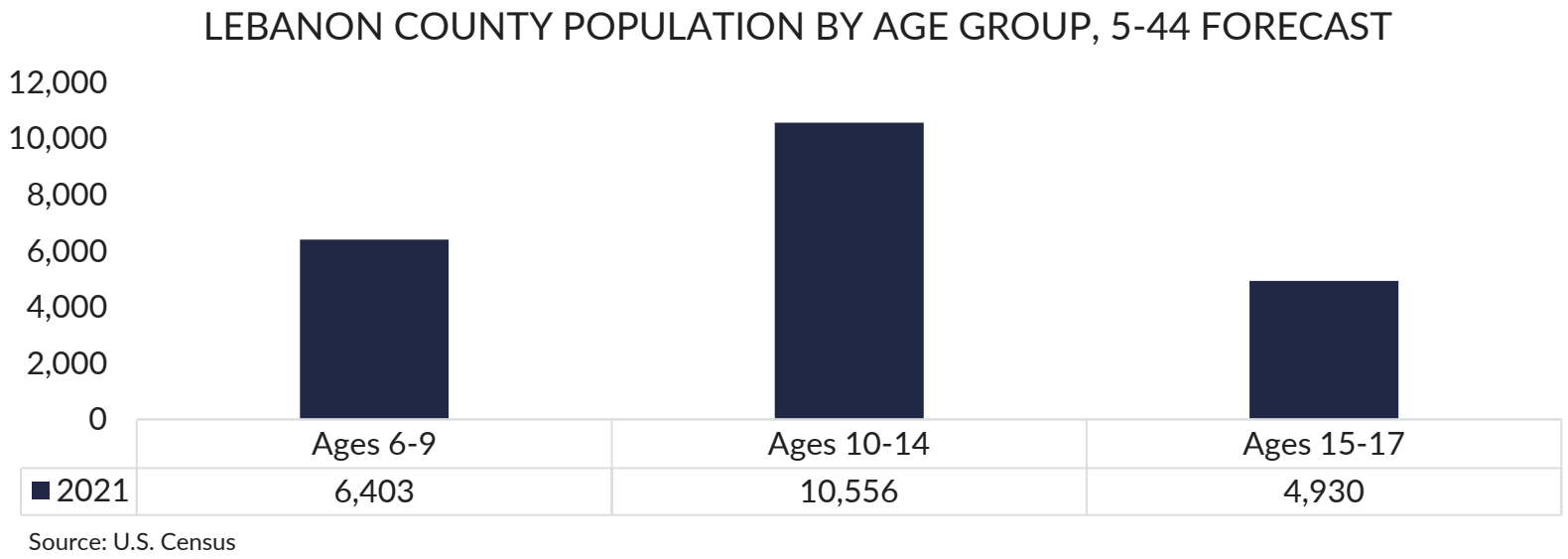
Assumes that the number of 18-44 year-olds entering the county is twice the number of those leaving. **Gross inward migration is projected to total almost 25,000 people over the period, assuming 2016-2020 trends continue. As (roughly) 50 percent of inward migration is 18-44, that means that **gross inward** migration of that age group will total 12,500 people. This implies a **gross outward** migration of 6250 for this age group.

Note: Hanover used this age group as the target population for LVCC's proposed advanced training center, based on consultation with LVCC. Where projected age group buckets did not align with Census buckets, Hanover aligned them by assuming that the proportion of the individual ages within each age group was equal (e.g., if there are 8,111 20-24 year olds, then that are ~2,020 people of each age).

ATC TARGET POPULATION

CURRENT SCHOOL-AGED POPULATION

Lebanon County's 6 to 17 year-old population, all of whom will be in the target population for LVCC's proposed advanced training center in 2033, totals to nearly 22,000.



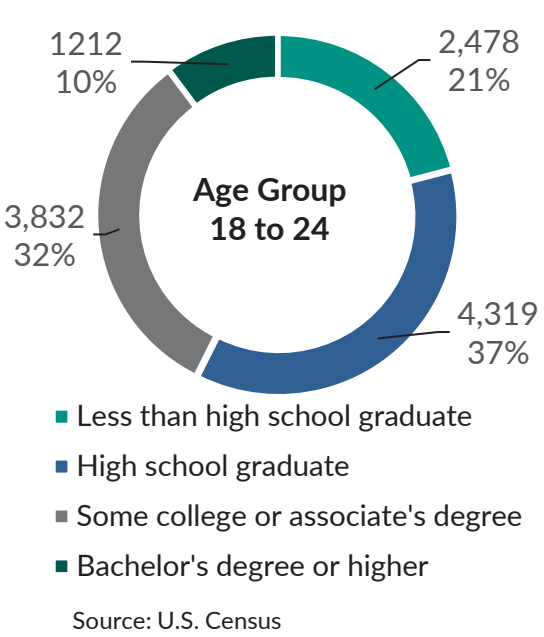
Source: U.S. Census

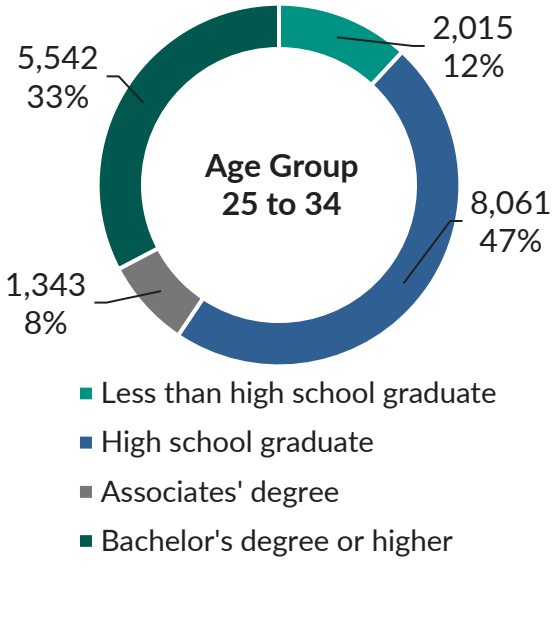
Note: Where projected age group buckets did not align with Census buckets, Hanover aligned them by assuming that the proportion of the individual ages within each age group was equal (e.g., if there are 8,111 20-24 year olds, then that are ~2,020 people of each age).

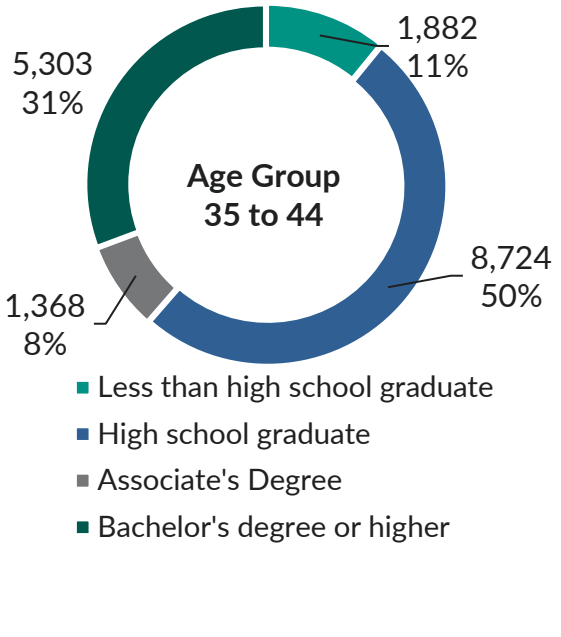
ATC TARGET POPULATION

EDUCATIONAL ATTAINMENT

Hanover estimates around 47% of Lebanon County's 18-44 year-old population has, or will have by the time they reach 25, a maximum educational attainment of a high school degree. Approximately 8% of the same population will have a maximum educational attainment of an associate's degree.







Source: U.S. Census

Notes: (1) High school graduates for age groups 25-34 and 35-44 includes those with some college experience but less than an associates degree. Hanover assumes that 8% of the over 25 population has an associate's degree, based on the 2021 rate in the over 25 year-old age group.
(2) Some college or associate's degree category included for age group 18 to 24 because this age group is still expected to be enrolled in higher education. It is unknown what portion of the 32% will be in the high school graduate or associates' group, although Hanover assumes in future calculations that high school graduate and some college will be 45% and associate's degree will be 8%, based on nationwide trends in educational attainment.
(3) Percentages may not add up to 100 due to rounding

TOTAL TARGET POPULATION, LOW ESTIMATES

Assuming historical migration trends continue, the target population for LVCC's proposed ATC ranges between 23,000 and 29,000, if 42% to 52% of the population has a maximum educational attainment of a high school degree and 7% to 9% has a maximum educational attainment of an associate's degree.

SIZE OF TARGET POPULATION FOR LVCC'S ADVANCED TRAINING CENTER, LOW POPULATION SCENARIO

Scenario	High School, Highest Degree Attained	Associate's Degree, Highest Education Attained	Total Target Population	Net Change in Target Population from 2021
2021	21,480	3,656	25,137	0 (0%)
2033 Low* Scenario	19,837	3,306	23,143	-1,993 (-7.9%)
2033 Mid** Scenario	22,199	3,799	25,977	841 (3.3%)
2033 High*** Scenario	24,560	4,251	28,811	3,675 (14.6%)

Source: U.S. Census, Pew Research, Education Data Initative, Hanover Research

*Assumes that the share of people with the maximum educational attainment of a high school degree is 5% lower than the 2021 estimated figure 47%, and the share of people with the maximum educational attainment of an associate's degree is 1% lower than the 2021 estimated figure of 8%.
**Assumes a maximum educational attainment in both categories that is the same as that in 2021.
*** Assumes a maximum educational attainment in both categories that is the inverse of the "Low" scenario (i.e., both figures are higher by that percentage, rather than lower)
Note:

TOTAL TARGET POPULATION, HIGH ESTIMATES

Assuming an increase in net migration, the target population for LVCC's proposed advanced training center will range from 25,500 to 32,000, if 42% to 52% of the population has a maximum educational attainment of a high school degree and 7% to 9% a maximum educational attainment of an associate's degree.

SIZE OF TARGET POPULATION FOR LVCC'S ADVANCED TRAINING CENTER, HIGH POPULATION SCENARIO

Scenario	High School, Highest Degree Attained	Associate's Degree, Highest Education Attained	Total Target Population	Net Change in Target Population from 2021
2021	21,480	3,656	25,137	0 (0%)
2033 Low* Scenario	21,976	3,663	25,638	502 (2.0%)
2033 Mid** Scenario	24,592	4,186	28,778	3,641 (14.5%)
2033 High*** Scenario	27,208	4,709	31,917	6,780 (27.0%)

Source: U.S. Census, Pew Research, Education Data Initative, Hanover Research

*Assumes that the share of people with the maximum educational attainment of a high school degree is 5% lower than the 2021 estimated figure 47%, and the share of people with the maximum educational attainment of an associate's degree is 1% lower than the 2021 estimated figure of 8%.
**Assumes a maximum educational attainment in both categories that is the same as that in 2021.
*** Assumes a maximum educational attainment in both categories that is the inverse of the "Low" scenario (i.e., both figures are higher by that percentage, rather than lower)
Note:

LEBANON COUNTY
TOP OCCUPATIONS & SKILLS

TOP INDUSTRIES & OCCUPATIONS

TOP INDUSTRIES & OCCUPATIONS

MAJOR EMPLOYERS & INDUSTRIES

Major employers in Lebanon County are in the healthcare, manufacturing, and food processing industries. The industry with the highest level of employment is transportation and material moving occupations.

Major Employers
Farmers Pride Inc. / Bell & Evans – Poultry Processing
The Good Samaritan Hospital – Healthcare
Bayer Consumer Care – Pharmaceuticals
TE Connectivity Corporation – Electronics
WellSpan Philhaven – Healthcare
Weaber Inc. – Manufacturing
Supreme Mid-Atlantic Corporation – Manufacturing-Truck Bodies
Murry's Inc. – Food Processing
BlueScope Buildings NA – Manufacturing
ASK Foods, Inc. – Food Processing

Major Industries	
Industry	**Employment**
Transportation and Material Moving Occupations	6,790
Office and Administrative Support Occupations	5,890
Production Occupations	5,650
Sales and Related Occupations	4,320
Food Preparation and Serving Related Occupations	3,870

TARGET TECHNICAL OCCUPATIONS

The top technical occupations in Lebanon County are categorized by transportation and material moving, healthcare, maintenance and repair, and construction and extraction.

Occupation	Total Employment	Mean Hourly Wage	Mean Annual Wage	Active Job Posts
Laborers and Freight, Stock, and Material Movers, Hand	1,530	16.03	33,340	351
Heavy and Tractor-Trailer Truck Drivers	990	21.87	45,500	565
Home Health and Personal Care Aides	880	13.29	27,640	
Maintenance and Repair Workers, General	720	21.13	43,960	420
Miscellaneous Assemblers and Fabricators	700	16.19	33,680	
Nursing Assistants	690	16.22	33,750	384
Industrial Truck and Tractor Operators	630	17.92	37,270	
Light Truck Drivers	610			
Licensed Practical and Vocational Nurses	520	24.43	50,820	460
Electricians	260	31.11	64,720	
First-Line Supervisors of Mechanics, Installers, and Repairers	250	34.23	71,190	

- Hanover selected top occupations based on total employment and wage. The table also highlights currently active job posts in each occupation.

TOP OCCUPATIONS DEMAND

Occupations by current job postings in Lebanon County and surrounding areas support BLS data and align with the selected top technical occupations in Lebanon County.

Top Occupations in Lebanon County (& Surrounding Areas)	
Occupation	Job Posts
Registered Nurses	1,662
Stockers and Order Fillers	1,166
First-Line Supervisors of Retail Sales Workers	740
Medical and Health Services Managers	710
Retail Salespersons	617
Heavy and Tractor-Trailer Truck Drivers	565
Medical Secretaries and Administrative Assistants	518
Fast Food and Counter Workers	464
Licensed Practical and Licensed Vocational Nurses	460
First-Line Supervisors of Production and Operating Workers	452
Security Guards	434
Maintenance and Repair Workers, General	420
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	416
Nursing Assistants	384
Laborers and Freight, Stock, and Material Movers, Hand	351

Top Occupations in Lebanon County		
Occupation	Total/Unique Posts	Median Posting Duration
Home Health and Personal Care Aides	363/179	21 days
Registered Nurse	83/50	21 days
Nursing Assistant	50/39	19 days
Retail Salespersons	19/18	15 days
Industrial Truck and Tractor Operators	21/17	18 days
Laborers and Freight, Stock, and Material Movers, Hand	19/17	15 days
Stockers and Order Fillers	14/14	13 days
Licensed Practical and Vocational Nurses	23/13	16 days
First-Line Supervisors of Retail Sales Workers	14/13	16 days
Industrial Engineering Technologists and Technicians	17/11	15 days

TOP ROLES & SKILLS

WORK ACTIVITIES & TECHNOLOGY SKILLS

The following work activities and technology skills from O*NET are associated with the top occupations in Lebanon County. These can be used to determine what courses and programs are in demand by local employers.

Work Activities

- Control/Operate vehicles, machines, and equipment
- Inspect equipment
- Repair and maintenance of equipment or technology
- Evaluate quality of materials or products
- Monitor processes, materials, or surroundings
- Document/record information
- Analyze data
- Evaluate information to determine compliance with standards
- Assemble electrical or electronic equipment
- Packaging
- Install electrical components, equipment, or systems
- Create construction or installation diagrams
- Medical care
- Direct operational activities
- Consulting

Technology Skills

- Cloud-based data access and sharing
- Analytical or scientific software
- Computer aided design
- Document management
- Industrial control
- Process mapping and design
- Facilities and inventory management
- Accounting
- Data base user interface and query
- ERP software
- Medical software
- Route Navigation
- Communications
- Materials requirements planning logistics and supply chain

CERTIFICATIONS & PROGRAMS

Data on occupations from O*NET listed 17 certifications and 28 programs that are relevant to the work activities in the top occupations in Lebanon County. These are potential courses that an additional training center could offer.

Certifications

- National Association for Home Care and Hospice
- Medical Assisting Certification
- Fabricators & Manufacturers Association (FMA)
- Association Connecting Electronics Industries, IPC
- Hospital Corpsman
- Commercial Driver's License (CDL)
- Lift Driver
- Train-The-Trainer Forklift Operator
- Telescopic Boom Cranes
- Licensed Practical Nurse
- (Residential) Electrical Inspector
- Electrical Plans Examiner
- Certified Service / Equipment / Technology Manager
- Certified Ventilation Inspector
- Wireless Systems Installer Engineer
- Certified Maintenance and Reliability Professional

Programs

- **Nursing:** Nursing Administration, Nursing Research, Clinical Nursing, Practical or Vocational Nursing, Nursing Assistants
- **Healthcare:** Health Services Administration, Health Sciences, Health Systems Management
- **Driving:** Truck and Bus Driver/Commercial Vehicle Operator and Instructor
- **Maintenance & Mechanics:** building / property maintenance, mechanical drawing, electricity, woodworking, blueprint reading, mathematics, industrial arts, electrical, plumbing, HVAC, roofing, vehicle maintenance and repair technology /technician, operations management and supervision, electrical and power transmission installation/installer
- **Other:** public safety and security, production and processing, math

CERTIFICATIONS & SKILLS BY JOB POSTING

Data from JobsEQ on job postings align with the certifications and skills that are required for the top technical occupations. These are related to healthcare, truck driving, and labor work.

Certifications	No. of Posts
Certified Nursing Assistant	41
Basic Life Support	21
Certified Loss Control Specialist	18
Licensed Practical Nurse	17
Security Clearance	12
CDL Class A License	9
Comercial Driver's License	9
Nurse Practioner	9
Licensed Vocational Nurse	8
Master of Business Administration	8

- Based on active job postings in Lebanon County and surrounding areas, the most common required certifications are related to healthcare work. Some jobs require specific driver's licenses.
- The most common skills are related to computer and technology.

Skills	No. of Posts
IT Support	3,267
Ability to Lift 41-50 lbs.	2,138
Microsoft Excel	1,659
Microsoft Office	1,625
Ability to Lift 51-100 lbs.	1,412
Manufacturing	813
Personal Computers (PC)	725
SAP	701
Retail Sales	639
Microsoft PowerPoint	636
Forklifts	625
Microsoft Outlook	620
Ability to Lift 21-30 lbs.	608
Ability to Lift 31-40 lbs.	607
Microsoft Word	563
English	560
Cash Handling (Cashier)	518
Mathematics	503
JavaScript	482
Medical Terminology	477

COMMUNITY PERCEPTIONS: TOP OCCUPATIONS AND SKILLS

OVERVIEW

Most In-Demand Roles & Skills by Industry

Manufacturing	Healthcare	Retail/Distribution
• Automation Controls & Systems • Electrical System Maintenance & Repair • Math • Testing of Materials • Welding • Forklift Operation • Crane Operation	• LPN • Nursing Assistant • Medical Assistant • Other Trades: Food Service, Maintenance, Hospitality	• Mechatronics • Machine Operation, Repair, & Maintenance • Computer Systems • Distribution & Processing

"With the world becoming much more digital, especially in manufacturing, whatever training to bring up the [advanced manufacturing] skill set is useful." – P5

"I don't think healthcare is going anywhere. So I think there will be always be a need." – P8

"I think technical skills are gonna continue to be more important in high level manufacturing occupations because the technology industry computerization, artificial intelligence, it's not gonna slow up." – P3

"Anytime we hire somebody to operate a machine, we would like for them to go get the mechatronics or mechanical electrical training." – Wilson

MANUFACTURING (1/2)

ROLES	SKILLS
Plant Maintenance Technician	• Control system diagnosis & repair • Electrical wiring up to 480-volt • Electrical system diagnosis • Program controllers (e.g., HDMI)
Diesel Mechanics	• Inspection licenses • Trailer & PIT repair • Powered industrial truck or pallet jack operation
Garage Mechanics	• Electrical Skills
Filling & Packaging Lines	• Simple mathematical skills • Basic testing of materials • Quality inspections • Interactions with HMI on Equipment • Understanding of basic line controls
Batch Makers	• Read & follow a formula • Interacting with batch making systems & automation • Basic math & testing skills
Other Maintenance & Mechanics	• Welding, wrench turners & riggers • Refrigeration • CNC programming • PLC programming • Automation controls and systems • Work with hoses, valves, clamps • Reading manuals & setting up controls
Distribution Roles	• Forklift operation • Crane operation

"For plant maintenance technicians, the stuff that is really lacking is high voltage, electrical training and control system training … being able to program controllers." – Strong, GAF

"Garage mechanics are in demand here, because the supply chain and logistics is very, very active and growing." – P2

"We have struggled historically with batch makers because it's a higher-level thought process. In a year, they may touch 200 or 300 batches that require different steps, tasks, and processes. They also manage a portfolio of batches at a time. So, there's a lot of multitasking." – P5

MANUFACTURING (2/2)

Employers have historically faced difficulties in hiring for mechanic roles, and this challenge is growing as companies enhance plant technology and automation, which requires more advanced electronic skills.

"There's definitely a shift to more electronics and we have more difficulty hiring for these roles. We expect that to continue to be a key need because of advancements in our technology." – P2

"We plan to introduce robotics and automate the facility in the next 15 to 20 years. So a much higher focus on interactions with AGVs, AMRs, cobots, and a higher-level understanding of automation and controls." - P5

"On the maintenance side, it really is the a lack of skill set [that's] gonna become a larger barrier. My plant is pretty modernized with a bunch of control systems … Now I really need guys that are multifunctional, They can turn a wrench and also diagnose and work on electrical stuff." – Strong

On the distribution side, there are fewer hiring challenges due to the high supply of workers for these positions. However, some employers have expressed a desire for more advanced forklift and crane operation training.

"We've rarely had to train someone in shipping. There's a lot of warehousing and distribution locations here. So there's always people floating around." – P5

"There's a lot of warehouses in the area, but we could get some more advanced forklift training … what we're really struggling to fill right now is crane operators and big heavy overhead crane operators. " – Morrow

"One bit of training that may be helpful is powered industrial truck training. Forklift training. Some of my entry level positions involve quite a bit of forklift." – Strong

HEALTHCARE

ROLES	SKILLS
Nursing	• LPNs • Nursing assistants
Outpatient Roles	• Medical Assistance • Patient service representative • Scheduling • Registration • Imaging
Food Service	• Cooks
Maintenance	• HVAC • Plumbing • Carpentry • Electrical skills
Hospitality	• House keeping

The main roles at healthcare companies in Lebanon are LPNs, nursing assistants, and medical assistants. Employers believe that the high demand for medical staff, due to shortages from COVID and the aging baby boomer population, will likely remain consistent.

"Everyone knew there was going to be a nursing shortage even prior to COVID. Probably the biggest factor is the aging of the baby boom population, and then the shortage was worsened by COVID. Nurses retired early, reduced hours, or simply quit because of the extra stressors." – P3

"We're always looking for nurses in Lebanon County. I can't say we're struggling specifically at that site for LPN's or nurses. But in general, there's always a great need for more nurses. There's just not enough of them graduating from programs." – P8

Employers also note the need for other trade professions in healthcare facilities such as food service, maintenance, hospitality.

"I think trades will continue to be needed and hospitality I think will still continue because the industry is booming nationwide." – P3

"We need more cooks, there's not enough culinary training. We need different levels of cooks, some lower and intermediate." – P3

"The most challenging role to hire on the outpatient non-nursing side would be medical assistants. There's just a big need for that role and the training that goes along with it." – P8

"For a few years it has been difficult to find enough people and we're all fighting for a small group trained in maintenance." – P3

EMPLOYER PERCEPTIONS: TOP OCCUPATIONS & SKILLS

RETAIL/DISTRIBUTION

ROLES	SKILLS
Maintenance	• Mechatronics • Machine operation • Repair & maintain machines • Computer systems • Language skills
Food Quality	• Food distribution & processing • Food safety knowledge

Since many employees are native Spanish speakers, providing ESL training would be advantageous.

"I do think more of the language skills would be able to provide individuals opportunities to learn English, to be able to simply obtain employment." – Thompson

There is currently no shortage of distribution skills among employers.

"We're distribution heavy. That general warehouse worker, there's not a shortage on skills in that area." – Thompson

Mechatronics and general maintenance roles pose the greatest challenge in hiring for the retail/distribution industry. Job candidates often lack the skillsets for these positions.

"It is most challenging to hire for maintenance roles. There is a lack of formal education. For maintenance mechanics, you think of people turning wrenches. While that is a piece of it, you also have a computer system telling a robot to do something. There needs to be training for that, so I certainly think that's where many of the jobs are going and there's a shortage of trained talent in that area." –Thompson

"I think we need more mechanical, just general maintenance within the plant. Anybody able to repair the machinery we're bringing in and the people with the mechatronics background to run the machines. We also need the mechanics to be able to fix and maintain them as well. These skills will become more important as we automate." – Wilson

LEBANON COUNTY TRAINING CENTERS

LEBANON COUNTY CAREER AND TECHNOLOGY CENTER

LEBANON COUNTY CAREER AND TECHNOLOGY CENTER

PROGRAM DEVELOPMENT

LCCTC program development integrates detailed analysis of program selection and logistics planning as well as community support. LCCTC is currently conducting a feasibility study to expand programs, specifically welding and automotive, and increase instructional time.

At present, LCCTC is actively engaged in a comprehensive feasibility study. The objective of this study is to pinpoint viable avenues for expansion, which may include the construction of an additional structure or a new wing.

This initiative is driven by a surge in enrollment and the consequent need to accommodate a broader range of programs. Specifically, LCCTC is planning to incorporate more welding and automotive courses, as well as other programs that the study identifies as being in high demand.

Program Selection

- Is this going to have a benefit to the community? To the school?
- Are students going to apply for this program?
- What are programs being offered at other schools? How are they doing?

"We are currently looking at all the programming to see how we can stay up to date within our programs. We're looking at another welding program, vet assistant, aviation, cyber security, the new teacher SIP, and surgical tech." – DiMarzio

Logistics Planning

- Where could we house them?
- What equipment do we need to get?
- How much money is this going to cost?

"We really rely on those industry experts to keep us abreast of the changes in the industry." – DiMarzio

"It is a very long process, [that] doesn't just take one summer. There is a five-step process with the state."– DiMarzio

Community Input

- Occupational Advisory Council or committees with industry representatives meet twice a year

LEBANON COUNTY CAREER AND TECHNOLOGY CENTER

PROGRAMS

LCCTC program development integrates detailed analysis of program selection and logistics planning as well as community support. LCCTC is currently conducting a feasibility study to expand programs, specifically welding and automotive, and increase instructional time.

Relevant Programs	Degree/ Certification
Auto Body	-
Automotive	NOCTI, AYES, S/P2, Certified Emissions Inspector, Certified Safety Inspector
Diesel Truck	NOCTI, Certified Safety Inspector
Welding	NOCTI, Level I – Entry Welder
Precision Machining	NOCTI, NIMS
Electromechanical	NOCTI, OSHA 10 Hour Construction Industry
Medical Assistant	NOCTI, First Aid, CPR, AED, Certified Medical Assistant, Blood-Borne and Airborne Pathogens
Health Careers	NOCTI, First Aid, CPR, Nurse Aid Registry, AED, Blood-Borne and Airborne Pathogens
Electrical	NOCTI, RCA National Registry, PA Builders Association Skills, AED, CPR, First Aid, OSHA
Plumbing/HVAC	NOCTI, RCA National Registry, PA Builders Association Skills, EPA 608, OSHA

"The most in demand programs are welding and automotive. Welding is definitely underserved. There's a large amount of students in those programs on the wait list, about 90 to 110 students." – DiMarzio

"Vet assistant, is another one that's underserved. Landscaping is one that is difficult to find a lot of students, landscaping and horticulture. Those struggle sometimes, and I know other schools that struggle as well." – DiMarzio

LEBANON COUNTY CAREER AND TECHNOLOGY CENTER

CURRENT ENROLLMENT AND CAPACITY

LCCTC can accommodate 1,200 high school students annually. It provides 14 pertinent courses and 3 certification programs. DiMarzio reports that enrollment is increasing, with many programs reaching full capacity or over-enrollment for the current academic year.

LCCTC offers a variety of programs to high school students in healthcare, manufacturing, architecture, and transportation. For adults, It provides two certification programs: forklift training and PA emissions and safety inspection certifications.

Program	Total Capacity
Medical Assisting	160
Health Careers	80
Electromechanical	72
Precision Machining	72
Welding	72
Auto Body	72
Auto Technology	72
Diesel Truck Tech	72
Forklift Training	120
Practical Nursing	*200*
Carpentry & Residential Construction	*72*
Electrical Technology	*72*
Plumbing / HVAC	*72*
PA Emissions and Safety Inspection	*80*
Capacity per Year	912 / *1,408*

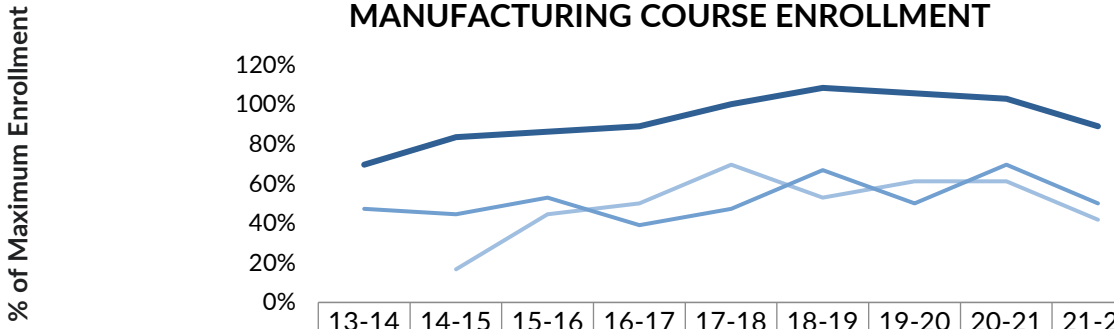
Note: Numbers outlined in orange are estimations. Highlighted rows indicate certification programs for adults.

*"**Enrollment is really going up.** This year we had an increase of about 150 students within the school. So right now we have about 700 students. Part of that has to do with the fact that some of our full day programs have gone to half day programs, which adds double the amount of students. But **a lot of our programs are full or overenrolled**. When it comes to the sheer number of students, it has definitely increased over time." -DiMarzio*

ENROLLMENT TRENDS: MANUFACTURING

Course enrollment at LCCTC over the past ten years has not reached max capacity, except in welding. Employers in the county have also expressed concerns with the low number of job candidates from LCCTC.

MANUFACTURING COURSE ENROLLMENT



	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	Medians
Electromechanical		17%	44%	50%	69%	53%	61%	61%	42%	51%
Welding	69%	83%	86%	89%	100%	108%	106%	103%	89%	89%
Precision Machining	47%	44%	53%	39%	47%	67%	50%	69%	50%	50%

Manufacturing course enrollment, except for welding, is much lower compared to other programs with median enrollment between 50% and 55% average, showing a flat to slightly increasing enrollment trend.

Welding has a median enrollment of 89%, and enrollment exceeded course capacity for four of the years it was offered.

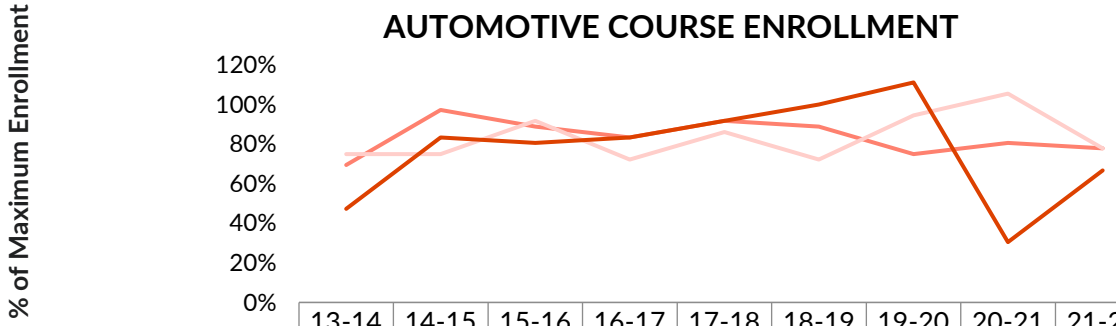
"The percentage of training from within Lebanon County is quite low, so we don't see a lot of education kind of pipelines." – P2

"We have the program electromechanical. Schools I used to be at called it electronic engineering technology, which was more of repairing TVZ and stuff like that, whereas electromechanical is more modern and deals with engineering and really robust topics such as aviation." – DiMarzio

"We try to get their welders because we know [LCCTC] has a Weld program. They cover many different Weld techniques. While we only do MIG welding, so they might only get a semester or a couple weeks on the welding that we need. I think it might be a bit too broad." – Morrow

LCCTC ENROLLMENT TRENDS: AUTOMOTIVE

Course enrollment at LCCTC over the past ten years has not reached max capacity, except in welding. Employers in the county have also expressed concerns with the low number of job candidates from LCCTC.



	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	Medians
Auto Body	69%	97%	89%	83%	92%	89%	75%	81%	78%	83%
Auto Technology	75%	75%	92%	72%	86%	72%	94%	106%	78%	78%
Diesel Truck Tech	47%	83%	81%	83%	92%	100%	111%	31%	67%	83%

- Transportation course enrollment is lower than health science with median enrollment in the 75-85% range, showing a flat enrollment trend.

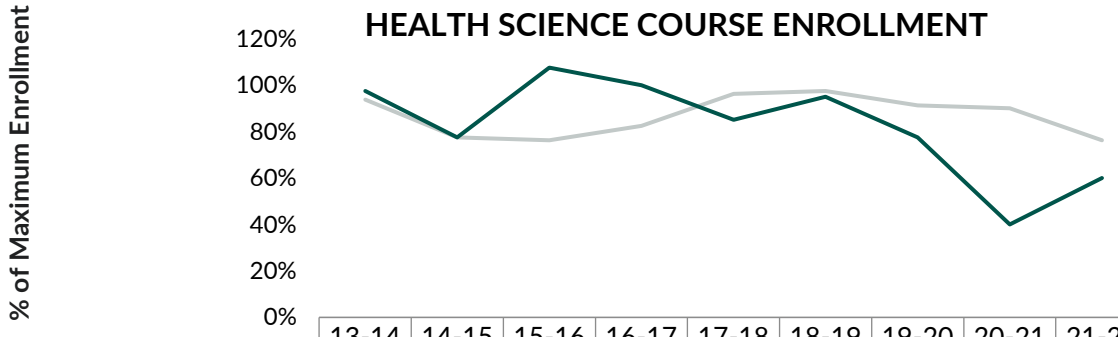
"Automotive is definitely a big one, which we are looking at adding another program." – DiMarzio

"For garage mechanics, there's a good foundation of basic skills. The challenge is applying that if they haven't been in a work environment like this or haven't worked with our specific equipment, they still have a learning curve." – P2

LEBANON COUNTY CAREER AND TECHNOLOGY CENTER

ENROLLMENT TRENDS: HEALTH

Course enrollment at LCCTC over the past ten years has not reached max capacity, except in welding. Employers in the county have also expressed concerns with the low number of job candidates from LCCTC.



	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	Medians
Medical Assisting	94%	78%	76%	83%	96%	98%	91%	90%	76%	90%
Health Occupations	98%	78%	108%	100%	85%	95%	78%	40%	60%	85%

Health Science course enrollment remains relatively high with median enrollment in the 80-90% range, showing a flat-to-downward enrollment trend.

"Obviously, there's a need for nurses, we do have four programs for health, career and medical assistants. So those are always kind of packed and there's always students willing to go into those." – DiMarzio

"There are simply not enough coming out of our schools is my understanding, and enrollments at our local technical training schools are actually down the last couple years since COVID. It's down pretty drastically." – P3

"The county has some programs. I know LCCTC does produce LPNs and it has a pretty good one for MAs. But in general, there's not enough programs and students that are graduating."– P8

LEBANON COUNTY CAREER AND TECHNOLOGY CENTER

JOB PLACEMENT & PARTNERSHIPS

Students in precision machining, welding, electromechanical, diesel, healthcare, and maintenance programs at LCCTC have achieved high job placement rates. LCCTC collaborates with local employers to enhance students' real-world experience. However, it seeks further investment, particularly in equipment, from businesses.

Job Placement

- The Lebanon County CTC mission is to provide high school and adult students with skills and knowledge to obtain employment and advance their careers. It offers apprenticeships, internships, and a career aptitude assessment, CareerScope.
- Programs with the strongest job placement include precision machining, welding, electromechanical diesel, masonry, all healthcare programs, plumbing, carpentry, and HVAC.

"I don't think welding, precision metal machining, or the medical field are going to drop off anytime soon. I don't see plumbing, carpentry, HVAC going away. Everything's kind of cyclical. It depends on the economy and where the focus is. For now, all the programs we have are very needed in the community." - DiMarzio

Academic Partnerships

Students in the precision machining program have been manufacturing parts for NASA through HUNCH

UPMC and other medical centers offer clinicals starting in January for LCCTC students in the medical program.

"We have not had challenges with job placement. Our interaction with local employers is fantastic. Local employers know that the CTCs can be a pipeline for them. Teachers always reach out to see if there's any projects needed or job openings. Administration reaches out to local community business owners and members to get feedback on a yearly basis." – DiMarzio

Future Needs: LCCTC would like to see more financial contributions, particularly in the form of equipment donations, which significantly enhance its ability to prepare students for industry roles and improve programs. The quality of classroom equipment is a key factor in this process.

HARRISBURG AREA COMMUNITY COLLEGE

HARRISBURG AREA COMMUNITY COLLEGE

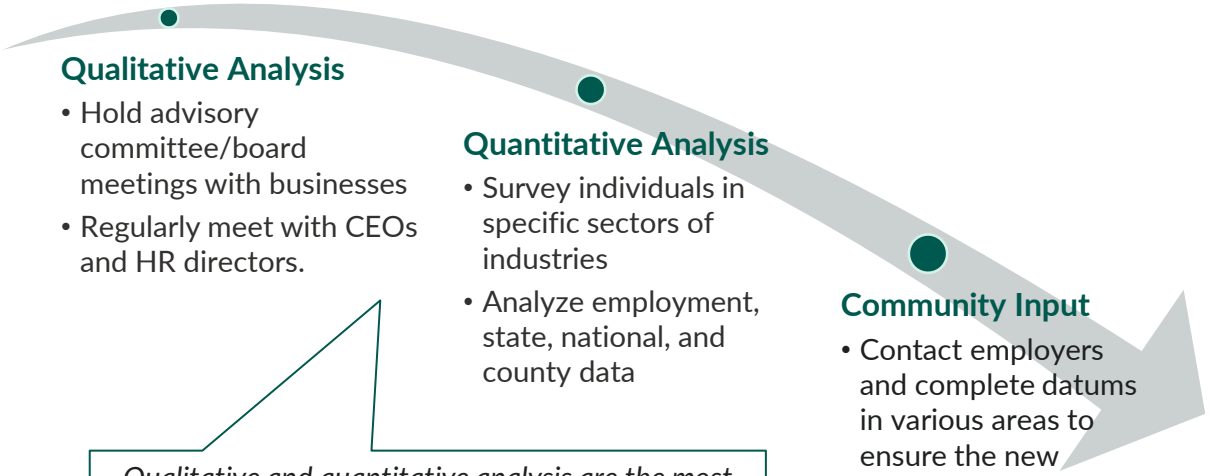
PROGRAM DEVELOPMENT

HACC's program development incorporates both qualitative and quantitative analysis of industry needs, along with direct community feedback. Based on recent yet inconsistent interactions with businesses in Lebanon County, HACC does not perceive a significant need to introduce additional programs.

At present, HACC has no intentions to expand its course offerings at the Lebanon campus.

However, the institution remains open to adaptation, ready to introduce additional courses should local employers express a significant need.

It's important to note that HACC's engagement with the community has been somewhat sporadic, focusing on specific sectors over the past couple of years. Unfortunately, these efforts have not generated a critical mass large enough to warrant the introduction of new programs.



Qualitative and quantitative analysis are the most important to determine what programs we need to really focus our energy and money on developing and at this time in Lebanon, our Lebanon campus, there are none." – Ski

"We work with employers, but there's not a huge request for any one area. We provide customized training to the employers, but there's not enough employers in the area to offer certain courses. We do leadership training at one place, welding at another. So, it's all customized training on site of the company." -Ski

HARRISBURG AREA COMMUNITY COLLEGE

PROGRAMS

At the Lebanon Campus, HACC provides a Certified Nursing Assistant (CNA) and Phlebotomy Technician Program. Across all its campuses, the most sought-after courses are in welding, robotics, mechatronics, and health professions.

Relevant Programs	Degree/ Certification
Nurse Aide*	Certificate
Phlebotomy*	Technician Certification
Practical Nursing	Certificate
Nursing Home Administrator	Certificate
Healthcare Management	Associate in Applied Science
Medical assistant	CCMA certification
Welding	Certificate
Mechanical Engineering	Associate in Science, mechanical technology certificate
Electrical Technology	Associate in Applied Science, Certificate
Mechatronics	Associate in Applied Science
Precision Machining & CNC	Certificate
HVAC/R	Associate in Applied Science, Certificate

All health care health professions are in demand, starting with nursing. We have the largest nursing program in the state of Pennsylvania. We have 1700 nursing students followed by Serge Tech, respiratory therapy, dental hygiene, etcetera. – Ski

Across all campuses, welding is far and away the number one vocational education training program that we offer. And then second is robotics. Third is mechatronics. - Ski

Plumbing and woodworking has been decreasing. I think many employers are doing their own training to provide the skill sets needed. They don't need to go through a registered apprenticeship program or college because they're not looking for degrees, they are looking for certificates, and they want those certificates to be quick. – Ski

*courses offered at Lebanon campus.

HACC RELEVANT OFFERINGS

HACC offers limited technical training opportunities at the Lebanon Campus, with Phlebotomy being the sole training course. This program can accommodate a maximum of 28 students annually.

- Part of HACC's workforce development (WFD) class is phlebotomy training, which has been offered in Lebanon County since at least 2017. WFD runs two courses per year with 8 to 14 students (28 max students per year). HACC offers other courses relevant to nursing and healthcare such as anatomy and physiology I and II, medical terminology, and allied health.

Course	Semester	No. Classes	Class Size	Seats Remaining
Anatomy and Physiology I	Fall 2023	2	36	
Anatomy and Physiology II	Fall 2023	2	60	
Phlebotomy Technician	7/22-6/23	2	28	6
Anatomy and Physiology I	Summer 2023	1	24	
Anatomy and Physiology II	Summer 2023	1	24	
Anatomy and Physiology I	Spring 2023	2	42	10
Anatomy and Physiology II	Spring 2023	2	54	17
Introduction to Allied Health	Fall 2022	2	50	37
Anatomy and Physiology I	Fall 2022	2	36	6
Anatomy and Physiology II	Fall 2022	2	60	2
Anatomy and Physiology I	Summer 2022	1	24	4
Anatomy and Physiology II	Summer 2022	1	24	5
Medical Terminology for Health Careers	Spring 2022	1	35	34
Anatomy and Physiology I	Spring 2022	2	36	3
Anatomy and Physiology II	Spring 2022	2	48	6

"We offer no career technical programs at Lebanon. Well, we offer CNA. there's 330 students on the Lebanon campus. We only have a biology lab." – Ski

HARRISBURG AREA COMMUNITY COLLEGE

JOB PLACEMENT & PARTNERSHIPS

HACC boasts a robust job placement success rate, particularly in healthcare, welding, mechatronics, and IT. The institution collaborates with local businesses, which either donate equipment or offer internships to students. This ongoing investment from local businesses is crucial for HACC's continued success.

Job Placement

- In 2021, HACC graduates exceeded average employment rates with an 81% job placement success rate.
- HACC's Career Services offers students assistance in exploring career options, locating internships and experiential learning, preparing resumes and interviews, and networking with employers.
- The strongest job placement has been in healthcare programs, welding, mechatronics, and IT. The demand for these jobs is expected to increase.

We don't really have any problems in job placement because most of our students are already working. 70-80% of our students are part time and those that do use our internship or job placement are usually placed. We're not seeing a problem there. – Ski

Everyone in the health care with the hospitals, nursing homes, rehab centers has been great. They're investment in us has been phenomenal. - Ski

Academic Partnerships

TE Connectivity provided 3D printers to HACC's hospitals.

Its labs were fitted by the area's Dental Hygiene Association

Several IT students completed internships at Rite Aid in their IT department.

HACC acquired one-of-a-kind simulators for commercial driving in partnership with several trucking firms.

Future Needs: The main challenge lies in the lack of sustained engagement from businesses in their collaborative efforts with educators. While businesses often show initial interest, they tend to disengage after a few meetings. To rectify this situation, we encourage businesses to increase their investment, and consider integrating students or employees into their operations.

"We could offer the training to those individuals and then businesses need to think about renting, leasing, donating, buying state of the art equipment or chip in. I think businesses need to put a little more skin in the game." – Ski

EMPLOYER PERCEPTIONS: SKILLS GAPS & TRAINING NEEDS

OVERVIEW

Employers consider it crucial to have more training opportunities available within the county. They face significant hiring challenges due to the lack of required skillsets in the workforce and limited job candidates graduating from programs. Furthermore, there is intense competition with surrounding counties that offer training programs.

Employers also highlighted other factors to consider in the development of a training center, including scheduling, affordability, and awareness. Training centers must be flexible enough to accommodate different schedules and financial situations. Additionally, employers noted a general lack of awareness and knowledge about job opportunities in the county.

"In Berks County there are a lot more welding jobs, so he had a lot of skills coming here. It was easily transferable for us, but for our entry level positions, I would say no and most of the ones we've hired recently have been entry level … We have two new hires that started on Monday that were trained at the [LCCTC]. They just graduated high school and we did hire them out of there." - Morrow

"We have the resources to staff and house training. But I think we would need both avenues, because these are difficult roles to fill. So, if there was a resource that we could engage with one week a month, they're dedicated full time to going off site and getting that training." – P2

"Certainly, I think there is a need for training. We have to outsource it." – Thompson

"Is there enough training areas? I don't think so. For example, in nursing we have a very good local vo-tech school, but I'm not really sure if there's enough availability there in the trades training." – P3

TRAINING NEEDS

Employers require training in machine operation, electronics, computer systems, and nursing. They also emphasize the importance of incorporating hands-on experience through clinical practice or apprenticeships.

"We have a lot of conveying systems and automated systems, so the equipment side of automation and technology is key." – P2

Mechanical Aptitude
- Interacting with and operating a machine
- Using an HDMI to make adjustments and going through menu paths
- System operation

"The underdeveloped skills are electrical and electronics. Even if someone comes out of school, they haven't necessarily applied it in this industry or with this equipment." – P2

"Having basic computer knowledge because our SOPs are housed in computer systems. we still find individuals that can't navigate a computer." – P5

Electrical & Electronics
- Troubleshooting, engaging with technical resources, setting up controls

"CNC operation is a big one because some of the newer equipment we're getting is more specialized." Morrow

Computer Training
- Excel, Word, Outlook
- CNC Programming

Forklift Operation
- Moving raw materials and finished goods throughout the facility

"A training center that had all types of welding and was a longer time period, even if we had some kind of input and curriculum setting would be valuable." – Morrow

"There's a growing Hispanic population, and we need to focus some of our energies on that growing Hispanic area. [HACC] is offering ESL GED classes." - Ski

Welding

Plumbing

Crane Operation
- Knowing how to balance loads or what the center of material is before lifting it

"There's an opportunity in diversifying offerings. We're missing an entire population. My employer has a predominant Spanish population, and [that's not uncommon] in Lebanon." – Thompson

Language Offerings (Spanish and ESL)

"There's value being in clinicals and having real life exposure to the jobs prior to joining." – P8

LPN, Nursing Assistant/Aid, Medical Assistant
- Clinical practice opportunities

HIRING CHALLENGES

Employers face significant hiring challenges, including a lack of necessary skillsets, a limited pool of job candidates, intense competition with neighboring counties, and long commutes.

Lack of Skillsets	Limited Job Candidates	Competition & Commute
Most training for in-demand jobs is located outside of the county, making it challenging for job candidates to receive the necessary training. Without training opportunities, prospective employees must have prior work experience, which limits the pool of candidates for non-entry level roles.	**The county's workforce population is not sufficient to fill all open positions.** Additionally, for some roles, there is a lack of awareness and interest in pursuing training.	**Employers face competition from companies in neighboring counties that offer training programs and desirable job opportunities.** Employees are often unwilling to commute if there are comparable job opportunities available within their own county.
"A lot of candidates are very entry level and we have very few entry positions. If there was additional training available that was local, it would be a big help just because a lot of people don't want to travel outside the area." – Morrow *"A lot of employees hired in the last few years have transferable skills from other distribution centers locally. When it comes to manufacturing in the plant, we've largely had to train on site. Unless we're lucky that they were coming from another manufacturer. But no one out of high school or vocational school." – P5*	*"I don't know if that's so much a missing skill set as just it's hard to find frontline manufacturers … the challenge in hiring is finding people interested." – Strong* *"There's been a general employment problem the past couple years that there's simply not enough human beings in the workforce." – P3* *"For user refrigeration roles, as an example, we hire entry level, but we can't staff our entire team as entry level. So, we do look for candidates who come in with some level of training, but those candidates are often very few." – P2*	*"Central PA has a lot of in-demand skills because it's a great business environment, but that also comes with a lot of competition." – P2* *"Commute is also a barrier. Our location in Lebanon County can be challenging because we sit between a couple of really active business areas." – P2* *"Many [employees] will leave Lebanon and go to Hershey. They can't afford to live in Hershey, but there are plenty of jobs, and they offer higher wages" – Ski*

OTHER CONSIDERATIONS

In developing an advanced training center, LVCC should consider the challenges that prospective students may face, such as scheduling and affordability. Additionally, LVCC must prioritize spreading awareness of the new training center and available job opportunities.

Scheduling & Affordability

"We do have employees who express interest in learning new skills, but a lot of times it's a challenge for them if their personal life for their schedule outside of work doesn't allow them to engage in that technical schooling." – P2

"We would like for them [all] to get the mechatronics or mechanical electrical training. But they don't have the transportation to get over to Gettysburg or Reading or the time and finding childcare and everything else." – Wilson

"They'll be out when they're taking these classes. So then we have a shortage of, while they're [in class] and it's not like they can do half the class and then come to work. It's too far." – Wilson

"We need more adult training … It's gotta be affordable, and have flexible scheduling. Try to find ways for tuition assistance to make it as easy as possible for people to get in LPN programs." – P3

Building Awareness & Exposure

"We need to reach out to high school students to let them know about the career opportunities in manufacturing … I have 100 guys on my floor that make darn good money with great benefits, fantastic schedules. I think there's a lot of kids that don't think about it as a career." – Strong

"We need more exposure to high schools about different career paths within healthcare through panel presentations and things like that. Individuals only think about doctors and nurses, not everything else. Building awareness to students or prospective employees is helpful." – P8

"In nursing and even in maintenance trades, we must be doing more education with very young students. We can't wait until kids are in high school. You've gotta keep getting the information to them every year about what's available, and the pay scales, because a lot of these jobs pay pretty well." – P3

Open Communication with Schools & Employers

"Continue promoting [HACC] when employers call them requesting organizations to provide training and education and they do a great job of that. Karen and Lori do a great job." - Ski

"As a business owner, I think we also need to keep in mind that we're all extremely busy. So just reaching out once might not be enough. As a principle and as the administration, it is our job to reach out to you guys. I always encourage my doors to be always open if the Chamber wants to come in. I think it's important for the Chamber to be a voice for the Community and to talk to us about it. I think it's both of our responsibilities to kind of keep communication and keep working towards what's best for the students." – DiMarzio

TRAINING CENTER MODELS

OVERVIEW

All five institutions - Lancaster County Career and Technology Center (LCCTC), Pittsburgh Technical College (PTC), Thaddeus Stevens College of Technology, Triangle Tech, and YTI Career Institute - offer job placement assistance to students, with a focus on career-specific training and hands-on experience. Funding options vary across these institutions, including federal and state aid, scholarships, grants, and institutional financing plans.

Job Placement

Training centers offer a variety of job placement services to support their students in securing employment after graduation. These services often include career counseling, resume and interview assistance, and networking events. However, the specifics of these services can vary between institutions.

HACC and YTI Career Institute both have strong job placement success rates and offer career services such as resume and interview assistance. HACC's partnerships are primarily with trucking firms, hospitals, and Rite Aid, where students can complete internships. In contrast, YTI Career Institute's Career Services Department networks with a broader range of prospective employers to match businesses with YTI graduates. They also incorporate professional development into their curriculum and include externships in the last term of their programs.

PTC has a more extensive network of partnerships, collaborating with organizations like the National Center for Construction Education and Research (NCCER) and the Associated Builders and Contractors of Western PA (ABC) for apprenticeships. They also partner with technology companies like Palo Alto Networks, Red Hat Academy, Cisco, and SAP.

Funding

Private institutions, such as PTC, primarily rely on tuition, fees, and grants for funding. PTC, for instance, secured $3.8 million in federal employee retention tax credits in 2023. The college also offers various scholarships and participates in programs like the Veterans Yellow Ribbon Program and the National Science Foundation Advanced Technological Education Grant.

Public colleges, on the other hand, receive aid from local, state, and federal sources. For example, Thaddeus Stevens College of Technology is supported by the Thaddeus Stevens Foundation, which was incorporated as a non-profit to support the college through donations, funding, awards, raising awareness, and maintaining partnerships with corporate partners, government entities, educational institutions, and individuals.

TRAINING CENTER MODELS

OVERVIEW

Hanover identified all programs relevant to high demand industries at each institution. Most institutions offer course in all relevant fields. Thaddeus Stevens and Triangle Tech offer degree programs, while LCCTC and YTI provide a mix of degree and certificate programs. All institutions emphasize hands-on learning, but the level of specialization and program duration vary.

Programs Offered

Manufacturing / Mechanics / Computer Systems	Maintenance / Automotive	Healthcare
• Electro-Mechanical Engineering / Mechatronics • Electronics Engineering • Robotics • Mechanical Engineering • Precision Machining • Metal Fabrication • Welding • Equipment Operation • Computer Aided Design / Computer Integrated Machining • Computer Software Engineering • Computer and Data Management	• Plumbing • HVAC/R • Electrical/Electrician Technology • Automotive Technology • Diesel Technology • Collision Repair Technology • CDL Training	• Practical Nursing (LPN) • Nursing Assistant • Home Health Aide • Medical Technology • Health Careers • Health Information Management • Medical Assistant • Phlebotomy • Medical Coding • Surgical Technology

LANCASTER COUNTY CAREER AND TECHNOLOGY CENTER

LANCASTER COUNTY CAREER AND TECHNOLOGY CENTER

PROGRAMS: MECHANICS & MANUFACTURING

Lancaster County CTC provides mechanics and manufacturing students with NMS, OSHA, AMIST, NOCTI, and NCTI certifications. The programs offered include precision machining, electro-mechanical engineering, Computer-Aided Design (CAD), heavy equipment operations and basic maintenance, metal fab, and welding.

Relevant Programs	Degree/ Certification	Curriculum Description
Precision Machining and Computer Aided Manufacturing	NIMS Certificate OSHA 10-hour General Industry Training Cert	Material characteristics and the influence of different cutting methods are acquired through hands on and theoretical instruction. The use of Precision Measuring equipment, technical print reading as well as mathematical calculations are common tasks performed in the machining environment. Students also study Computer Numerical Control machines and additive manufacturing (3D printing).
Electro-Mechanical Engineering Technology	AMIST Certificate Certification-OSHA Construction Industry	Safety in the Multimedia Laboratory, Design Technology, Foundations of Information Technology, Computer Applications, Fundamentals of Computer Operation and Networks, Basics of Programming, Creating Graphic Content, Layout and Design, Multimedia Projects, Legal and Ethical Issues in IT, Client Relations, JavaScript Fundamentals
Architectural CAD / Design	Drafter Certifications	Students work with experienced home and building designers, create, design and produce complex working drawings from conception to completion and use advanced state of the art software and hardware identical to what professional architects and engineers use.
Heavy Equipment Operations & Basic Maintenance	OSHA Forklift PennDOT Flagger OSHA General Industry ABC Core Level 1	Hand tools and introduction to power tools; Basic Rigging- Objectives and Performance Tasks; Employability Skills ; Heavy Equipment Safety; Preventative Maintenance; Major Division 8 Grades; Major Division 9 Dump Trucks; Vibratory Rollers; Skid-Steer Loaders; Crawler Loaders; Wheel Loaders; Dozers

LANCASTER COUNTY CAREER AND TECHNOLOGY CENTER

PROGRAMS: MECHANICS & MANUFACTURING

Lancaster County CTC provides mechanics and manufacturing students with NMS, OSHA, AMIST, NOCTI, and NCTI certifications. The programs offered include precision machining, electro-mechanical engineering, Computer-Aided Design (CAD), heavy equipment operations and basic maintenance, metal fab, and welding.

Relevant Programs	Degree/ Certification	Curriculum Description
Metal Fabrication	NCTI Certificate PA Skills Certificate	Create and fabricate custom metal work; Build and troubleshoot advanced sheet metal systems; Operate state-of-the-art, metal-shaping equipment.
Welding Technology	NOCTI PA Skills Certification AWS SENSE Level 1 Certification	Students perform a wide range of welding processes using advanced welding techniques, assemble and fabricate specialized metal products, practice welds needed for weld certification, use modern power tools/equipment and interpret fabrication blueprints.
Advanced Welding	Industry Certificates	Provides an advanced comprehension of welding knowledge, proficiency and practice to meet the skills needs of: manufacturing, aerospace, automotive, industrial fabrication, pipeline, ship building, and heavy construction occupations
Part Time Welding	Certificate	Basic Welding (10 weeks), Electric ARC Welding (7 weeks), MIG Welding (7 weeks), TIG Welding (7 weeks)

PROGRAMS: MAINTENANCE

Maintenance programs at Lancaster County CTC include plumbing, HVAC, and electrical construction technology. Upon completion students receive NOCTI, PA Skill, and EPA certifications.

Relevant Programs	Degree/ Certification	Curriculum Description
Plumbing	NOCTI PA Skill Certificate	Interact with plumbing industry experts; Perform plumbing systems installation in homes and businesses; Interpret and construct plumbing systems in homes and businesses
HVAC	EPA Certification	Prepares air conditioning and refrigeration technicians for the EPA Certification test to be certified as a Universal Technician; Includes preparatory manual for Air Conditioning and Refrigeration Technicians (Federal Clean Air Act—Section 608); Manual must be picked up one week prior to the start of class
Electrical Construction Technology	NOCTI PA Skill Certificate	Interact with electrical industry experts; Develop skills and knowledge needed to build electrical systems; Design and construct electrical systems in homes and businesses

LANCASTER COUNTY CAREER AND TECHNOLOGY CENTER

PROGRAMS: AUTOMOTIVE

Students in the automotive technology program at Lancaster County CTC can earn a specialized associate's degree. The institution also provides programs for emissions inspector and vehicle safety inspection certifications, along with Commercial Driver's License (CDL) training.

Relevant Programs	Degree/ Certification	Curriculum Description
Automotive Technology (AST)	Specialized Associate Degree	Examine vehicles, compile estimates of repair costs, and secure customers' approval to perform repairs; Repair, overhaul, or adjust brake systems; Troubleshoot fuel, ignition, and emissions control systems, using electronic testing equipment; Repair or replace defective ball joint suspensions, brake shoes, or wheel bearings; Inspect/test new vehicles for damage and record findings; Test electronic computer components; Tune automobile engines; Install or repair air conditioners and service components; Repair, replace, or adjust defective fuel injectors, carburetor parts, and gasoline filters; Remove and replace defective mufflers and tailpipes
Emissions Inspector Certification	Certified Emissions Inspector	Lancaster County CTC, in cooperation with the PA Department of Transportation, provides the necessary information and testing for Automotive Mechanics to become Certified Emissions Inspectors.
Vehicle Safety Inspection Certification	Category 1, 2, and 3 Certifications	This course provides the necessary information and testing to become licensed as a PA State Inspection Mechanic. Students receive a Commonwealth of PA State Inspection certification card (MV 439) issued by the PA Department of Transportation upon course completion.
CDL Training	CDL, H and P Endorsements	ELDT certified 4-week class A CDL program and passenger and hazmat endorsement training with group training and modern equipment.
Additional Certifications	Snap-On Tools 509 Meter, ASE 609 AC Recovery & Recycling, PA Safety & Emissions	

LANCASTER COUNTY CAREER AND TECHNOLOGY CENTER

PROGRAMS: HEALTHCARE

Nursing students at Lancaster County CTC have the opportunity to earn an LPN degree, as well as NOCTI and PA certifications through the nursing assistant/home health aide program. The institution also offers courses in medical assisting, advanced health careers, phlebotomy, and medical terminology.

Relevant Programs	Degree/ Certification	Curriculum Description
Medical Assistant	NOCTI and PA Certifications	Students will apply advanced diagnostic procedures to patient care such as phlebotomy and pharmacology, assist in minor office surgeries, and participate in a 7-week medical assistant externship.
Nursing Assistant/ Home Health Aide	NOCTI and PA Certifications	Students perform a wide range of basic nursing skills, personal care skills, and enhanced dining experiences in a classroom and real world setting (in long-term care facilities and private homes).
Advanced Health Careers	National Skills Certificates/ Credentials	Students shadow health care professionals to observe patient care, practice ethical standards, confidentiality, leadership, and professionalism when interacting with patients, clients, and coworkers.
Phlebotomy	Pre-req course to higher education	Students learn necessary safety precautions, terminology, anatomy, physiology, venipuncture, collection procedures and infection control.
Medical Terminology	Pre-req course to higher education	This course is an introduction to medical terms and the building of medical language. Students will learn the basics including, word roots, prefixes, suffixes, and combining forms for all body systems, as well as disease and disorder terms.
Practical Nursing	LPN	LCCTC offers a 12-month daytime and 19-month evening program with theory classes and clinical experiences. Students will have the ability to demonstrate their skills and knowledge in our nursing lab, simulations lab, clinical sites, and in the classroom.

LANCASTER COUNTY CAREER AND TECHNOLOGY CENTER

JOB PLACEMENT & PARTNERSHIPS

Lancaster County CTC offers a comprehensive job placement plan that includes job interviews, job boards, advisement, internships, and co-op programs. To offer more extensive career services, it collaborates with PA CareerLink and Pathways to Career and Higher Education.

Job Placement

- The Lancaster CTC carries out a comprehensive placement plan, directed by the assistant principal/director at each campus, for all program graduates. Prospective employers visit the Career & Technology Center labs as guest speakers and consultants to ensure that skill training is relevant to the employment market.
- The Advanced Placement Internship (API) and Cooperative Education (Co-op) programs are work-based learning experiences designed to integrate classroom learning with supervised work experience. API provides students who excel from the onset of their program with an earlier entry into the workforce of their career field of choice.
- According to Lancaster County CTC's 2022 student survey (1,022 participants), 45% were successfully employed, 20.2% planned to attend post-secondary education, and 1.5% planned to join the military.

Note: survey was conducted in May before students graduated and received certifications necessary to obtain employment.

Career Services

- Job interviews
- Job boards
- Student advisement
- Follow-up data and reporting
- Access to student services after graduation

Academic Partnerships

Pennsylvania CareerLink® Pennsylvania CareerLink partners with Lancaster County CTC and serves as a connecting link between Lancaster County residents and area businesses.

Pathways to Career and Higher Education is a group of institutional and state programs that helps lead students to a successful career via higher learning through programs like SOAR, Technical Institute in High School, Cooperative Education, Dual Enrollment.

Occupational Advisory Committees are made up of local industry experts and professionals. They help ensure that each program is teaching the most current and in-demand techniques, services, and methods.

FUNDING & PARTNERSHIPS

LCCTC's funding comes from local (78.9%), state (15.9%), and federal (5.3%) sources, with the majority of funds originating from Member Districts through general fund, bond, and plan con subsidy payments. Student financial aid is financed by a variety of federal, state, and local programs.

- **Accreditations:** The Lancaster County Career & Technology Center is accredited by the Commission of the Council on Occupational Education and licensed by the Pennsylvania State Board of Private Licensed Schools. The Lancaster County Career & Technology Center's Practical Nursing Program is approved by Pennsylvania State Board of Nursing.

General Funding

LCCTC's proposed General Fund Budget 2022-2023 details revenue and other financing sources:

- **Local Sources (78.9%):** The majority these funds comes from Member Districts, specifically general fund payments, followed by bond payments, and plan con subsidy payments. Other sources include earnings on investments, tuition from patrons, and state and local grants.
- **State Sources (15.9%):** State funding comes from state revenues for specific educational programs, the share of Social Security and Medicare, and retirement contributions.
- **Federal Sources (5.3%):** All federal funding is provided by restricted Grants-in-Aid from the Federal government through the Commonwealth of PA.

Financial Aid Funding

Lancaster County Career & Technology Center participates in various federal, state, and local financial aid programs.

- FAFSA
- Subsidized & Unsubsidized Stafford Student Loan
- Federal Direct PLUS Loan
- Veteran's Education Assistance
- Lancaster County CareerLink
- New Choices Career Development
- Fostering Independence Tuition Waiver Program
- PHEAA State Grant
- Animal Care PA's Veterinary Student Scholarships
- MikeRoweWorks Scholarship
- Horatio Alger National Career & Technical Scholarship

FUNDING & PARTNERSHIPS

The Lancaster County Career and Technology Foundation sponsors the CTC with scholarships and financial support. It works to improve career and technical education awareness and provides Teacher Innovation Grants and Workforce Talent Grants.

LANCASTER COUNTY
CAREER & TECHNOLOGY FOUNDATION

The Lancaster County Career & Technology Foundation provides scholarships and financial support to CTC students, works to improve career and technical education awareness in the county, supports special projects with Teacher Innovation Grants, helps to combat the local skilled job gap with Workforce Talent Grants.

Funding from LCCTF in 2021/2022:

- Through the Commonwealth's Educational Improvement Tax Credit (EITC) program, LCCTC raised $243,500.
- The Susquehanna Litho Foundation awarded $25,000 to provide scholarships for Digital Design/Print Media students.
- The Workforce Talent Transportation program supported adult students enrolled in the LCCTC Commercial Driver's License (CDL) program by awarding $165,000 in tuition assistance for 32 CDL students.
- LCCTC utilized funds from the EITC and the Fly on the Run fly fishing tournament ($120,000) and Extraordinary Give ($40,000) fundraising events for Teacher Innovation Grants, scholarships for LCCTC students enrolled in postsecondary education, workforce grants for LCCTC career-bound students, financial assistance for high school students needing books, uniforms and tools, mental health awareness programs for all LCCTC students.

PITTSBURGH TECHNICAL COLLEGE

PITTSBURGH TECHNICAL COLLEGE

PROGRAMS: MECHANICS & MANUFACTURING

At PTC, students in mechanics and manufacturing can earn an associate degree through programs in electronics engineering, robotics and autonomous engineering, and welding.

Relevant Programs	Degree/ Certification	Curriculum Description
Electronics Engineering Technology	Associate in Science ETA's Certified Electronics Technicians	Math for Engineering Technology, Electricity, Electronics, AC Fundamentals, Computer and Network Systems, Digital Electronics, Communication Systems, Control System Electronics, Robotics
Robotics & Autonomous Engineering Technology	Associate in Science	Engineering Graphics (Industry Days), AutoCAD, Math for Engineering Technology, Wellness and Resilience, Blueprint Reading, Introduction to Electronics (Industry Days), Critical Thinking, College Algebra, Intro to Manufacturing, Robotics (Industry Days), Trigonometry, English Composition, Introduction to Parametric Modeling
Welding	Associate in Science Welding Certification	Introduction to Welding, Math for Welders, Metal Cutting, Blueprint Reading & Welding Symbols, Personal Finance, Critical Thinking, Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, Personal Finance, Critical Thinking, Shielded Metal Arc Welding, Effective Speech, Ethics, Advanced Pipe Welding, Exotic Metals, Human Relations in Organizations, GTAW Pipe Welding, GTAW/SMAW Pipe Welding, GTAW Tube, Internship

PITTSBURGH TECHNICAL COLLEGE

PROGRAMS: MAINTENANCE

PTC offers a certification program in electrician technology and an associate degree with an HVAC certification in HVAC technology.

Relevant Programs	Degree/ Certification	Curriculum Description
Electrician Technology	Certification	Math for Electricians, Residential Wiring, Introduction to the National Electrical Code, National Electrical Code Applications, Commercial Wiring, Motor Controls, Residential Wiring Applications, Blueprint Reading, Commercial Wiring Applications, Computers & Networking, Programmable Controllers, Troubleshooting Electrical Systems, Project Management & Estimating, Transformers and Distribution Systems
HVAC Technology	Associate of Science HVAC Certification	Supplementary Mathematics, College Mathematics, Fundamentals of Electricity, Heating Systems, Welding & Sheet Metal Fabrication, College Algebra, Critical Thinking, Residential Refrigeration, Principles of Writing, English Composition, Human Relations in Organizations, Hydronics, HVAC-R Controls

PITTSBURGH TECHNICAL COLLEGE

PROGRAMS: HEALTHCARE

Students in healthcare can earn associate degrees in surgical technology and nursing, as well as certifications in medical coding and practical nursing.

Relevant Programs	Degree/ Certification	Curriculum Description
Surgical Technology	Associate in Science Certified Surgical Technologist	Medical Terminology, Anatomy & Physiology (Lab), Supplemental Mathematics, College Mathematics, Surgical Instrumentation, Foundations of Surgery, Surgical Prep/Equip and Supplies, Principles of Writing, English Composition, Microbiology (Lab), Principles of Surgery, Surgical Procedures, Pharmacology, Diseases and Diagnostic Methods, Psychology, Clinical Rounds Review, Clinical Rotation, CST Review, Internship
Medical Coding	Certification National Coding Exam	Medical Terminology, Healthcare Delivery in Medical Office, Computerized Practice Management and HER, Foundations of Health Insurance, Anatomy & Physiology, Diagnostic & Procedural Coding, Diseases & Diagnostic Methods, Advanced Coding, National Exam Prep
Nursing	Associate of Science Registered Nurse Practical Nursing Certification	College Algebra, Clinical Practice, Nutrition, English Composition, Pharmacology in Disease Management, Care of Adults with Chronic Illness, Psychology, Effective Speech, Acute Care of the Adult, Lifespan Development, Pediatric Professional Nursing, Maternity Professional Nursing, Psychiatric/Mental Health Nursing, Effective Speech, Professional Transition to Practice Nursing: Anatomy & Physiology (Lab), Introduction to Nursing and the Language of Medicine, Steps to Nursing Success, Foundations of Nursing, Microbiology (Lab), Primary Care & Wellness LPN to ASN Track: LPN to ASN Transition in Professional Nursing

PITTSBURGH TECHNICAL COLLEGE

JOB PLACEMENT & PARTNERSHIPS

PTC highlights its 96% job placement success rate and offers comprehensive career services for students, alumni, and employers. The institution also collaborates with local businesses like NCCER and Aurora to enhance its programs and offer apprenticeships.

Job Placement

- PTC highlights it **96% job placement success rate**. Students work in tandem with Career Services in the classroom throughout their program as an essential part of the curriculum. Students actively network with employers, conduct mock interviews, and get themselves in front of the people who are hiring.
- All degree seeking on ground students have immersive internships or clinical rotations with employers. Online degree seeking students participate in internships or capstone projects in their last quarter. Examples of capstone projects include job shadowing with up to five industry professionals and interviewing at least 10-20 employers.

Career Services	
For Students: • Career prep class • Career fairs • Mock interviews • Industry & alumni speakers • Career advisor For Alumni: • Resume assistance • Career Connect • Networking events	For Employers: • Candidate screening • Interview coordination • On-campus recruiting • Alumni referrals • Internships • Part-time jobs

Academic Partnerships

PTC is officially an approved training site for the National Center for Construction and Research (NCCER), in partnership with the Associated Builders and Contractors of Western PA (ABC). Students now have the option to participate in apprenticeships with local ABC contractors.

Its new 18-month robotics and autonomous engineering technology program was designed in partnership with Aurora. With a growing fleet of autonomous vehicles in Pittsburgh, Aurora wanted to help train the next generation of skilled SETs in the region. Each quarter, students participate in Industry Days to gain on-site experience, exposure to local employers, and job shadowing.

- Its Technology Partners enhance IT students' curriculum and applied learning projects.

PITTSBURGH TECHNICAL COLLEGE

FUNDING & PARTNERSHIPS

PTC, a private institution, primarily relies on tuition, fees, and grants for funding. Recently, with the assistance of Representative Deluzio, it secured $3.8 million in federal employee retention tax credits.

- **Accreditations:** Pittsburgh Technical College is accredited by the Middle States Commission on Higher Education. PTC is a private non-profit and regionally accredited institution funded by tuition, fees, and grants.

General Funding

Representative Deluzio helped the college secure $3.8 million in federal employee-retention tax credits in April 2023.

The college plans to hire and train faculty in key areas, provide scholarships, and offer additional support through counseling programs.

Grants & Scholarships

- Veterans Yellow Ribbon Program
- S-STEM Scholarship
- The Pittsburgh Promise Scholarship
- Lou Holtz Marching Scholarship
- STRIVE

Sponsored Programs

- National Science Foundation Advanced Technological Education Grant
  - Cyber-Employment Readiness Program
  - Integrating Software and Machine Lab Instruction
- NSF Scholarships in Science, Technology, Engineering, and Math
  - S-STEM Scholarships
- Carl D. Perkins Career and Technical Education Improvement Act of 2006
  - Perkins V Programs

THADDEUS STEVENS COLLEGE OF TECHNOLOGY

THADDEUS STEVENS COLLEGE OF TECHNOLOGY

PROGRAMS: MECHANICS & MANUFACTURING

Thaddeus Stevens offers associate degrees in the following mechanics and manufacturing programs: electro-mechanical technology, mechanical engineering, metals fabrication, welding, computer integrated machining, computer software engineering, electronic engineering, and engineering CAD technology.

Relevant Programs	Degree/ Certification	Curriculum Description
Electro-Mechanical Technology (Mechatronics)	Associate Degree	Mechanical systems, manufacturing fundamentals, electrical systems, programmable logic controllers, mechatronics seminar and advanced project, robotics and motion control, process control and industrial instrumentation, computer-integrated manufacturing systems and PLCs
Mechanical Engineering Technology	Associate Degree	Drafting fundamentals, engineering graphics, engineering standards, CAD, fabrication principles, mechanical design, product design, manufacturing processes, engineering mechanics, fluid mechanics, production design, parametric solid modeling, engineering materials, thermodynamics, machine design, engineering seminar
Metals Fabrication & Welding Technology	Associate Degree	Drafting fundamentals, oxy-acetylene welding, cutting and brazing, metals fabrication: parallel line development and machine processes, industrial applications: fabrication blueprint reading, materials of the trade and applied metallurgy, shielded metal arc welding, triangulation pattern, CNC applications and estimating, gas tungsten arc welding, radial design development and machine processes, print reading for welding/field equipment and rigging
Welding Technology	Associate Degree	Welding blueprint reading, oxy-fuel welding and related processes, shielded metal arc welding, introduction to safety, gas metal arc welding, gas tungsten arc welding, flux cored and submerged arc welding, shielded metal arc welding, metallurgy, special welding processes, pipe welding, non-destructive testing

THADDEUS STEVENS COLLEGE OF TECHNOLOGY

PROGRAMS: MECHANICS & MANUFACTURING

Thaddeus Stevens offers associate degrees in the following mechanics and manufacturing programs: electro-mechanical technology, mechanical engineering, metals fabrication, welding, computer integrated machining, computer software engineering, electronic engineering, and engineering CAD technology.

Relevant Programs	Degree/ Certification	Curriculum Description
Computer Integrated Machining	Associate Degree	Blueprint reading and related math, manufacturing processes, measurement systems, lathe and vertical milling machining, metallurgy, machine skills lab, computer numerical control, CNC milling, CNC turning, CAD/CAM, CAE/CAM, machine tool internship
Computer Software Engineering Technology	Associate Degree	Introduction to web applications, web development, technical requirements and data structures,, software project, database design, security and professional ethics, web technologies and network security fundamentals, advanced data integration, database management systems, workplace communications, internship, software principles, systems administration, network design,
Electronic Engineering Technology	Associate Degree	DC fundamentals, AC fundamentals, combinational digital logic, solid state devices, sequential digital logic, microprocessors/microcontrollers, interfacing and programming microprocessors, interfacing and basic control circuits, automation and control systems with PLCs, data acquisition and control project (all courses also have a lab)
Engineering CAD Technology	Associate Degree	Fundamentals of machining, technical drawing, AutoCAD applications, AutoDesk Inventor applications, piping and cabling, processes of manufacturing, geometric tolerancing, metals fabrication drafting, SolidWorks applications, Pro/Engineer applications, working drawings, power transmission

THADDEUS STEVENS COLLEGE OF TECHNOLOGY

PROGRAMS: MAINTENANCE

Maintenance students at Thaddeus Stevens can earn an associate degree in electrical technology, HVACR, and plumbing.

Relevant Programs	Degree/ Certification	Curriculum Description
Electrical Technology	Associate Degree	Electricity theory and analysis (lab), electricity practicum, systems design, industrial electricity, industrial electronics, DC and AC motors and generators, industrial motor control, advanced motor and drive controls, programmable logic controllers
HVACR	Associate Degree	OSHA Electrical and Construction Safety, electrical fundamentals for HVAC/R, electrical components for HVAC/R, electrical circuits for HVAC/R, electrical applications (lab), HVAC installation procedures (lab), principles of refrigeration, residential heating systems, heating applications (lab). Refrigerant system components, cooling applications (lab), refrigerant management, mechanical codes for HVAC/R, AC systems, heat pump systems, system installation and start up, commercial refrigeration, load calculations, controls of HVAC, ventilation, system servicing and troubleshooting, principles of industrial refrigeration, low/high side components, industrial refrigeration operations and safety
Plumbing Technology	Associate Degree	Plumbing trade, plumbing design, plumbing installation: tools and materials, blueprint reading, residential plumbing installation, introduction to plumbing service, plumbing codes, commercial plumbing installation, designing/installing/servicing hydronic heating systems

THADDEUS STEVENS COLLEGE OF TECHNOLOGY

PROGRAMS: AUTOMOTIVE

Automotive programs at Thaddeus Stevens include automotive, diesel, and collision repair technology. Graduates earn associate degrees and various state certifications.

Relevant Programs	Degree/ Certification	Curriculum Description
Automotive Technology	Associate Degree PA Safety Inspection/Enhanced Emissions Inspection PA Department of Transportation Vehicle Equipment and Inspection Regulation Enhanced Emissions Inspector	Automotive service fundamentals, internal combustion engine service, chassis service/steering suspension, automotive brake systems, automotive electrical/electronic principles, engine electrical/electronic principles, fuel and emissions systems, advanced engine diagnosis, advanced chassis service, independent diagnosis and repair, heating and AC, drive train and manual transaxle service, advanced engine computer control analysis, automatic transaxle service, fuel injection systems
Diesel Technology	Associate Degree	Diesel shop safety, diesel service fundamentals; engine, electrical, and drive train PMI; brake, steering & suspension, and cab components PMI, fuel and supply systems, diesel engine technology (lab), basic electricity, hydraulics, brake systems, diesel equipment HVAC, manual/automatic transmission, basic welding/fabrication
Collision Repair Technology	Associate Degree	Details of body construction, collision repair welding, repairing damaged panels and metalworking, refinishing procedures, panel replacement, adjustment, and corrosion protection, frame alignment and repair, estimating technology, aluminum technology, non-structural technology, steel structural technology, refinishing technology, mechanical technology

THADDEUS STEVENS COLLEGE OF TECHNOLOGY

JOB PLACEMENT & PARTNERSHIPS

Thaddeus Stevens reported a 97.2% job placement success rate. The college has a Career Center, College Central Network, and internship program. It partners with colleges and businesses to enhance workforce training efforts.

Job Placement

- Thaddeus Steven College's reported a **97.2% average job placement rate** from 2018 to 2022. The Career Center services and resources provide assistance to students in the cultivation and enhancement of skills to master job search techniques and strategies, and research employment opportunities. It provides effective service to employers in recruitment programs and activities.
- College Central Network (CCN) is the college's job search website, exclusively for TSCT students and graduates. The online job agent matches registered job seekers with new jobs daily. Employers can register on the site to recruit students.
- The internship program provides undergraduates with a means to integrate academic theories and principles with practical job experience through cooperative education and internships.

Career Services

- Resume writing
- Interviewing skills/mock interviewing
- Soft "power/ employability" skills
- Social media management
- Professional presentation
- Internship placement
- Job placement
- Job/Career Fairs
- On-campus company info sessions
- College transfer

Academic Partnerships

In 2023, Thaddeus Stevens College partnered with Elizabethtown College for its students to seek out graduate-level education or professional certifications at Elizabethtown College.

The Manufacturers' Association established a new workforce and training partnership with the college to provide high quality training and education to the manufacturing industry.

THADDEUS STEVENS COLLEGE OF TECHNOLOGY

FUNDING & PARTNERSHIPS

The Thaddeus Stevens Foundation, donations, EITC Business Tax Credit program, PPL Foundation, and Truist Foundation provide general funding to the institution.

Accreditations: Thaddeus Stevens College of Technology (TSCT) is accredited by the Middle States Commission on Higher Education (MSCHE). Thaddeus Stevens Foundation was incorporated in the Commonwealth of Pennsylvania in 1985 as a 501(c)3 non-profit to support the college through donations, fundings, awards, raising awareness, and maintaining partnerships with corporate partners, government entities, educational institutions, and individuals.

General Funding

Thaddeus Stevens College is also a participating organization of the ExtraGive, Lancaster County's community-wide day of giving.

In the 2021-22 academic year, Thaddeus Stevens received gifts from 161 alumni in the amount of $173,491, $275,169 from 68 gifts from friends, $18,000 from the ExtraGive, 82 gifts from corporations and foundations amounting to $874,961. In total, the college acquired $1,331,396 from 321 donors' unrestricted and restricted gifts.

The EITC Business Tax Credit Program, administered by the Department of Community & Economic Development under Act 48, allows businesses to pay a part of their business taxes directly to the college.

In 2022, the PPL Foundation gave $35,000 to fund HMIs at student training stations in the Electrical and Electronic Engineering Technology program laboratories.

The college received a $150,000 grant from the Truist Foundation to support its short-term job training programs with Tec Centro.

Financial Aid Funding

Financial aid can be obtained through federal funding sources such as FAFSA as well as the Student Emergency Assistance Fund, a donor partnership between the Office of the President and the Offices of Advancement, Student Success, Student Services, and Academic Affairs.

Donors can establish a scholarship through a named endowed scholarship, general scholarship fund, or as a company tuition reimbursement.

TRIANGLE TECH

TRIANGLE TECH

PROGRAMS: MECHANICS & MANUFACTURING

At Triangle Tech, students in the mechanics and manufacturing field can receive an associate degree in CADD as well as A.W.S. and ASME Code certifications in welding.

Relevant Programs	Degree/ Certification	Curriculum Description
CADD with Additive Manufacturing & 3D Printing Technology	Associate Degree in Specialized Technology (AST)	Drafting principles, Fundamentals of mechanical drafting, Computer Applications & CADD I (AutoCAD 2D), Manufacturing Processes, Mechanical Design and Cost Estimating, Cams, Gears, & Kinematics, CADD II (AutoCAD 2D & 3D), Residential and commercial architectural design theory, Residential and commercial architectural engineering and cost estimating, Statics and strengths of materials, CADD III (Revit), Job communications, specifications and technical writing, Fabrication, welding, structural and piping drawings, Mechanical and electrical systems, CADD IV (Inventor)
Welding & Fabrication Technology	A.W.S. Code Certification ASME Code Certification	Arc welding processes, Fuel gas processes, AWS welding codes, Metallurgy, Blueprint reading, TIG welding, MIG welding, Metal surfacing, Structural steel weld certification, Pipe weld certification, Computer applications, Pipe welding, Pipe fitting, Weld inspection, Piping systems, Metal identification, Structural steel layout, Steel fabrication
Industrial & Structural Welding	A.W.S. Code Certification	Arc welding processes, AWS welding codes, Blueprint reading, MIG welding, Structural steel weld certification, Structural steel layout, Fuel gas processes, Metallurgy, TIG welding, Metal surfacing, Steel fabrication

TRIANGLE TECH

PROGRAMS: MAINTENANCE

Maintenance students can obtain associate degrees in maintenance electricity and construction technology and HVACR technology.

Relevant Programs	Degree/ Certification	Curriculum Description
Maintenance Electricity & Construction Technology	Associate Degree in Specialized Technology (AST)	Residential wiring, Residential construction design, Electrical services installation, Power transformers, Power distribution, Motor controls, Programmable logic controllers, Industrial controls, Computer applications, Power generators, Electric lighting, Three phase motors, AC/DC motors, Cost estimating, Conduit installation, Low voltage wiring
HVACR Technology	Associate Degree in Specialized Technology (AST)	Refrigeration theory, Residential refrigeration, Electricity and electronics, Commercial refrigeration, Refrigeration troubleshooting, Heating systems, Ventilation systems, Air conditioning, Blueprint reading, Pneumatic controls, Cost estimating, Digital electronics, Sheet metal fabrication, Environmental controls, Transport refrigeration, Environmental engineering, Direct digital controls

JOB PLACEMENT & PARTNERSHIPS

Triangle Tech provides career services to students and employers, including resume development, interview practice and scheduling, and an employer guarantee. It partners with universities to offer students more program options.

Job Placement

- Triangle Tech's Job Placement services works with local employers and offers career advising. Each student has a Personal Career Advisor, who makes sure the student is doing well in course work and prepares them for the job search by discussing employment goals, developing a resume and distributing it to companies, and interview preparation. The Career Advising Services also offers free employment services for companies.
- Triangle Tech partners with a variety of widely respected employers to help match new graduates.
- It offers an Employer Guarantee in which Triangle Tech graduates will be given additional training if they are deficient in any skills in the first 90 days of employment.

Career Services

For Students:

- Resume development
- Interview practice

For Employers:

- Candidate data (resumes, transcripts, attendance percentages, instructor comments)
- Interview scheduling assistance
- Private interview facilities

Academic Partnerships

Clarion University signed an agreement with Triangle Tech that will allow students to earn an Associate of Applied Science in Industrial Technology degree from Clarion University with a technical concentration at Triangle Tech.

TRIANGLE TECH

FUNDING & PARTNERSHIPS

Triangle Tech is a private for-profit institution that is funded by tuition and receives federal and state grants to support its financial aid programs.

Accreditations: Triangle Tech is a private for-profit institution, accredited by the Accrediting Commission of Career Schools and Colleges and licensed by the PA Department of Education, State Board of Private Licensed Schools.

- **Financial Aid**
- Federal Grants:
- Federal Pell Grants
- Federal Supplemental Education Opportunity Grant
- Federal Loans:
- William D. Ford Federal Direct Loans
- Federal Direct PLUS Loans

State Grants:

- Pennsylvania Higher Education Assistance Agency (PHEAA)
- Fostering Independence Tuition Waiver Program
- Veterans Education Benefits
- VA Dependent Educational Assistance Program
- Vocational Rehabilitation Program

Scholarships:

- Imagine America Scholarship
- Imagine America: Military Award Program (MAP)
- Worksmith Institute Scholarship

YTI CAREER INSTITUTE

YTI CAREER INSTITUTE

PROGRAMS: MECHANICS & MAINTENANCE

YTI provides OSHA and EPA certifications in electrical technology and HVACR programs, along with an associate degree in electronics engineering technology. The computer systems programs at YTI, such as CADD and computer and data management, also offer an associate degree in specialized technology.

Relevant Programs	Degree/ Certification	Curriculum Description
Electrical Technology	10 hour OSHA Certification	It combines qualified instruction with the electrical lab facilities and tools. Students train in simulated work settings, and learn construction site safety, OSHA requirements, National Electrical Code standards and practices, proper tool use and care.
Electronics Engineering Technology	Associate in Specialized Technology	Students learn analysis and troubleshooting of analog and digital systems, field service equipment repair, quality control and inspection, cable installation, alarm system installation and maintenance, home theater automation.
HVACR	30 hour OSHA Certification EPA Certification	The program intensively covers the service, installation and repair of heating, ventilation, air-conditioning and refrigeration systems. Students will develop an understanding of the electrical and mechanical principles related to gas and oil heating units, AC and refrigeration systems.
Computer Aided Drafting and Design	Associate in Specialized Technology	Students train to use AutoCAD software and SolidWorks to create 3D models. The YTI experience combines qualified instruction with the technical facilities, computer equipment, and tools.
Computer and Data Management	Associate in Specialized Technology	Students earn Comp TIA+, Network+, and Cloud+ certifications. Areas of study include, installation, configuration, and troubleshooting of a variety of desktop, server and mobile operating systems, of virtualization products and cloud platforms, and of networks, router setup and configuration, cybersecurity concepts and implementation of security solutions.

YTI CAREER INSTITUTE

PROGRAMS: COMPUTER SYSTEMS

At YTI, the computer systems programs, including CADD and computer and data management, offer an associate degree in specialized technology.

Relevant Programs	Degree/ Certification	Curriculum Description
Computer Aided Drafting and Design	Associate in Specialized Technology	Students in YTI's Computer Aided Drafting and Design program train to use AutoCAD software and SolidWorks to create 3D models. The YTI experience combines qualified instruction with the technical facilities, computer equipment, and tools.
Computer and Data Management	Associate in Specialized Technology	Students earn Comp TIA+, Network+, and Cloud+ certifications. Areas of study include, installation, configuration, and troubleshooting of a variety of desktop, server and mobile operating systems, the installation, configuration, and maintenance of virtualization products and cloud platforms, installation, administration, and troubleshooting of networks, router setup and configuration, cybersecurity concepts and implementation of security solutions, and support for office applications.

YTI CAREER INSTITUTE

PROGRAMS: HEALTHCARE

Students in the healthcare field can earn an associate in specialized technology degree in the medical assistant, health information management, and respiratory therapy programs. Other certifications include phlebotomy and CPR.

Relevant Programs	Degree/ Certification	Curriculum Description
Health Information Management	Associate in Specialized Technology RHIT Credentialing Exam	Students learn diagnostic and procedural coding, reimbursement and revenue cycle management, use of electronic health records, medical law and ethics, managing health data, communications, and statistics, and more.
Medical Assistant	Associate in Specialized Technology Phlebotomy & CPR Certifications	It offers instruction on medical facilities, equipment and instruments and includes a 10-week externship in actual medical facilities. Learned skills include scheduling appointments, completing medical records and billing, recording vital signs, preparing patients for examination, and administrative work.
Medical Billing and Coding	Certified Professional Coder (CPC) exam	The program focuses on the business, administrative, and office side of the medical profession: completing medical records, insurance submissions and billing, and providing office support. Students are trained in proper medical coding, medical record security, documentation, and billing.
Respiratory Therapist	Associate in Specialized Technology	This programs prepares students for the clinical setting, which may include analyzing a patient's lung function, performing arterial blood gas analysis to determine levels of oxygen and carbon dioxide and performing chest physical exams. It includes National Board for Respiratory Care Test prep.

YTI CAREER INSTITUTE

JOB PLACEMENT & PARTNERSHIPS

YTI's Career Services Department offers externship opportunities, networking events, career placement, professional development, career fairs, and campus interviews. Additionally, it has partnered with a college to provide students with a discounted rate.

Job Placement

- YTI's Career Services Department assists graduates with finding employment opportunities. Networking with prospective employers, YTI Career Service Specialists match businesses that have employment needs with YTI graduates suited for those positions.
- Professional development is built into the curriculum, teaching current trends in the job market, presenting a professional image, resume writing workshops, job search methods, effective application techniques, interview techniques, and evaluating employment offers. Outside externships are also incorporated into the last term of the program curriculum to help students gain practical experience.
- YTI partners with employers to promote their businesses, recruit employees, and sponsor learning through industry-promoted scholarships. Employers also serve as Advisory Board Members to share specific knowledge and expertise on current and future industry trends.

Career Services

- Externship
- Career networking events
- Career placement opportunities
- Professional development (resume, job search, interview prep)
- Career fairs
- Campus Interviews & visitations

Academic Partnerships

Elizabethtown College partnered with YTI for employees to earn a degree at a 15% discounted rate through the Affinity Partnership.

YTI CAREER INSTITUTE

FUNDING & PARTNERSHIPS

YTI is a private for-profit institution that receives federal and state funding for financial aid, along with local programs for scholarships and grants.

Accreditations: YTI Career Institute is a private for-profit institution, accredited by the Accrediting Commission of Career Schools and Colleges (ACCSC).

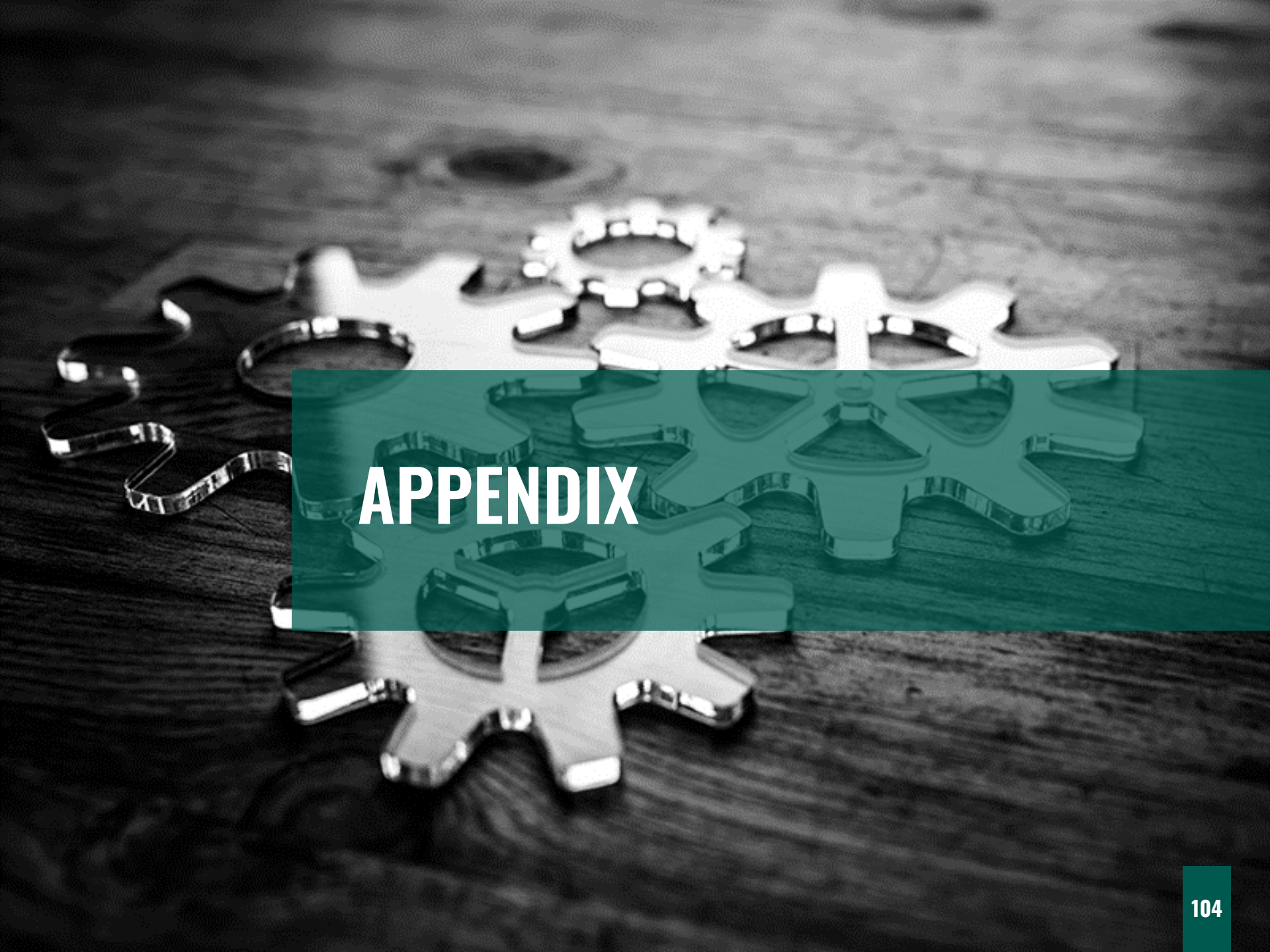
Financial Aid

Scholarships & Grants

- 2023 High School Graduate Scholarship Grant
- Imagine America Foundation
- National Board for Respiratory Care Scholarship
- Citizens Scholarship
- College Ave Student Loans
- EDvestinU Quarterly Scholarship Giveaway
- Altrusa International of South Central PA
- American Culinary Federation Education Foundation
- James Beard Foundation Scholarships Program
- Lancaster County Foundation Scholarship
- National Restaurant Association Educational Foundation
- American Supply Association
- American Business Women's Association – Colonial York Charter Chapter
- Skillpointe Foundation
- RevPart's STEM Scholarship
- American Trucks Student Scholarship
- EGIA Foundation HVAC HERO Scholarship
- Lockheed Martin Vocational Scholarship
- Sam Haskell Scholarship
- The PHCC Educational Foundation
- True Eye Experts
- Tylenol Scholarship

Federal & State Funding

- Federal Pell Grants
- Pennsylvania Higher Education Assistance Agency Grant
- Federal Direct Student Loans
- Federal Direct Subsidized Loan
- Federal Direct Unsubsidized Loan
- Federal Direct PLUS Loan
- PA Forward Loan



APPENDIX

APPENDIX

INTERVIEW PARTICIPANTS

Name	Company	Industry
Scott Strong	GAF	Manufacturing
Participant 2	[REDACTED]	Manufacturing
Participant 3	[REDACTED]	Healthcare
Jen Wilson	Nortera Foods	Retail/Distribution
Participant 5	[REDACTED]	Manufacturing
Jennifer Thompson	[REDACTED]	Retail/Distribution
Dawn Morrow	BlueScope Buildings	Manufacturing
Participant 8	[REDACTED]	Healthcare
Alexander DiMarzio	LCCTC	Principal
John J. “Ski” Sygielski	HACC	President & CEO

HANOVER CORE CAPABILITIES

Supporting your entire marketing workflow

MARKET ANALYSIS

Market Monitoring
- Industry News
- Political Regulatory Environment
- Economic Environment
- Social and Cultural Environment

Market Trend Forecasts
- Emerging Technologies

Market Profiling and Structure
- By Product, Service, or Geography

Market Sizing and Market Share
- Domestic and International Opportunity mapping

Competitive Intelligence

Partnership Evaluation
- Alliances and Partnerships
- Merger and Acquisition Opportunity Analysis

CUSTOMER EXPERIENCE

Customer Acquisition
- Consumer Decision Process
- Lead Generation
- Purchase Insights
- Buyer Decisions Journey

Customer Segmentation
- Customer Needs
- Cluster Analysis / Segment
- Identification
- Segment Validation

Loyalty Management
- Key Performance Drivers
- Win / Loss Analysis
- Satisfaction and Loyalty
- Customer Life Cycle Management

PRODUCT LIFECYCLE

Concept Testing
- Feature Preferences
- Product / Service Validation
- Conjoint Analysis

Opportunity Analysis
- Patent Analysis

TURF Analysis

Channel Optimization
- Sales Territory Alignment
- Value Chain Analysis

Price Optimization
- Product / Service Demand
- Price Elasticity / Sensitivity

Post-Launch Assessment

Product / Service Life Cycle Assessment

Product / Service Line Analysis

Sales Forecasting

BRAND STRATEGY

Brand Audit
- Awareness and Perceptions
- Attitude and Usage
- Perceptual Mapping

Brand Communication
- Positioning
- Imagery and Messaging Analysis

Brand Performance
- Health and Equity
- Gap Analysis
- SWOT Analysis
- Ongoing Tracking

Marketing Mix Evaluation

Campaign Performance
- Advertising Testing

HANOVER RESEARCH

Thank you.

CONTACT

Matt Babineaux

Client Engagement Director

E: mbabineaux@hanoverresearch.com

P: 281-300-2762

hanoverresearch.com