



LEHIGH VALLEY TALENT STUDY REPORT

2022



LEHIGH VALLEY
economic development



WORKFORCE
BOARD
LEHIGH VALLEY

REGIONAL ACCOMPLISHMENTS



Lehigh Valley Education and Talent Supply Council is an unprecedented partnership that includes employers, school administrators, colleges, universities, and economic development and workforce agencies. The council's goal is to strengthen the Lehigh Valley's talent pipeline.

Awards



2021 Excellence in Economic Development Gold Award, International Economic Development Council (IEDC) - Recognizes LVEDC as best Talent Development and Retention initiative in the country, particularly its Hot Careers Guide, Internship Summit, and Toolkit.



2021 Economic Development Program of the Year, Pennsylvania Economic Development Association (PEDA) - Recognizes LVEDC's talent supply initiative as best economic development program in the state.



2022 Best Project Supporting Collaborative Community and Regional Initiatives, Council for Community and Economic Research (C2ER) – Recognizes the talent supply partnership for its use of research and data analysis in supporting the program's accomplishments.



The following programs were inspired by a 2018 Talent Study done in partnership with the Workforce Board Lehigh Valley:

Made Possible in Lehigh Valley

is a regional branding campaign highlighting why the Lehigh Valley is a desirable place to visit, work, learn, and live. A coalition of regional partners amplify this message by distributing it across many platforms: a microsite, social media, paid advertising, podcast, events, and other marketing materials.

This campaign also addresses a key finding from talent-perception research conducted for LVEDC by DCI in the fall of 2018 that the Lehigh Valley is a blank slate to talent from other locations.

The annual Lehigh Valley Internship Summit

helps employers establish, expand, and improve internship programs and enhances connections with career development offices at Lehigh Valley colleges and universities.

The **Internship Toolkit and Directory** provides employers with internship best practices, from writing job descriptions to evaluating job performance, and contacts for career development offices at Lehigh Valley's colleges and universities.

The **Employability Skills and Career Readiness Curriculum**, based on a framework developed by the U.S. Department of Education, was produced by the Workforce Board Lehigh Valley and made available to regional schools.

The **Lehigh Valley Hot Careers Guide** helps students, parents, teachers, and guidance counselors understand the most in-demand occupations in growing industries in the Lehigh Valley. The data-driven compilation is researched by LVEDC annually and shared with more than 60,000 students.

The **Alumni Survey** gauged the perceptions alumni of the Lehigh Valley's colleges and universities have about the region and explored their priorities in choosing where to live. Favorable perceptions of the Lehigh Valley were tied to how recently the alumni visited the region, prompting LVEDC to partner with alumni offices about local events and opportunities here.

A **2022 Talent Study** was completed in partnership with the Workforce Board Lehigh Valley. This refreshed the 2018 Talent Study to understand employers' needs and review our strategic actions in light of the COVID-19 pandemic and evolving talent demand shifts. The final report offers deep employer insights into the post-pandemic economy and talent needs here. The findings guide future regional strategies.

EXECUTIVE SUMMARY

The Lehigh Valley economy changed in remarkable ways in recent years.

In 2019, on the eve of the COVID-19 pandemic, the Lehigh Valley had added more than 25,000 jobs in the previous five years and produced a record Gross Domestic Product topping \$44 billion. During the pandemic, the manufacturing sector in the region soared, producing an output that ranked among the nation's top 50 in 2020. Meanwhile, the Lehigh Valley captured significant professional office investments, including a new Air Products campus which opened in 2022.

While not immune to the economic disruptions caused by COVID-19 pandemic, the Lehigh Valley demonstrated its grit. The region led Pennsylvania's jobs recovery, regaining 95% of the jobs initially lost in less than two years. It became one of the busiest industrial markets in the United States as the economy evolved to meet consumer demands indelibly changed by the pandemic. The economic growth continues to improve the quality of life and attract more people who call the Lehigh Valley home.

A critical driver of those successes are the people, a skilled and agile workforce that employers value in a rapidly changing world. A robust talent supply attracts and retains employers who provide rewarding and family-sustaining career opportunities.

This has been the goal of the Education and Talent Supply Council, a collaboration of employers, educators, and community leaders.

The council's priorities include understanding the needs of employers related to the attraction, development, and retention of talent and the challenges facing them in a post-pandemic economy.

To that end, the Lehigh Valley Economic Development Corporation (LVEDC) and the Workforce Board Lehigh Valley (WBLV) commissioned Camoin Associates, in partnership with labor market analytics group EMSI/Burning Glass, to examine the talent market. An update of a 2018 study, the report identified industry trends, strengths of key industry sectors, opportunities for meaningful employment, projected hiring gaps, and strategies to address workforce issues.

The work included a labor market analysis, survey of local employers, interviews, and focus groups comprising business leaders, educational providers, and community partners. Specific focus was given to growing industry sectors with a strong presence in the region: manufacturing, life sciences, health care, transportation & logistics, and high value business services. Those sectors of the Lehigh Valley labor market were identified based on current employment level, growth in employment, and/or the potential for future growth.

The study culminated in a strategic action plan that will guide future efforts in fortifying the talent pipeline – attracting, developing, and retaining the workforce that will drive the Lehigh Valley's economy into the future.

FIVE KEY JOB MARKET SECTORS:

Based on current employment, employment increases over time, and potential for significant growth



Manufacturing



High-Value
Business Services



Life
Sciences



Transportation
& Logistics



Health
Care



Scan the QR code or visit lehighvalley.org to access full study and learn more about the 5 key job market sectors, current workforce, and future opportunities in the Lehigh Valley.

KEY FINDINGS

Growing Population

The Lehigh Valley grew by 3.9% to 689,167 residents from 2016-2021, outpacing statewide growth. The population is expected to increase by another 3% by 2025. People between the ages of 18 and 34 are growing at faster pace of 10.7% over the last decade, making the Lehigh Valley among the fastest growing regions for young people in Pennsylvania. Job growth in the Lehigh Valley has also outpaced the growth rate statewide.

Skills and Experience

Eighty-seven percent of Lehigh Valley employers surveyed say a workforce with the right skills is important for future growth. In addition to skills, employers are seeking workers with relevant career experience.

Employability Skills

Employability skills, also known as soft skills, remain a priority for employers surveyed, a majority of whom believe there needs to be improvement. Among the skills employers have a hard time finding in the workforce are problem solving skills (48% of businesses surveyed), interpersonal skills (36%), and communication skills (35%).

Hiring Challenges

The pandemic triggered what is now known as the “Great Resignation” as workers quit their jobs in historic numbers, exacerbating labor shortages. Of the employers surveyed in the Lehigh Valley, 89% of employers say they have a difficult time recruiting, hiring, or retaining employees. The challenge is compounded by the fact that business is growing. In the next 12 months, 74% of employers expect to have more employees than they currently have.

Shift to Digitization

The pandemic accelerated the shift to digitization, creating greater use and acceptance of remote learning and work. Businesses and schools have quickly adapted and continue to evolve under the new paradigm.

Investment in Diversity, Equity, and Inclusion

Approximately 75% of Lehigh Valley employers surveyed are engaging in diversity, equity, and inclusion initiatives. Those initiatives include hiring a diversity, equity and inclusion officer; setting up teams; diversity training; and implementing new hiring policies. Some employers have already established programs; others are developing new policies, many with the guidance of an outside consultant.

Community Focused on Talent

The current system of partnership and collaboration among employers, education, and other community partners is working well and should be maintained and leveraged for further success. This includes the Education and Talent Supply Council.

LEHIGH VALLEY DEMOGRAPHICS

Population¹

2021 Census
Population Estimate

 **689,167**

The Lehigh Valley is a growing region with a diverse economy and a history of innovation, positioned at the center of the massive East Coast market.

By population, it is the **68th largest metropolitan area in the United States.**

The Lehigh Valley population between the ages of 18-34 grew by 10.7% in the past decade.

Median Household Income²

Median household income is higher in the Lehigh Valley than in Pennsylvania and is higher than the national median as well.

\$66,865
Lehigh Valley

\$61,744
Pennsylvania

\$62,843
U.S.



Poverty Level²

While reducing poverty is a shared goal of LVEDC and its partners, the percentage of households earning less than **the poverty level is lower in the Lehigh Valley** than in Pennsylvania or the United States.

10.7%
Lehigh Valley

12.4%
Pennsylvania

13.4%
U.S.



Lehigh Valley Population Change³ (2012-2021)



Net Migration

The Lehigh Valley's population continues to grow, driven significantly by immigration.

Births
70,326 

Deaths
65,279 

Domestic Migration

-946 

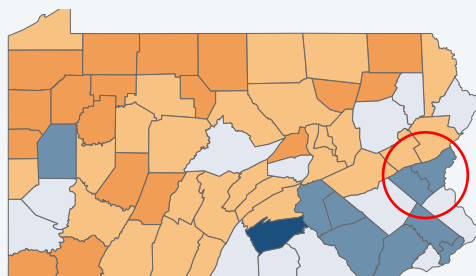
International Migration

23,034 

10-Year Population Change⁴

Employers want to be in places where the population and labor force are growing.

The Lehigh Valley is one of the fastest growing areas in Pennsylvania.



Percent Change

- 10.0 to 19.9
- 5.0 to 9.9
- 0.0 to 4.9
- -4.9 to -0.1
- -5.0 or less

Population Diversity⁴

The composition of the Lehigh Valley is steadily changing with growth across racial and ethnic groups as we entered the 21st century. While White people make up the majority of the region's population, People of Color have increased by double digit percentages. The Lehigh Valley's population has gotten more diverse over the last decade.

Race	% of 2020 Pop.	Total Pop.
White	70.3%	482,980
Black or African American	6.8%	47,031
American Indian and Alaska Native	0.3%	2,342
Asian	3.5%	23,982
Native Hawaiian and Other Pacific Islander	0.0%	264
Some Other Race	9.8%	67,624
Two or More Races	9.2%	63,285

A major driver of the Lehigh Valley's population growth was a **46% increase in people who identify as Hispanic or Latino**, who now make up 21% of the region's population. People who report themselves as Hispanic or Latino can be of any race.



WORKFORCE CHARACTERISTICS



**Lehigh Valley
Workforce²**

349,261

The Lehigh Valley's workforce is strong and growing.

Over 1.3 million workers live within a one-hour drivetime from the region, ensuring ample access for employers to their workforce.



Commuting Patterns⁵

The number of people both living and working in the Lehigh Valley has grown by 9% from 2015-19, outpacing the region's total population growth. Meanwhile, the number of people who are commuting into the Lehigh Valley to work has grown twice as fast as residents commuting to jobs outside the region.

101,947

**Work in Lehigh Valley,
live elsewhere**

197,559

**Live and work in
Lehigh Valley**

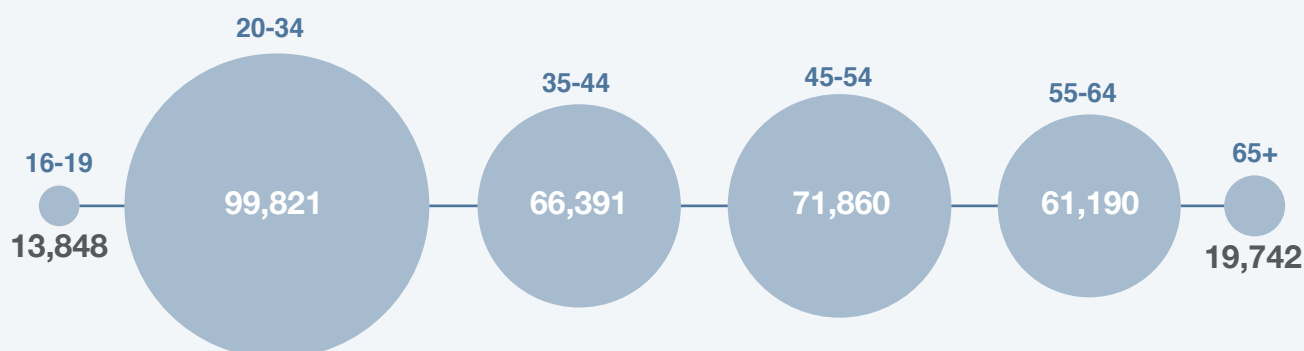
103,906

**Live in Lehigh Valley,
work elsewhere**



Workforce Distribution by Age Group⁶

Workers between the ages of 20 and 34 now make up the largest segment of the Lehigh Valley's workforce.



Jobs Recovered⁷

The COVID-19 pandemic and its impact drove workers from the workforce. As of December 2021, the percentage of jobs recovered since the start of the pandemic in Lehigh Valley outpaces the state and the country.

95.3%

Lehigh Valley

77.3%

Pennsylvania

85.2%

U.S.



Lehigh Valley Educational Attainment²

The Lehigh Valley has a higher graduation rate from high school than the national average as well as associate degree attainment.

Educational Attainment, Ages 25-64

	Lehigh Valley	U.S.A.
No High School Diploma	8.0%	10.9%
High School Graduate	30.9%	25.7%
Some College, No Degree	18.1%	20.7%
Associate Degree	10.6%	9.1%
Bachelor Degree	20.4%	21.2%
Postgraduate Degree	12.0%	12.3%

14.6 Percent
of all associate degrees
awarded from community
colleges in Pennsylvania were
from Lehigh Valley's two
community colleges.⁸

Awards from Lehigh Valley Colleges & Universities and Career & Technical Schools⁹ (2019-20 Academic Year)

Educational institutions support workers with certifications and degrees preparing them for jobs in the region.

Non-Credit	2,133
Certification	522
Associates Degree	1,913
Bachelors Degree	7,494
Masters Degree	1,508
PhD/Professional Degree	164

10,760
Lehigh Valley
College &
University
Graduates⁹
(2019-2020)



Lehigh Valley Colleges, Universities, and Career and Technical Centers



MANUFACTURING



Manufacturing, the second-largest industry sector in the Lehigh Valley, contributes \$7.9 billion toward the region's \$42.9 billion GDP. That puts the Lehigh Valley among the nation's top 50 U.S. manufacturing markets. Supported by programs at the region's three technical schools and 11 colleges and universities, the Lehigh Valley's more than 700 manufacturers employ nearly 35,000 people.

Employees⁶
34,967

Employers¹⁰
752

**Average Annual
Employment Change
(Past Five Years)⁶**
↑ 1.9%

**Average Annual
Compensation⁶**
\$73,916

Opportunities¹¹

1. Exposing students to Manufacturing opportunities to leverage low-debt career pathways can reinvigorate the workforce.
2. Some occupations within the sector have low entry level educational requirements but with upskilling/training, these can lead to occupations with higher wages.
3. The synergies with the Transportation, Warehousing, Logistics and Wholesale sector is essential in supporting the growth of the Manufacturing sector.



In-Demand Skills^{11,12}

Specialized Skills	Baseline Skills
Repair	Communication Skills
Hand Tools	Physical Abilities
System Applications and Products (SAP)	Problem Solving
Scheduling	Detail-Oriented
Customer Service	Microsoft Office
5S Methodology	Microsoft Excel
Forklift Operation	Positive Disposition
Machinery	English
Welding	Troubleshooting
Manufacturing Process	Teamwork/Collaboration

Priority Occupations^{2,11,13}

Stable and growing occupations through 2026

Occupation	Employment	Annual Mean Wage	Typical Entry Level Education	Projected Employment (2026)
Team Assemblers	2,968	\$43,200	HS Diploma/GED	2,915
First-Line Supervisors of Production and Operating Workers	1,293	\$66,100	HS Diploma/GED	1,318
Laborers and Freight, Stock, and Material Movers	1,098	\$36,000	HS Diploma/GED	1,121
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	683	\$42,300	HS Diploma/GED	710
Machinists	659	\$49,600	Certificate/ Specialized Training	682
Industrial Machinery Mechanics	644	\$60,300	Certificate/ Specialized Training	718
Welders, Cutters, Solderers, and Brazers	605	\$43,800	Certificate/ Specialized Training	632
Assemblers and Fabricators	375	\$45,400	HS Diploma/GED	369



Scan the QR code or visit lehighvalley.org/manufacturing to learn more about the Manufacturing sector, current workforce, and future opportunities in the Lehigh Valley.

BUSINESS SERVICES



The High-Value Business Services sector employs nearly 27,400 people, or about 8.5% of the Lehigh Valley workforce, and contributes \$6.3 billion toward the region's GDP. The corporate home of Fortune 500 companies PPL and Air Products, the region includes more than 1,860 establishments in the sector. In recent years, its developed clusters of data processing and hosting, financial transactions, payroll services, administrative management, and consulting services.

Employees⁶
27,395

Employers¹⁰
1,890

**Average Annual
Employment Change
(Past Five Years)⁶**
↓ 2.4%

**Average Annual
Compensation⁶**
\$117,052

Opportunities¹¹

1. Software Developers and Software Quality Assurance Analysts and Testers are growing with high earnings.
2. The Lehigh Valley has numerous educational institutions that support sector. These institutions can be better leveraged to increase engagement with students for internship positions and work opportunities.
3. National trend of declining number of college graduates, due to population trends poses a challenge to the sector. There is a need to shift hiring requirements to encompass non-traditional education and experience into hiring practices.



In-Demand Skills^{11,12}

Specialized Skills	Baseline Skills
Customer Service	Communication Skills
Sales	Problem Solving
Customer Contact	Teamwork/Collaboration
Scheduling	Microsoft Office
Logistics	Organizational Skills
Occupation Health and Safety	Detail-Oriented
Risk Management	Building Effective Relationships
Prospective Clients	English Fluency
Product Knowledge	Written Communication
Project Management	Troubleshooting

Priority Occupations^{2,11,13}

Stable and growing occupations through 2026

Occupation	Employment	Annual Mean Wage	Typical Entry Level Education	Projected Employment (2026)
Software Developers and Software Quality Assurance Analysts and Testers	1,294	\$97,100	Bachelor Degree	1,400
Accountants and Auditors	1,199	\$78,700	Bachelor Degree	1,221
Management Analysts	780	\$102,000	Bachelor Degree	818
Computer Systems & Information Security Analysts	599	\$89,800	Bachelor Degree	624
Computer User Support Specialists	446	\$57,800	Associate Degree	461
Market Research Analysts and Marketing Specialists	439	\$65,000	Bachelor Degree	475
Computer Network & Database Administrators & Architects	308	\$107,542	Bachelor Degree	313
Computer Network Support Specialists	169	\$71,900	Bachelor Degree	145



Scan the QR code or visit lehighvalley.org/business-services to learn more about the Business Services sector, current workforce, and future opportunities in the Lehigh Valley.

LIFE SCIENCES



The Life Sciences sector commands a small but strong base in the Lehigh Valley, contributing \$1.5 billion to the region's GDP. It employs 6,500 people at more than 170 establishments. Home to B. Braun USA and Olympus of the Americas, the Lehigh Valley has developed a specialized niche of medical device makers. Institutions, such as Ben Franklin Technology Partners of Northeastern Pennsylvania, foster entrepreneurship in this sector.

Employees⁶
6,521

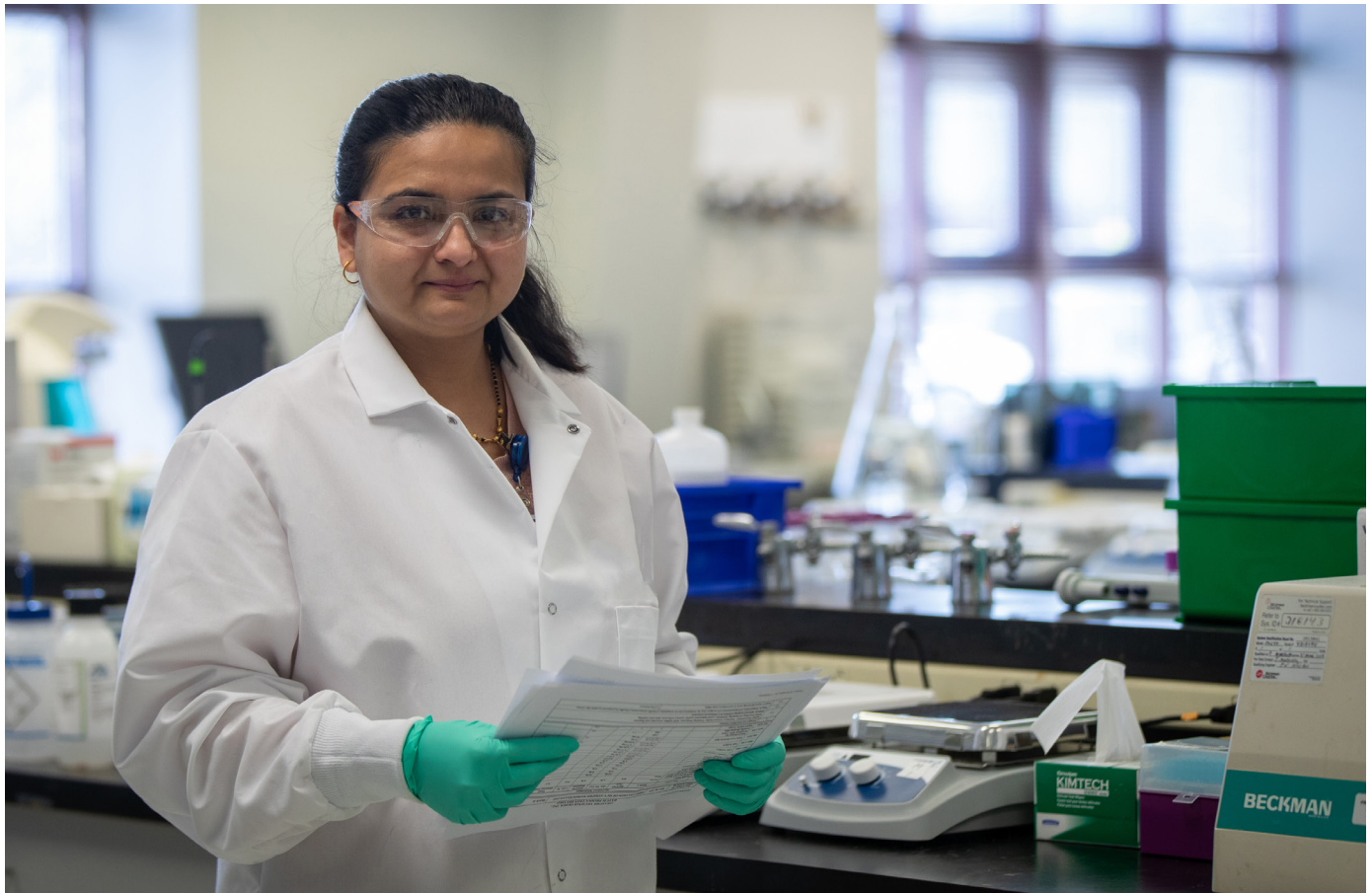
Employers¹⁰
172

**Average Annual
Employment Change
(Past Five Years)⁶**
↑ 2.9%

**Average Annual
Compensation⁶**
\$94,862

Opportunities¹¹

1. Lehigh Valley's strength in Health Care and Manufacturing are assets to growing the region's Life Sciences industries.
2. Surgical and Medical Instrument Manufacturing is highly concentrated in the Lehigh Valley - five times more prevalent in the Lehigh Valley than the nation.
3. Lehigh Valley colleges and universities produce a surplus of Chemistry and Chemical Engineering graduates providing an opportunity for Life Sciences companies to hire locally.



In-Demand Skills^{11,12}

Specialized Skills	Baseline Skills
Packaging	Communication Skills
Manufacturing Principles	Teamwork/Collaboration
Cancer Knowledge	Problem Solving
Project Management	Microsoft Excel
Biotechnology	Physical Abilities
Good Manufacturing Practices	Organizational Skills
Environmental Protection	Computer Literacy
Scheduling	Detail-Oriented
Clinical Trials	Planning
Budgeting	Microsoft Word

Priority Occupations^{2,11,13}

Stable and growing occupations through 2026

Occupation	Employment	Annual Mean Wage	Typical Entry Level Education	Projected Employment (2026)
Phlebotomists	215	\$38,600	Certificate/ Specialized Training	245
Medical and Clinical Laboratory Technologists	191	\$54,400	Bachelor Degree	209
Medical and Clinical Laboratory Technicians	182	\$54,300	Associate Degree	200
Packaging and Filling Machine Operators and Tenders	135	\$40,200	HS Diploma/ GED	138
Diagnostic Related Technologists and Technicians	164	\$60,719	Associate Degree	181
Medical Scientists, Except Epidemiologists	143	\$80,700	Mast/PhD/Prof. Degree	153
Software Developers and Software Quality Assurance Analysts and Testers	112	\$102,800	Bachelor Degree	121
Industrial Engineers	96	\$93,400	Bachelor Degree	103



Scan the QR code or visit lehighvalley.org/life-sciences to learn more about the Life Sciences sector, current workforce, and future opportunities in the Lehigh Valley.

TRANSPORTATION & LOGISTICS



Transportation and Logistics are among the Lehigh Valley's fastest growing sectors. They employ 38,100, an annual increase of nearly 7% over the last five years. Among the busiest industrial markets in the nation, the Lehigh Valley is attractive to companies including Amazon and FedEx Ground because of its easy access to interstate highways, rail lines, and airports, with a third of the population within a day's drive.

Employees⁶
38,177

Employers¹⁰
887

**Average Annual
Employment Change
(Past Five Years)⁶**
↑ 6.9%

**Average Annual
Compensation⁶**
\$55,565

Opportunities¹¹

1. The Lehigh Valley offers cost competitive sites and labor that can be further leveraged to draw additional jobs to the region.
2. General and Operations Managers in the sector grew by 244 jobs between 2015 and 2020, for a growth of 103%. The occupation's typical entry level of education is bachelor's degree. There is an opportunity to grow this high wage occupation by helping companies train and promote from within, retain talent coming from regional higher education, and attract talent to the region.
3. A strong demand for Commercial Driver's License (CDL) drivers in the Lehigh Valley will continue, seeing that General Freight Trucking industries are anticipated to increase by 403 jobs between 2020 and 2025.



In-Demand Skills^{11,12}

Specialized Skills	Baseline Skills
Sorting	Communication Skills
Scheduling	Physical Abilities
Forklift Operation	Microsoft Office
Customer Service	Microsoft Excel
Repair	Detail-Oriented
Lifting Ability	English
Packaging	Planning
Customer Contact	Teamwork/Collaboration
Logistics	Computer Literacy
Warehouse Operations	Written Communication

Priority Occupations^{2,11,13}

Stable and growing occupations through 2026

Occupation	Employment	Annual Mean Wage	Typical Entry Level Education	Projected Employment (2026)
Laborers and Freight, Stock and Material Movers	8,508	\$34,300	HS Diploma/GED	8,814
Heavy and Tractor-Trailer Truck Drivers	4,632	\$50,200	Certificate/Specialized Training	4,770
Stockers and Order Fillers	4,363	\$29,400	HS Diploma/GED	4,461
Industrial Truck and Tractor Operators	3,625	\$40,600	HS Diploma/GED	3,752
Light Truck Drivers	2,155	\$41,800	HS Diploma/GED	2,314
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	1,213	\$64,100	HS Diploma/GED	1,268
Packers and Packagers, Hand	1,159	\$31,100	HS Diploma/GED	1,188



Scan the QR code or visit lehighvalley.org/transportation to learn more about the Transportation sector, current workforce, and future opportunities in the Lehigh Valley.

HEALTH CARE



Health Care is the region's largest employing sector with a workforce of 47,200 and contributes \$4.9 billion to the region's GDP. Supported by world class facilities Lehigh Valley Health Network and St. Luke's University Health Network, the health care sector has more than 1,300 offices, health centers, hospitals, and other health facilities.

Employees⁶
47,175

Employers¹⁰
1,317

**Average Annual
Employment Change
(Past Five Years)⁶**
↑ 0.6%

**Average Annual
Compensation⁶**
\$71,337

Opportunities¹¹

1. Much of the workforce demand within the sector is focused on hospitals - there is an opportunity to work directly with their operations to build programs.
2. As of 2020, 6% of the Registered Nurses commuted into the Lehigh Valley for work. There is a need for employers to increase engagement with both students and faculty to build a network of future nurses within the Lehigh Valley.
3. Specialty Hospitals have grown 27% in the past five years from 2015 to 2020 and are projected to grow an additional 28% by 2025.



In-Demand Skills^{11,12}

Specialized Skills	Baseline Skills
Cardiopulmonary Resuscitation (CPR)	Computer Literacy
Home Health	Communication Skills
Treatment Planning	Teamwork/Collaboration
Scheduling	Problem Solving
Patient Care	English
Home Care	Planning
Hospice	Time Management
Clinical Experience	Bilingual
Meal Preparation	Written Communication
Case Management	Spanish

Priority Occupations^{2,11,13}

Stable and growing occupations through 2026

Occupation	Employment	Annual Mean Wage	Typical Entry Level Education	Projected Employment (2026)
Registered Nurses	8,011	\$71,300	Bachelor Degree	8,272
Nursing Assistants	3,456	\$34,100	Certificate/ Specialized Training	3,565
Personal Care Aides	2,811	\$26,600	HS Diploma/ GED	3,080
Medical Assistants	1,940	\$35,700	Certificate/ Specialized Training	2,095
Physicians, All Other; and Ophthalmologists, Except Pediatric	1,294	\$200,900	Mast/PhD/Prof. Degree	1,317
Home Health Aides	998	\$26,600	HS Diploma/ GED	1,094
Medical and Health Services Managers	802	\$95,500	Bachelor Degree	917



Scan the QR code or visit lehighvalley.org/healthcare to learn more about the Health Care sector, current workforce, and future opportunities in the Lehigh Valley.

AVERAGE ANNUAL EDUCATION & TRAINING PROGRAM COMPLETIONS FOR SECTORS^{9,14}

Program	Sectors	Non-Cred.	Cert.	Assoc.	Bach.	Mast.	PhD	Total
Business Administration, Management, Operations, and Managerial Economics	BS, LS	0	1	115	802	199	2	1,119
Registered Nurse/Registered Nurse	HC	0	0	162	307	0	0	469
Truck and Bus Driver/Commercial Vehicle Operation	TL	324	120	0	0	0	0	444
Automobile/Automotive Mechanics Technology/Technician	TL	285	5	22	0	0	0	312
Computer and Information Sciences	M, HC, BS, LS, TL	0	0	37	240	31	2	310
Medical Clinical & Allied Health and Medical Assisting Services	HC	46	192	60	0	0	0	298
Finance, General	BS, LS	0	0	0	275	7	0	282
Accounting & Accounting Technology/Technician and Bookkeeping	BS	3	8	38	188	18	0	255
Mechanical Engineering & Technologies/Technician	M	0	0	5	167	39	15	226
Health Professions and Related Clinical Sciences, Other	HC, LS	170	0	0	33	0	0	203
Business/Commerce, General	BS, LS	0	4	131	31	15	0	181
Licensed Practical/Vocational Nurse Training	HC	0	165	0	0	0	0	165
Electrical and Electronics Engineering & Technology/Technician	M	56	0	7	45	30	8	146
Industrial Engineering & Management	M, TL	0	0	0	60	72	7	139
Welding Technology/Welder	M	75	33	30	0	0	0	138
Logistics, Materials, and Supply Chain Management	TL	79	0	0	30	8	0	117
Emergency Care Attendants & Emergency Medical Technology/Technicians	HC	112	3	0	0	0	0	115
Marketing/Marketing Management, General	BS	0	0	6	103	2	0	111
Chemical Engineering & Technology/Technician	M	0	0	8	81	8	7	104
Chemical and Biomolecular Engineering	LS	0	0	0	81	12	7	100
Heating, Air Conditions, Ventilation and Refrigeration Maintenance Technology/Technician	TL	67	4	12	0	0	0	83
Chemistry & Chemical Technology/Technician	LS	0	0	17	52	9	4	82
Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing, Other	HC	0	43	0	33	0	0	76
Physician Assistant	HC	0	0	0	0	71	0	71
Computer Systems Networking and Telecommunications	BS	21	0	49	0	0	0	70
Rehabilitation Aide	HC	60	0	0	0	0	0	60
Nurse/Nursing Assistant/Aide and Patient Care Assistant	HC	59	0	0	0	0	0	59
Advanced Manufacturing Training	M, LS	58	0	0	0	0	0	58
Autobody/Collision and Repair Technology/Technician	TL	56	0	0	0	0	0	56
Construction/Heavy Equipment/Earthmoving Equipment Operation	TL	56	0	0	0	0	0	56
Health Services/Allied Health/Health Sciences, General	HC	0	0	29	27	0	0	56

Program	Sectors	Non-Cred.	Cert.	Assoc.	Bach.	Mast.	PhD	Total
Machine Tool and Die Technology/Technician/Machinist	M	53	1	0	0	0	0	54
Bioengineering and Biomedical Engineering	LS	0	0	0	48	4	1	53
Web Page, Digital/Multimedia and Information Resources Design	BS	36	9	7	0	0	0	52
Phlebotomy Comprehensive (Phlebotomy Technican/Phlebotomist)	LS	21	28	0	0	0	0	49
Engineering, General & Other	M, LS	5	0	18	25	0	0	48
Health Information/Medical Records Technology/Technician	HC	0	0	44	0	0	0	44
Graphic Design	BS	0	0	35	7	0	0	42
Industrial Electronics & Mechanics and Maintenance Technology	M, TL	13	3	25	0	0	0	41
Computer and Information Systems Security/Information Assurance	BS	0	0	20	16	3	0	39
Medical Administrative/Executive Assistant and Medical Secretary	HC	0	2	37	0	0	0	39
Electromechanical Technology/Electromechanical Engineering Technology	M	29	1	8	0	0	0	38
Information Technology	BS	0	0	0	38	0	0	38
Human Resources Management/Personnel Administration	BS	0	5	12	13	4	0	34
Materials Engineering	M	0	0	0	25	4	5	34
Health/Health Care Administration/Management	HC	0	16	0	10	4	0	30
Computer Engineering, General	BS	0	0	0	24	4	1	29
Pharmacy Technician/Assistant	HC	20	6	0	0	0	0	26
Management Sciences and Quantitative Methods	LS	0	0	0	5	19	0	24
Building, Property Maintenance and Management	TL	21	0	0	0	0	0	21
Drafting and Design Technology/Technican, General	BS	18	0	3	0	0	0	21
Sales, Distribution, and Marketing Operations, General	TL	21	0	0	0	0	0	21
Logistics Forklift	TL	20	0	0	0	0	0	20
Computer Support Specialist	BS	0	0	15	0	0	0	15
Entrepreneurship/Entrepreneurial Studies	LS	11	4	0	0	0	0	15
Computer Programming/Programmer, General	BS	0	4	10	0	0	0	14
Small Engines & Gas Engines/Recreational Vehicle Repair	TL	12	0	0	0	0	0	12
Manufacturing Engineering & Technologies/Technicians	M, TL	0	1	4	0	6	0	11
Medium/Heavy Vehicle and Truck Technology/Technician	TL	10	0	0	0	0	0	10
Clinical/Medical Laboratory Technician	LS	0	0	7	0	0	0	7
Polymer/Plastics Engineering	M	0	0	0	0	6	1	7
Project Management	LS	0	0	0	0	7	0	7
Quality Control Technology/Technician	M, LS	0	0	2	0	0	0	2

Sector Key: **M** = Manufacturing, **LS** = Life Sciences, **BS** = Business Services, **HC** = Health Care, **TL** = Transportation & Logistics

Average Annual Program Completions show an annual average of the last five years (2016-2020) for accredited programs and three years (2018-2020) for non-credit programs in the Lehigh Valley.

KEY RECOMMENDATIONS

Camoin & Emsi Burning Glass have identified 4 recommendations as part of its action plan to guide talent strategies for the Lehigh Valley over the coming years.

Focus on skills

- Employability and “soft skills” availability and quality
- Technical skills which are specific to the sectors
- Expand STEM skills criteria to be applicable to all industries
- Develop short-term immediate training

Develop and adopt digital tools

- Life-long learning, training, and certification which is accessible and scalable
- Mentorships and internships
- Digital dashboards and access to data
- Communications, sharing of resources, stories, best practices
- Virtual tours and experiences for job seekers, students, and the community

Bring all ages into the workforce

- Reengage retirees and others to return to the workforce, if desired
- Engage younger workers in community offerings and with opportunities
- Intensify talent attraction initiatives and campaigns including targeting through talent and people analytics and digital campaigns
- Continue and support efforts aimed at diversity, equity, and inclusion

Continue stakeholder engagement and collaboration

- Regularly convene the Education and Talent Supply Council
- Facilitate work groups about Talent Study recommendations
- Grow the coalition
- Stay current on employer needs regarding talent



METHODOLOGY

Camoin Associates and Emsi Burning Glass (now Lightcast) completed a thorough quantitative, qualitative, and validated study and subsequent recommendations for the Lehigh Valley talent market. Camoin Associates is a full-service economic development, strategic and organizational planning, and business lead generation firm. Emsi Burning Glass is a labor market data company serving clients in the U.S., U.K., Canada, European Union, and the Asia-Pacific region.

To understand the landscape, these firms reviewed existing reports, surveys, data, and other resources in preparation for this Lehigh Valley Talent Supply and Sector Analysis and Strategic Action Plan.

Camoin Associates engaged with Lehigh Valley employers, economic development organizations, workforce organizations, educational institutions, and other stakeholders to understand current workforce challenges impacting hiring and retention trends, current solutions and partnerships being utilized. The engagement was done in three ways: a digital survey, focus group discussions, and information calls:

- The digital survey, open from July 13, 2021 to September 7, 2021, received 350 responses that were used to assess labor force gaps and challenges. Survey results were examined in sectors that are growing and/or have a strong presence in the Lehigh Valley.
- Camoin led six focus group discussions with employers in each sector, sector leaders, educational institutions, and other relevant organizations. These discussions centered on workforce opportunities and challenges as well as validating findings from the survey and data collection.
- In more detailed discussions, Camoin Associates spoke with 31 local employers to drive a deeper understanding about workforce challenges and solutions.

In partnership with Emsi Burning Glass, Camoin Associates also completed a detailed analysis of supply and demand data in a Labor Market Analysis. The analysis examined demographic, industry sector, and skills trends to identify the gaps between Lehigh Valley's workforce and the demand from the region's industry sectors. The analysis also examined COVID-19 related data and trends to better understand how the pandemic has and will continue to impact the industries.

Key themes emerged from the employer and stakeholder engagement and data analysis. These are embedded in the findings and recommendations for the talent study.

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LVEDC acknowledges the support and involvement of its Education and Talent Supply Council members, the many local businesses and stakeholders who participated in the study, and the Lehigh Valley's 11 colleges and universities and three career and technical centers, who provided valuable data on recent graduates and current students in the region's talent supply pipeline.

LVEDC thanks the staff of Camoin & Emsi Burning Glass for its extensive work, which has provided a fuller understanding of the Lehigh Valley's current talent market and a framework for ongoing research and collaboration to identify and fortify the Lehigh Valley talent pipeline.

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Our Mission

The mission of the Lehigh Valley Economic Development Corporation is to market the economic assets of the Lehigh Valley and to create partnerships to support the recruitment, growth and retention of employers and the creation of jobs for people of all skills and education levels.

Our Vision

Our vision is of a diverse Lehigh Valley economy that provides economic growth and opportunity for people of all skills and education levels and strengthens all our cities, boroughs, and townships.

Our Values

Find a way: We do what it takes to solve the problem or find the answer

Build the team: We work with each other and all partners to find solutions

Collaborate: We are the region's economic connector

Inspire trust: Treat all equally and fairly and focus on the big picture

Results first: Focus our work and efforts on outcomes, not on process

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