

Apprenticeships

The apprenticeship office was established in TDLWD in 2019 to increase the number of apprenticeships across the state and introduce new types of apprenticeships. The total number of apprenticeship completers increased from 981 in 2020 to 1135 in 2021, then held steady at 1118 for 2022. Slightly more than half of the completers were in the East Region (53 percent), with 29 percent in the Middle Region and 18 percent in the West Region. The sponsors and the number of completers in each region and in the LWDA's within the region are shown in the following tables.

Table 36: East LWDA Tops the Region in the Number of Registered Apprenticeship Sponsors with Completers in 2022

Program Sponsor Name	LWDA	Program Sponsor County	Number of Completers
Consolidated Nuclear Security, LLC	East	Anderson County	2
Eagle Bend Manufacturing	East	Anderson County	5
Knoxville Painters	East	Anderson County	1
Oak Ridge Electric JATC	East	Anderson County	22
Danny Davis Electrical Contractors, Inc.	East	Blount County	3
Massey Electric #1	East	Blount County	10
Tennessee Valley Youth Apprenticeships	East	Blount County	1
Telos Global, LLC	East	Campbell County	2
Walters State Community College	East	Hamblen County	31
Oshkosh Manufacturing LLC	East	Jefferson County	5
Electrician Training Academy Knoxville	East	Knox County	24
Funderburk Electrical Services	East	Knox County	10
Insulators Local 46 JATC	East	Knox County	9
Knoxville Area Sheet Metal JAC	East	Knox County	24
Knoxville Ironworkers JAC	East	Knox County	4
Knoxville Laborers JATC	East	Knox County	12
Knoxville Plumbers & Steamfitters JATC	East	Knox County	20
Knoxville Plumbing Heating Air Conditioning Cont	East	Knox County	10
Pellissippi State Community College	East	Knox County	2
Resource Valley	East	Knox County	24
ShoffnerKalthoff,MES	East	Knox County	11
TVA	East	Knox County	29
Dienamic Tooling System Inc	East	Roane County	1
East Tennessee LWDA Total			262
Holston Electric Co	Northeast	Hawkins County	4
Mountain Electric Cooperative	Northeast	Johnson County	2
Eastman Chemical Co. - Coal Gas Division	Northeast	Sullivan County	13
Eastman Chemical Co. - Tn Operations	Northeast	Sullivan County	113
Northeast State Community College/RCAM	Northeast	Sullivan County	1
Primester	Northeast	Sullivan County	1
Tri-Cities Electrical JATC	Northeast	Sullivan County	7
AO Smith	Northeast	Washington County	2
Plumber and Pipefitters, Local Union 538 JATC	Northeast	Washington County	5
Northeast LWDA Total			148
Puerto Rico Industries for the Blind Corp	Southeast	Bradley County	4
Chattanooga Electrical JATC	Southeast	Hamilton County	55
Chattanooga Ironworkers JAC	Southeast	Hamilton County	8
Chattanooga Painters JAC	Southeast	Hamilton County	3
Chattanooga State Community College	Southeast	Hamilton County	10
Chattanooga State Community College (Westrock)	Southeast	Hamilton County	1
Gestamp Chattanooga, LLC	Southeast	Hamilton County	5
Tennessee Carpenters Regional Council JATC	Southeast	Hamilton County	70
UA Local 43 Plumbers Steamfitters JATC	Southeast	Hamilton County	19
ABB	Southeast	McMinn County	1
Operating Engineers Local No. 917 Apprenticeship &	Southeast	McMinn County	4
Southeast LWDA Total			180
Grand Total for East Region			590

Source: TDLWD Apprenticeship Data

Table 37: Northern Middle LWDA has a Wide Variety of Apprenticeship Sponsors with Completers in 2022 in the Middle Region

Program Sponsor Name	LWDA	Program Sponsor County	Number of Completers
Industrial Electric Services, Inc.	Northern Middle	Cheatham County	1
Abec Electric Company, LLC	Northern Middle	Davidson County	7
American Commercial Industrial Electric, LLC	Northern Middle	Davidson County	1
Datatel Network Services	Northern Middle	Davidson County	2
Elevator Constructors Local 93	Northern Middle	Davidson County	23
Fast Electrical Contractors, Inc.	Northern Middle	Davidson County	2
John Bouchard & Sons Co.	Northern Middle	Davidson County	2
Messer Construction Co.	Northern Middle	Davidson County	2
Nashville Electric Service	Northern Middle	Davidson County	16
Nashville Electrical JATC	Northern Middle	Davidson County	47
Nashville Ironworkers	Northern Middle	Davidson County	11
Nashville Plumbers and Pipefitters	Northern Middle	Davidson County	26
Nashville Sheetmetal JATC	Northern Middle	Davidson County	30
Nashville State Community College	Northern Middle	Davidson County	3
Next Steps At Vanderbilt University	Northern Middle	Davidson County	2
Power Tek, LLC	Northern Middle	Davidson County	1
Shift.Org, Inc	Northern Middle	Davidson County	6
Specialty Care	Northern Middle	Davidson County	4
Stansell Electric Apprenticeship Training Program	Northern Middle	Davidson County	11
Summit Fire and Safety	Northern Middle	Davidson County	1
Tennessee Department Of Education	Northern Middle	Davidson County	28
Wolfe & Travis Electric	Northern Middle	Davidson County	19
Wright Industries, LLC Dba Jr Automation	Northern Middle	Davidson County	3
Cumberland Electric Membership Corporation	Northern Middle	Montgomery County	3
M&M Electrical Contractor, Inc	Northern Middle	Robertson County	1
CMS Nextech	Northern Middle	Rutherford County	1
Middle Tennessee Electric Membership Corp	Northern Middle	Rutherford County	8
Robert C Byrd Institute	Northern Middle	Sumner County	8
Hamilton-Ryker TalentGro	Northern Middle	Williamson County	26
Lee Company	Northern Middle	Williamson County	6
Northern Middle LWDA Total			301
Micro Craft, Inc.	Southern Middle	Coffee County	1
Spring Hill Manufacturing (General Motors)	Southern Middle	Maury County	2
Southern Middle LWDA Total			3
TLD Logistics	Upper Cumberland	Cumberland County	25
Shiroki North America, Inc	Upper Cumberland	Dekalb County	1
Upper Cumberland LWDA Total			26
Grand Total for Middle Region			330

Source: TDLWD Apprenticeship Data

Table 38: Greater Memphis has Nearly 150 Apprenticeship Completers 2022 in the West Region

Program Sponsor Name	LWDA	Program Sponsor County	Number of Completers
Chickasaw Electric Cooperative	Greater Memphis	Fayette County	3
Atlantic Track	Greater Memphis	Shelby County	1
G.I. Apprentice Inc	Greater Memphis	Shelby County	2
Greater Memphis Auto Dealers Association	Greater Memphis	Shelby County	11
International Union Of Elevator Constructors Local	Greater Memphis	Shelby County	10
IUOE Local 369 Training Fund	Greater Memphis	Shelby County	1
Memphis Asbestos JAC	Greater Memphis	Shelby County	5
Memphis Electrical JATC	Greater Memphis	Shelby County	30
Memphis Light, Gas, and Water	Greater Memphis	Shelby County	14
Memphis Plumbers JAC	Greater Memphis	Shelby County	9
Memphis Sheet Metal Workers JAC	Greater Memphis	Shelby County	3
Mid South Independent Electrical Contractors	Greater Memphis	Shelby County	22
Steamfitters Local Union 614 Joint Apprenticeship Training Program	Greater Memphis	Shelby County	18
West Tn Associated Builders & Contractor	Greater Memphis	Shelby County	2
Whitewater Protection	Greater Memphis	Shelby County	14
Y & W Technologies	Greater Memphis	Shelby County	2
Greater Memphis LWDA Total			147
Amteck	Northwest	Dyer County	3
Auston Mealers Equipment Services	Northwest	Dyer County	4
Dyersburg State Community College	Northwest	Dyer County	2
Alliance Staffing Group LLC	Northwest	Gibson County	1
Northwest Corrections	Northwest	Lake County	29
Weakley County Electric	Northwest	Weakley County	4
Northwest LWDA Total			43
Southwest Tennessee EMC	Southwest	Haywood County	3
Jackson Energy Authority	Southwest	Madison County	2
Tennessee College Of Applied Technology, Jackson	Southwest	Madison County	3
Southwest LWDA Total			8
Grand Total			198

Source: TDLWD Apprenticeship Data

Table 39 lists the occupations for which the apprentices completed training. The top occupations were electricians, pipe fitters, chemical operators, sheet metal workers, and carpenters. There were 17 occupations that had five or more completers that were not on the list in 2021, including elevator constructors, K-12 teachers, structural steel workers, two healthcare occupations (medical assistant and medical records technician) and several manufacturing technicians, likely responding to shortages of personnel in these areas.

Table 39: Electrician is the occupation for which most apprenticeships are completed

Apprenticeship Occupation Title	Number of Completers, 2022
Electrician (Alternate Title: Interior Electrician)	331
Pipe Fitter (Construction)	84
*Chemical Operator III	66
Sheet Metal Worker	62
Carpenter	55
*Elevator Constructor (Alternate Title: Elevator Constructor Mechanic)	33
Line Installer-Repairer	30
Plumber	30
Millwright	29
*K-12 Teacher	28
Nurse Assistant Certified (Existing Title: Nurse Assistant)	26
*Structural Steel Worker (Alternate Titles: Ironworker Or Structural Ironworker)	25
Truck Driver, Heavy	25
Line Erector (Power-Line Distribution Erector)	22
*Medical Assistant	22
*Electromechanical Technician	18
*Chemical Laboratory Technician	14
*Master Homeland Security Specialist	14
Composite Plastic Fabricator (Existing Title: Insulation Worker)	13
*Refinery Operator	13
Construction Craft Laborer	12
*Automotive Technician Specialist	11
*Refrigeration Mechanic (Any Ind)	11
Tool And Die Maker	11
*Industrial Manufacturing Technician	7
*Welder, Combination	7
*Machinist (Alternate Title: Precision Machinist)	6
Maintenance Repairer, Industrial	6
*Technical Sales Representative	6
Electrician, Maintenance	5
*Medical Record And Health Information Technician/Medical Coders	5
*Operating Engineer (Alternate Title: Heavy Construction Equipment Mechanic)	5
Electric Meter Repairer	4
Industrial Sewing Machine Operator	4
Machine Operator I	4
Metal Fabricator	4
Painter (Const)	4
Stamping Press Operator	4
Surgical Technologist	4
Automobile Mechanic (Alternate Title: Light-Wheel Vehicle Mechanic)	3
Cellar Worker (Wine)	3
Electrician, Powerhouse	3

Table 39, continued: Electrician is the occupation for which most apprenticeships are completed

Apprenticeship Occupation Title	Number of Completers, 2022
Heating, Ventilation, Air Conditioning (Ex. Tit: Heating&Air Cond. Inst/Ser)	3
Small Engine Mechanic	3
Chef De Partie (Cook Hotel & Restaurant)	2
Early Childhood Educator	2
Environmental Control Syst. Instal/Services (Hvac)	2
Heating & Air-Conditioner Install/Ser	2
Industrial Maintenance Mechanic	2
Maint Mechanic (Any Ind) (Alternate Title: Industrial Maintenance Mechanic)	2
Plater	2
Power-Plant Operator	2
Storage And Distribution Manager	2
Tool And Die Maker (Die Manufacturer)	2
Waste Treatment Operator	2
Wastewater-Treatmt - Plant Operator (Alternate Title: Water Treatment Specialist)	2
Wireless Technician	2
Bartender	1
Cable Splicer	1
Carpenter, Interior Systems (Alternate Title: Interior Systems Carpenter)	1
CDL Tractor Trailer / Tanker Operator	1
Cement Mason	1
Electrician	1
Electrician, Substation	1
Inspector, Building	1
IT Generalist	1
Maintenance Tech Municipal	1
Mechanical Engineering Technician	1
Mechatronics Technician	1
Meter Repairer (Any Ind)	1
Office Manager/Admin Services	1
Pipe Coverer & Insulator	1
Press Setup Operator - Stamping	1
Substation Operator	1
Grand Total	1118

*New occupation for 2022 with 5 or more completers
Source: TDLWD Apprenticeship Data

Emerging Industries and Conclusion

In 2021-2022, based on place of work, Tennessee employment grew by nearly 4.6 percent, a notable recovery from the pandemic. Nonfarm employment in 2022 averaged 3,244,800 jobs, which was 141,300 more jobs than in 2021. All of Tennessee's 10 MSAs had positive employment growth from 2021 to 2022. The Nashville MSA had the largest increase- 69,900 jobs.

Notably, for the state, growth in the goods- producing sector of 5.34 percent outpaced that of the private service-providing sector (5.03) as in-sourcing of manufacturing increased with billions of dollars in investment pouring into Tennessee. The growth in technology across many sectors contributed to the information industry being the most rapidly- growing sector in 2021-2022. Based on their historical growth, recent growth, employment size, projected growth, and for most, average weekly wages being above that of the state for 2022, seven industries were selected as top industries on which to focus employment services.

Spurring employment growth in the state are Tennessee's top industries, including:

- **Leisure & Hospitality** – The industry “Art, Entertainment and Recreation” is first in terms of the number of jobs expected (60%) to be added by 2030 and the industry “Accommodation and Food Services” is placed fourth in terms of projected job growth (36%).
- **Health care and social assistance** – The largest industry in 2020 and projected to be the largest in 2030, it ranks second in the number of jobs expected to be added by 2030.
- **Manufacturing** – Ranked second in employment, and fifth in employment growth in 2021-2022, it also ranked fifth in the number of jobs expected to be added by 2030.
- **Transportation, warehousing, and utilities** – ranked first in the percent growth of new jobs from 2017-2022, it also ranked fourth in the number of new jobs expected to be added by 2030.
- **Professional, scientific, and technical services** – Ranked second in new jobs added in the five-year period, and one of the top five industries in growth in 2021-2022.
- **Construction** – It was in the top three industries for growth of new jobs in the last five years and in new jobs added from 2021-2022.
- **Information** – The industry grew at the most rapid pace of any in Tennessee from 2021-2022 at more than 15 percent in employment.

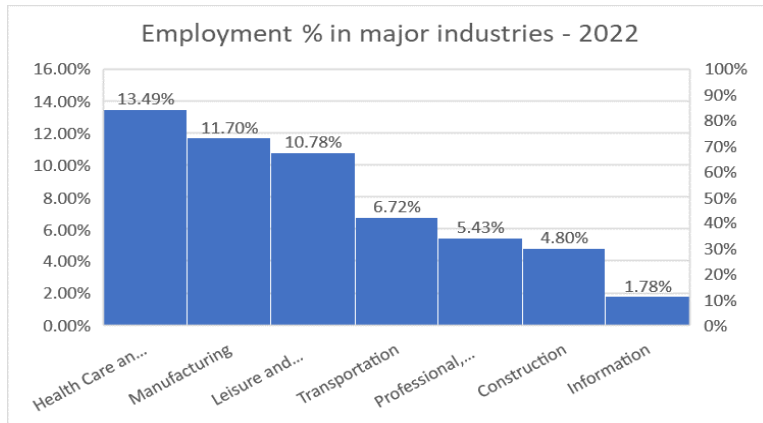


Figure 29

Source: TDLWD, TN QCEW Annual Averages, 2022

According to annual averages for 2022, these industries employ 54.7% of the total workforce. Health care and social assistance ranks first with a 13.5% market share, followed by manufacturing with an 11.7% market share and leisure and hospitality with a 10.78% market share.

Emerging Industries: Within each of the major industries, emerging industries were identified—those expected to have the highest growth rates between now and 2030. In the information industry, software publishers are expected to have the highest growth. Within health care and social assistance, residential facilities for substance abuse, mental health, and intellectual disability have the greatest growth rate as funds for treatment are increasing; with an aging population, more assisted living facilities are being developed. Manufacturing is forecast to have the highest growth in the electric vehicle and battery manufacturing industries. In construction, nonresidential building structures include hotels, medical facilities, and manufacturing plants, among others.

From 2015 to 2023, investment and employment in electric vehicles, electric vehicle battery employment, and battery components have boomed in the U.S., with announced investments of \$120.1 billion and 143,000 jobs. Tennessee, as one of the top 10 states, is the recipient of \$16.6 billion in announced investments, expected to create 18,300 jobs.¹ These and other clean tech investments will create jobs for electricians, mechanics, construction workers, technicians, support staff, engineers, chemists, and related jobs.

Many grants being awarded are now specifying that plans for workforce development in emerging and traditional occupations be included in grant applications,² with an emphasis on quality jobs and increasing equity in employment, encouraged by the U.S. Department of Labor.³ In a recent national survey, four of five employers in energy technologies industries reported “some difficulty” in finding qualified workers.

¹ Environmental Defense Fund, March 2023. US Electric Vehicle Manufacturing Investments and Jobs, p. 3. State-Electric-Vehicle-Policy-Landscape.pdf

² Kery Murakami (February 28, 2023). Feds to hand out \$39B to chip makers in workforce development subsidies. Route Fifty Feds to Hand Out \$39B to Chip Makers in Workforce Development Subsidies - Route Fifty (route-fifty.com)

³ Employment and Training Advisory System, U.S. Department of Labor, Washington, D.C. January 18, 2023. Training and Employment Guidance Letter No. 07-22. <https://www.dol.gov/agencies/eta/advisories/tegl-07-22>

Occupational Shortages: The Tennessee Hospital Association released a report in October 2022¹ stating that the changing demographics of the population in Tennessee will not only increase the demand for health care, but also make it more difficult to recruit and retain enough health care workers to meet the demand. While they project overall population growth will be 9.7 percent during that time, the population of 65- to-74-year-olds will increase by 13.3 percent and those 75 and older by 54.1 percent.

They report current shortages include registered nurses, respiratory therapists, medical laboratory technologists and technicians, and emergency medical technicians. The number of social workers being trained is adequate, but low pay is creating problems with retention.

The significant occupational shortages section of this report lists occupations at every level- high school, postsecondary training from certificate to associate's degree, and bachelor's degree occupations for which large gaps exist between the number of job openings listed on jobs4tn and the number of resumes currently in the system. In addition, the media and school districts report many unfilled positions for elementary and secondary teachers for which accurate numbers are not available.

The appendix to this report lists by East, Middle, and West Region occupations in demand alphabetically by job title. This list was developed by a collaboration of the Tennessee Departments of Labor and Workforce Development, Education, Economic and Community Development, and the Tennessee Higher Education Commission. The criteria for developing this list can be found in the related publication *Improving the Pipeline for Tennessee's Workforce* (March 2023) <https://www.tn.gov/content/tn/thec/research/supply-and-demand.html>.

With Tennessee's growth comes the challenge of filling the current and emerging gaps in its workforce. Tennessee's labor force participation rate is lower than that of the U.S. Governor Lee's goal is to increase the labor force participation rate to 62 percent by 2024, encompassing a variety of initiatives across the state. This dashboard [Labor Force Participation Analysis \(tn.gov\)](#) tracks those results monthly as the workforce system acts to reduce barriers to employment in each region needed to sustain growth.

¹ Tennessee Hospital Association (October 2022). Health Workforce Projections 2021-2035.

Appendix: Occupations in Demand by Region 2022

Occupation Title	West	Middle	East
Accountants and Auditors	X	X	X
Administrative Services Managers	X	X	
Advertising Sales Agents	X	X	X
Agricultural Equipment Operators	X		
Architectural and Civil Drafters	X		X
Architectural and Engineering Managers	X	X	
Art Directors		X	
Audio and Video Technicians		X	
Automotive Body and Related Repairers	X	X	X
Automotive Service Technicians and Mechanics	X	X	X
Bakers		X	X
Bill and Account Collectors	X	X	X
Billing and Posting Clerks	X	X	X
Bookkeeping, Accounting, and Auditing Clerks	X	X	X
Brickmasons and Blockmasons		X	X
Bus and Truck Mechanics and Diesel Engine Specialists	X	X	X
Bus Drivers, Transit and Intercity	X		X
Butchers and Meat Cutters	X	X	
Buyers and Purchasing Agents	X	X	X
Cabinetmakers and Bench Carpenters		X	X
Captains, Mates, and Pilots of Water Vessels	X		
Career/Technical Education Teachers, Postsecondary	X	X	
Cargo and Freight Agents			X
Carpenters	X	X	X
Cement Masons and Concrete Finishers	X	X	X
Chefs and Head Cooks	X	X	X
Chemical Technicians	X		
Chemists	X		X
Chief Executives	X	X	X
Child, Family, and School Social Workers			X
Civil Engineers	X	X	X
Claims Adjusters, Examiners, and Investigators	X		X
Clinical Laboratory Technologists and Technicians	X	X	X
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	X	X	X
Compensation, Benefits, and Job Analysis Specialists	X	X	
Compliance Officers	X		
Computer and Information Systems Managers	X	X	
Computer Network Architects	X	X	X
Computer Network Support Specialists		X	
Computer Numerically Controlled Tool Operators	X	X	X
Computer Occupations, All Other		X	
Computer Programmers	X	X	X

Occupation Title	West	Middle	East
Computer Systems Analysts	X	X	X
Computer User Support Specialists	X	X	X
Computer, Automated Teller, and Office Machine Repairers	X		X
Construction and Building Inspectors	X	X	X
Construction Laborers	X	X	X
Construction Managers	X	X	X
Conveyor Operators and Tenders	X		
Correctional Officers and Jailers	X	X	
Cost Estimators	X	X	X
Counselors, All Other			X
Credit Analysts (Tennessee only)			
Crossing Guards and Flaggers	X	X	
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders		X	
Customer Service Representatives	X	X	X
Cutting and Slicing Machine Setters, Operators, and Tenders	X	X	X
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	X		X
Data Entry Keyers	X	X	X
Database Administrators	X	X	X
Dental Assistants	X	X	X
Dental Hygienists	X	X	X
Diagnostic Medical Sonographers	X	X	X
Dietitians and Nutritionists	X		
Dispatchers, Except Police, Fire, and Ambulance	X	X	X
Editors		X	X
Education Administrators, Postsecondary	X	X	X
Educational, Guidance, and Career Counselors and Advisors	X	X	X
Electrical and Electronic Engineering Technologists and Technicians	X	X	X
Electrical and Electronics Repairers, Commercial and Industrial Equipment	X	X	X
Electrical Engineers	X	X	X
Electrical Power-Line Installers and Repairers	X		X
Electricians	X	X	X
Emergency Medical Technicians	X	X	X
Engineering Technologists and Technicians, Except Drafters, All Other			X
Engineers, All Other	X		X
Executive Secretaries and Executive Administrative Assistants	X	X	X
Exercise Trainers and Group Fitness Instructors	X	X	X
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic		X	
Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers			X
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders			X
Facilities Managers		X	X
Fiberglass Laminators and Fabricators			X
File Clerks	X		X

Occupation Title	West	Middle	East
Financial and Investment Analysts	X	X	X
Financial Managers	X	X	X
Financial Risk Specialists		X	
First-Line Supervisors of Construction Trades and Extraction Workers	X	X	X
First-Line Supervisors of Firefighting and Prevention Workers			X
First-Line Supervisors of Food Preparation and Serving Workers	X	X	X
First-Line Supervisors of Housekeeping and Janitorial Workers	X	X	X
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	X	X	X
First-Line Supervisors of Mechanics, Installers, and Repairers	X	X	X
First-Line Supervisors of Non-Retail Sales Workers		X	
First-Line Supervisors of Office and Administrative Support Workers	X	X	X
First-Line Supervisors of Personal Service Workers	X	X	X
First-Line Supervisors of Production and Operating Workers	X	X	X
First-Line Supervisors of Retail Sales Workers	X	X	X
First-Line Supervisors of Security Workers	X		X
Food Batchmakers	X	X	X
Food Processing Workers, All Other	X		X
Food Service Managers	X	X	X
Forging Machine Setters, Operators, and Tenders, Metal and Plastic	X		
Foundry Mold and Coremakers			X
General and Operations Managers	X	X	X
Glaziers		X	
Graders and Sorters, Agricultural Products	X		
Graphic Designers	X	X	X
Grinding, Polishing, etc. Machine Tool Setters, Operators, and Tenders, Metal and Plastic	X		X
Hairdressers, Hairstylists, and Cosmetologists		X	
Health Education Specialists			X
Health Technologists and Technicians, All Other	X		
Healthcare Social Workers	X	X	X
Healthcare Support Workers, All Other	X	X	X
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic		X	
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	X	X	X
Heavy and Tractor-Trailer Truck Drivers	X	X	X
Helpers--Carpenters	X		
Helpers--Electricians	X	X	X
Helpers--Installation, Maintenance, and Repair Workers	X	X	
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	X	X	X
Helpers--Production Workers	X	X	X
Human Resources Assistants, Except Payroll and Timekeeping	X	X	X
Human Resources Managers	X	X	X
Human Resources Specialists	X	X	X
Industrial Engineering Technologists and Technicians	X		X

Occupation Title	West	Middle	East
Industrial Engineers	X	X	
Industrial Machinery Mechanics	X	X	
Industrial Production Managers	X		
Industrial Truck and Tractor Operators	X	X	X
Information and Record Clerks, All Other		X	
Information Security Analysts	X	X	X
Inspectors, Testers, Sorters, Samplers, and Weighers	X	X	X
Installation, Maintenance, and Repair Workers, All Other	X	X	X
Insurance Sales Agents	X	X	X
Interior Designers		X	
Interviewers, Except Eligibility and Loan	X	X	X
Laborers and Freight, Stock, and Material Movers, Hand	X	X	X
Landscaping and Groundskeeping Workers	X	X	X
Lawyers	X		X
Librarians and Media Collections Specialists	X	X	X
Licensed Practical and Licensed Vocational Nurses	X	X	X
Life, Physical, and Social Science Technicians, All Other	X		
Light Truck Drivers	X	X	
Loan Interviewers and Clerks	X	X	X
Loan Officers	X	X	
Lodging Managers		X	X
Logging Equipment Operators		X	
Logisticians	X	X	X
Machine Feeders and Offbearers		X	X
Machinists	X	X	X
Maintenance and Repair Workers, General	X	X	X
Maintenance Workers, Machinery	X		
Management Analysts	X	X	X
Market Research Analysts and Marketing Specialists	X	X	X
Marketing Managers	X		X
Marriage and Family Therapists			X
Massage Therapists	X	X	X
Meat, Poultry, and Fish Cutters and Trimmers	X		
Mechanical Engineers	X	X	X
Medical and Health Services Managers	X	X	X
Medical Assistants	X	X	X
Medical Equipment Preparers			X
Medical Records Specialists	X	X	X
Medical Scientists, Except Epidemiologists			X
Medical Secretaries and Administrative Assistants	X		
Meeting, Convention, and Event Planners		X	X
Mental Health and Substance Abuse Social Workers	X		

Occupation Title	West	Middle	East
Merchandise Displayers and Window Trimmers	X	X	X
Metal Workers and Plastic Workers, All Other	X	X	X
Millwrights	X		X
Miscellaneous Construction and Related Workers (Tennessee only)			
Mixing and Blending Machine Setters, Operators, and Tenders	X	X	X
Mobile Heavy Equipment Mechanics, Except Engines	X	X	X
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	X	X	
Motor Vehicle Operators, All Other	X		
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	X	X	
Musicians and Singers		X	
Network and Computer Systems Administrators	X	X	X
New Accounts Clerks	X		
Nurse Anesthetists		X	
Nurse Practitioners	X	X	
Occupational Health and Safety Specialists	X		
Occupational Therapists	X	X	
Occupational Therapy Assistants		X	X
Office and Administrative Support Workers, All Other	X		X
Office Clerks, General	X	X	X
Operating Engineers and Other Construction Equipment Operators	X	X	X
Operations Research Analysts	X	X	X
Ophthalmic Medical Technicians		X	
Opticians, Dispensing	X	X	
Order Clerks		X	X
Outdoor Power Equipment and Other Small Engine Mechanics		X	
Packaging and Filling Machine Operators and Tenders	X	X	X
Packers and Packagers, Hand	X	X	
Painters, Construction and Maintenance	X	X	X
Paralegals and Legal Assistants	X		X
Parts Salespersons	X		
Paving, Surfacing, and Tamping Equipment Operators		X	X
Payroll and Timekeeping Clerks	X	X	X
Personal Financial Advisors	X	X	X
Pest Control Workers	X	X	X
Pesticide Handlers, Sprayers, and Applicators, Vegetation	X		
Pharmacy Technicians	X	X	X
Phlebotomists	X	X	X
Physical Therapist Assistants	X	X	X
Physical Therapists	X	X	
Physician Assistants	X	X	X
Physicians, All Other		X	
Pipelayers	X		X

Occupation Title	West	Middle	East
Plumbers, Pipefitters, and Steamfitters	X	X	X
Postal Service Clerks		X	X
Postal Service Mail Carriers	X		
Power Plant Operators		X	X
Prepress Technicians and Workers		X	
Preschool Teachers, Except Special Education	X	X	X
Print Binding and Finishing Workers	X		
Printing Press Operators	X	X	X
Probation Officers and Correctional Treatment Specialists	X		
Procurement Clerks (Tennessee only)			
Producers and Directors		X	
Production Workers, All Other	X	X	X
Production, Planning, and Expediting Clerks	X	X	X
Project Management Specialists	X	X	X
Property, Real Estate, and Community Association Managers	X	X	X
Protective Service Workers, All Other	X	X	X
Public Relations Specialists	X	X	X
Purchasing Managers	X		X
Radiologic Technologists and Technicians	X		
Real Estate Sales Agents	X		X
Refuse and Recyclable Material Collectors	X		
Registered Nurses	X		
Reservation and Transportation Ticket Agents and Travel Clerks		X	
Respiratory Therapists	X	X	X
Roofers	X	X	X
Sales Managers			X
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	X		X
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	X	X	X
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products		X	X
Sawing Machine Setters, Operators, and Tenders, Wood	X	X	X
School Bus Monitors		X	
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	X	X	X
Securities, Commodities, and Financial Services Sales Agents	X		X
Security and Fire Alarm Systems Installers	X	X	
Security Guards	X	X	X
Self-Enrichment Teachers			X
Sewing Machine Operators	X		
Sheet Metal Workers	X	X	X
Shipping, Receiving, and Inventory Clerks	X	X	X
Social and Community Service Managers	X	X	X
Social and Human Service Assistants	X	X	X
Software Developers	X	X	X

Occupation Title	West	Middle	East
Software Quality Assurance Analysts and Testers	X	X	
Speech-Language Pathologists	X	X	X
Structural Iron and Steel Workers		X	X
Structural Metal Fabricators and Fitters			X
Surgical Technologists	X	X	X
Surveying and Mapping Technicians			X
Tax Preparers	X		
Telecommunications Equipment Installers and Repairers, Except Line Installers	X	X	X
Telecommunications Line Installers and Repairers		X	X
Tellers		X	
Tool and Die Makers	X		
Training and Development Managers		X	
Training and Development Specialists	X	X	X
Transportation, Storage, and Distribution Managers	X	X	X
Tree Trimmers and Pruners	X		
Upholsterers			X
Veterinarians		X	X
Veterinary Assistants and Laboratory Animal Caretakers		X	
Veterinary Technologists and Technicians	X		X
Water and Wastewater Treatment Plant and System Operators	X	X	X
Web Developers (Tennessee only)			
Weighers, Measurers, Checkers, and Samplers, Recordkeeping	X		
Welders, Cutters, Solderers, and Brazers	X	X	X
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	X		X
Woodworkers, All Other			X
Woodworking Machine Setters, Operators, and Tenders, Except Sawing			X

Definition of Occupations in Demand in a Region

These lists of occupations in demand by region were developed using data from the Tennessee Departments of Labor and Workforce Development and Economic and Community Development for the publication *Improving the Pipeline for Tennessee's Workforce 2023*: <https://www.tn.gov/content/tn/thec/research/supply-and-demand.html>

Methodology: Occupations must meet the following thresholds for wages and employment:

- **Median Wage:** To encourage job creation and skill development in high-quality jobs, occupations must meet a minimum median wage threshold. All occupations identified as in demand have a median wage which is at least 80 percent of the median wage for the LWDA.
- **Employment:** Additionally, to prevent reporting positions with very low employment levels as in-demand, occupations must meet a minimum employment threshold of 0.04 percent of an LWDA's total employment.

Ratios to identify demand: To measure jobs with high employer demand, postings, openings, and hires for an occupation were analyzed relative to the total number of individuals employed in the occupation within each LWDA. Occupations which meet at least two of these three requirements are identified as having high employer demand:

- **The ratio of job openings** (2021) to the number of individuals employed in an occupation is greater than or equal to the median ratio for all occupations in the region.
- **The ratio of hires** (2021) to the number of individuals employed in an occupation is greater than or equal to the median ratio for all occupations in the region.
- **The ratio of projected annual job openings** from 2020 to 2030 for the state and 2018-2028 for the LWDAs to employment for an occupation is greater than or equal to the median ratio for all occupations in the LWDA.

Regional Demand: An occupation was considered in demand in a region if it was in demand in at least one LWDA in the region.

Data Sources: TDLWD: Occupational Employment and Wages Survey (OEWS), TN and LWDAs, 2021; Long-Term Employment Projections, TN (2020-2030) and LWDAs (2018-2028) (jobs4tn.gov); annual job openings by occupation 2021 (jobs4tn.gov); TNECD (EMSI), 2021.

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