

Manufacturing Career Ladder



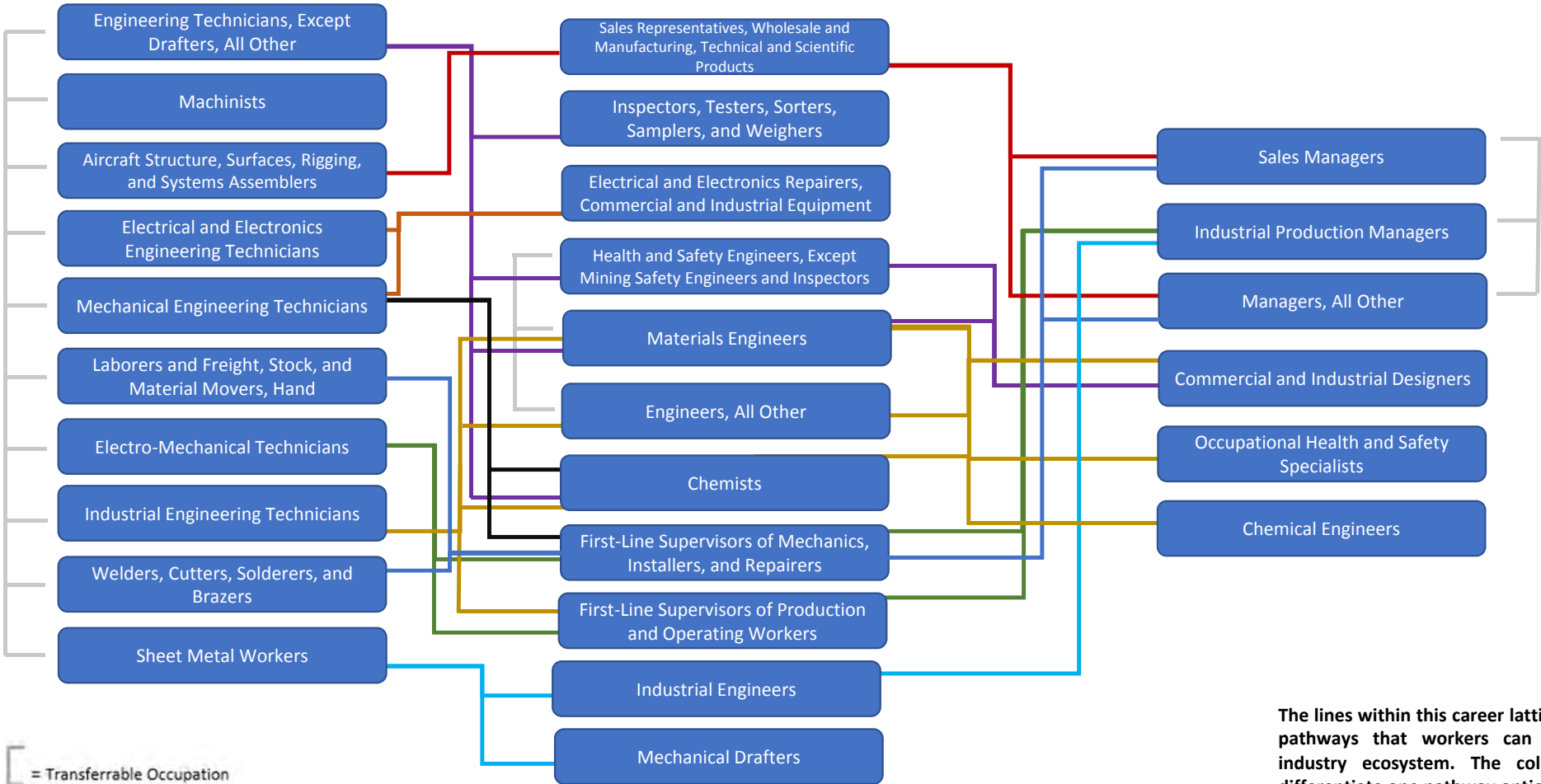
Prepared by AdvanceCT and Thomas P. Miller & Associates

To increase job opportunities in Connecticut's green technology sector, lower energy costs, improve energy efficiency and promote sustainability, the Office of Workforce Competitiveness, in consultation with other agencies, created a green jobs career ladder. This ladder is designed to link green jobs employers with technical education and career schools and institutions of higher education to foster coordination and grow the workforce in the sector.

The green jobs ladder includes components such as the scope of the industry and various occupations included, the skills and knowledge needed to succeed in those occupations, and the professional opportunities available at the entry, mid-career and advanced levels, along with the current salary ranges for each. To maintain this ladder as a comprehensive and useful resource for the green technology industry and its educational partners, it will be updated periodically as needed.

Manufacturing Career Ladder

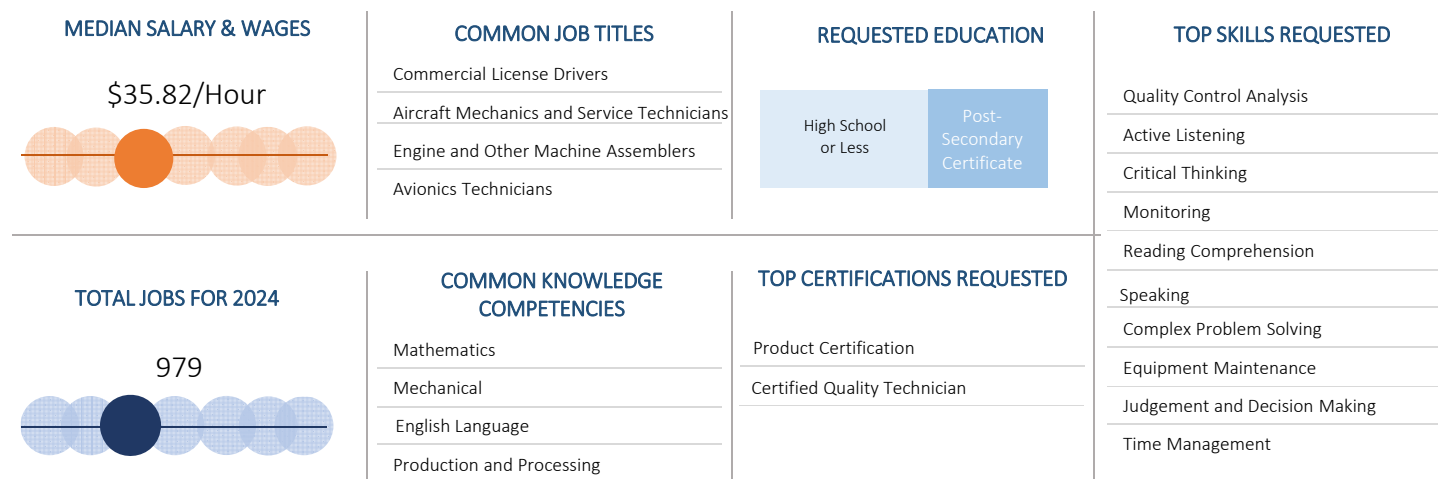
Entry Level | High School Diploma and On-the-Job Training | **Mid-Career** | Bachelor's Degree/ 5 Years or Less of Training | **Advanced** | Doctoral or professional degree/ 5+ Years of Training



The lines within this career lattice provide potential pathways that workers can follow within this industry ecosystem. The colors are simply to differentiate one pathway option from the other.


[= Transferrable Occupation

Aircraft Structure, Surfaces, Rigging, and Systems Assemblers Occupational Profile



SIMILAR INDUSTRIES




 Indicates an especially close similarity

Chemists Occupational Profile



SIMILAR INDUSTRIES



 Indicates an especially close similarity

Chemical Engineers Occupational Profile



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 Indicates an especially close similarity

Commercial and Industrial Designers Occupational Profile

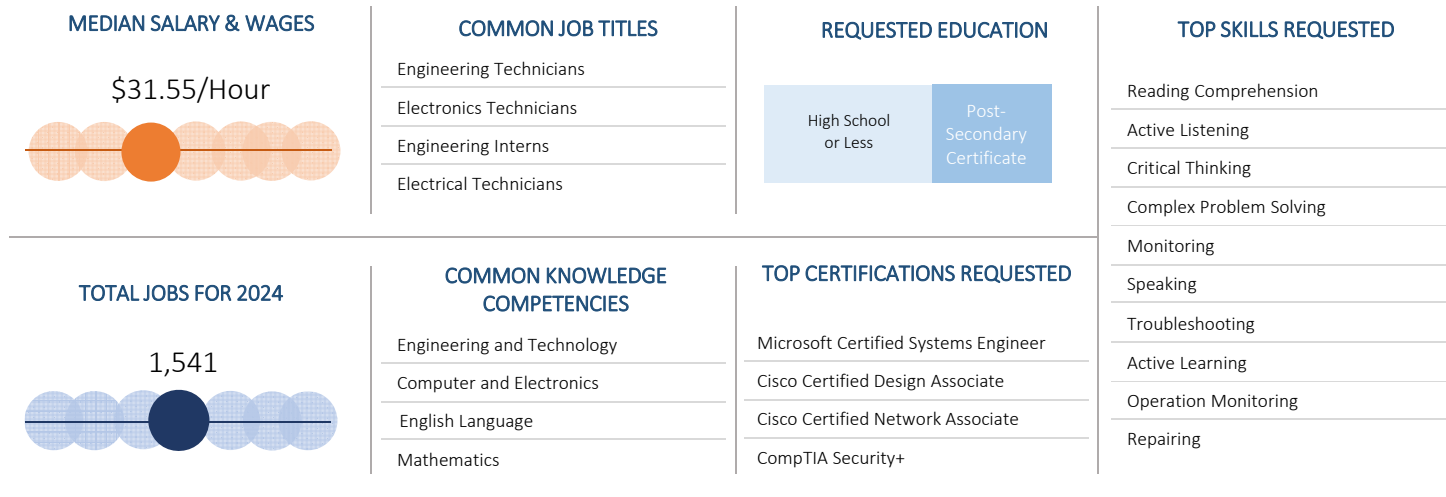


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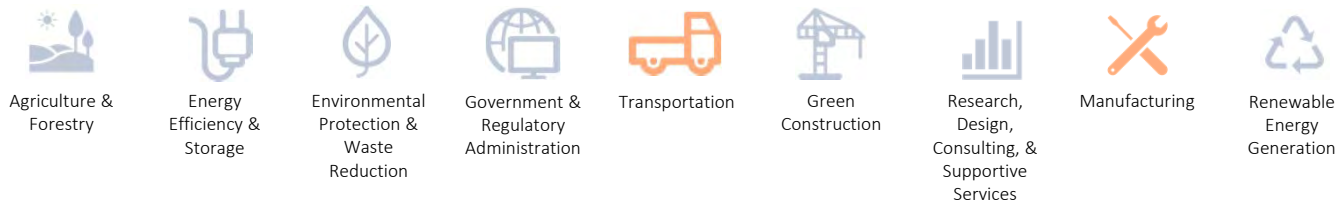


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Electrical And Electronics Engineering Technicians Occupational Profile

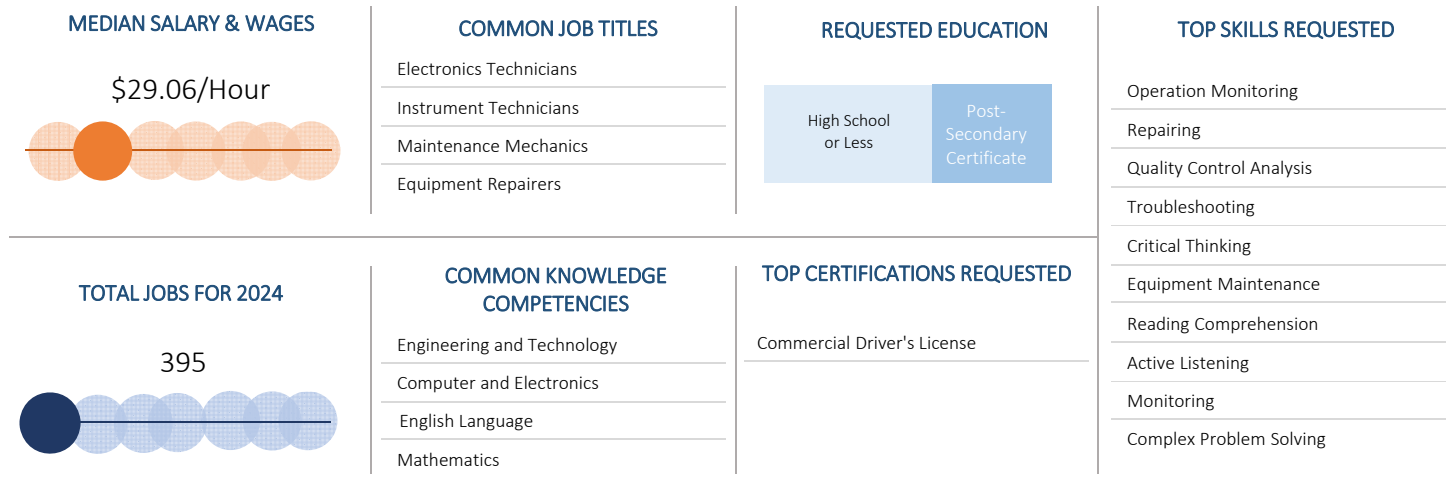


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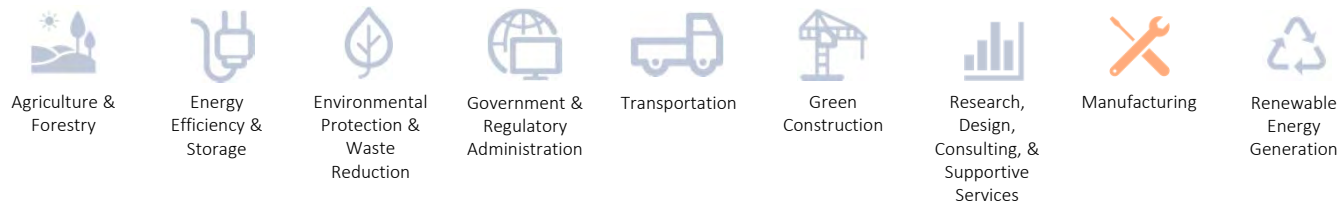


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Electrical and Electronics Repairers, Commercial and Industrial Equipment Occupational Profile

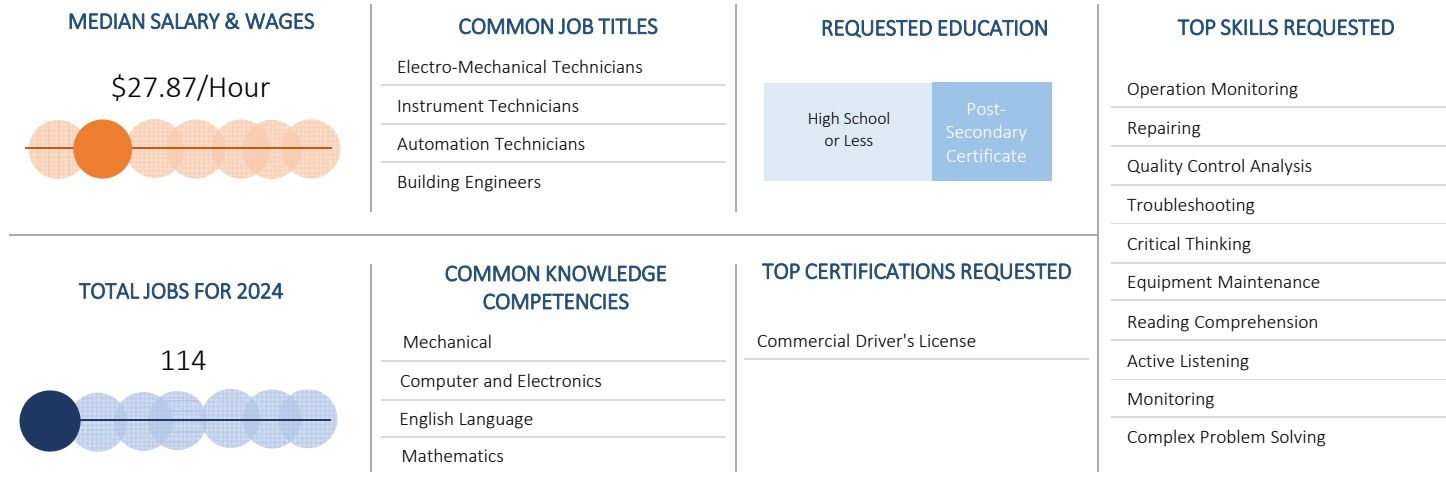


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Electro-Mechanical Technicians Occupational Profile

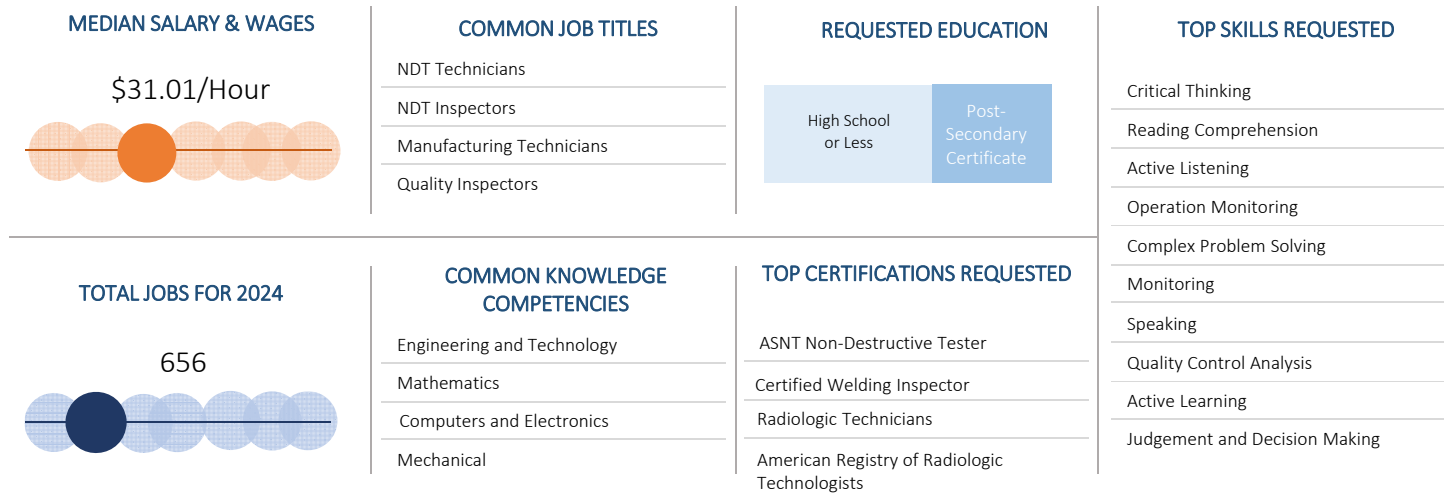


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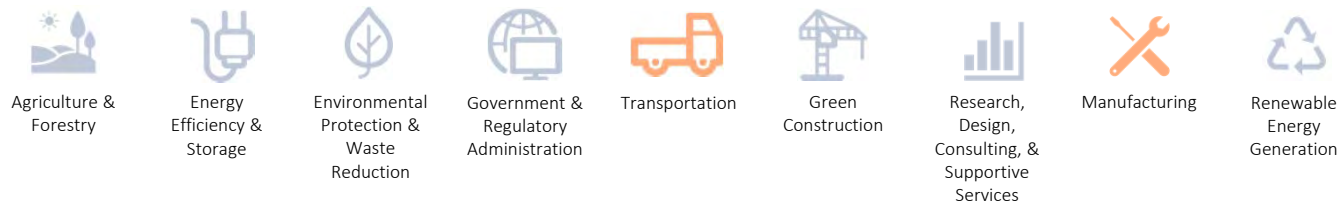


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Engineering Technicians, Except Drafters, All Other Occupational Profile

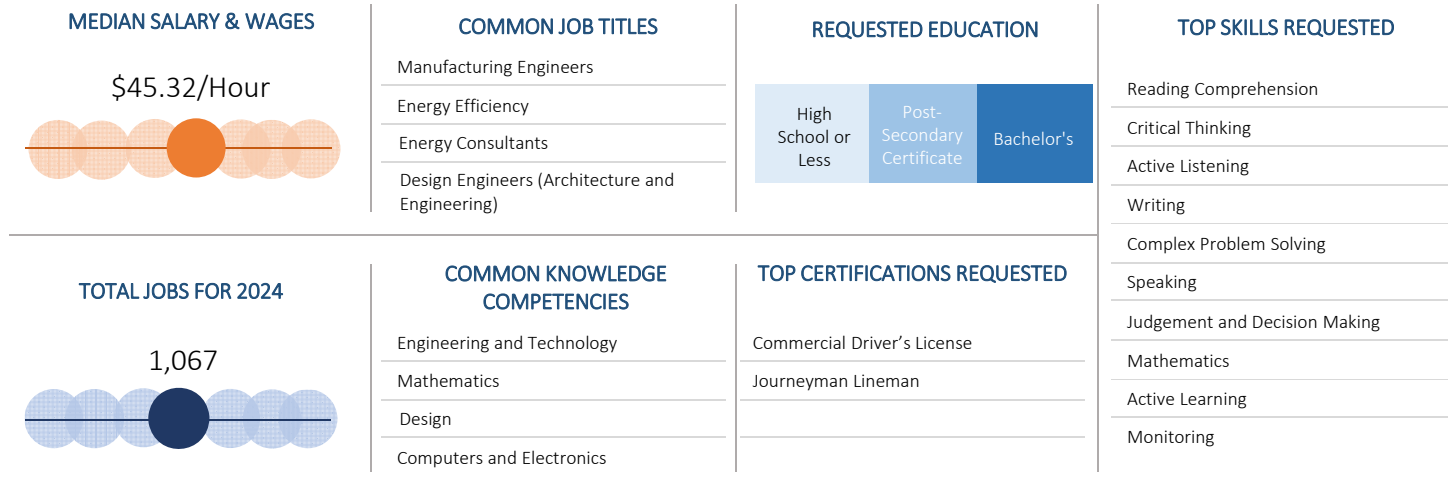


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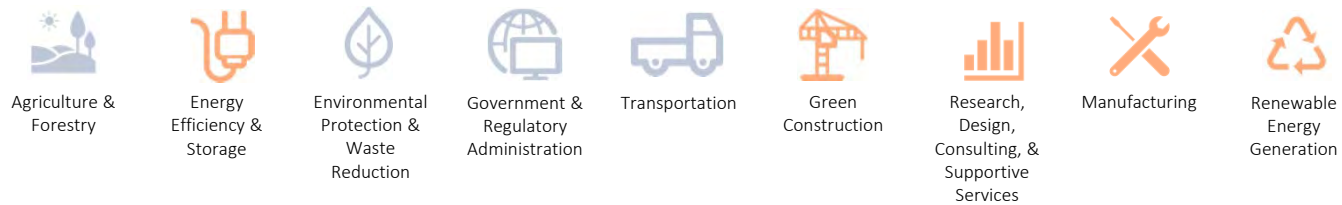


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Engineers, All Other Occupational Profile

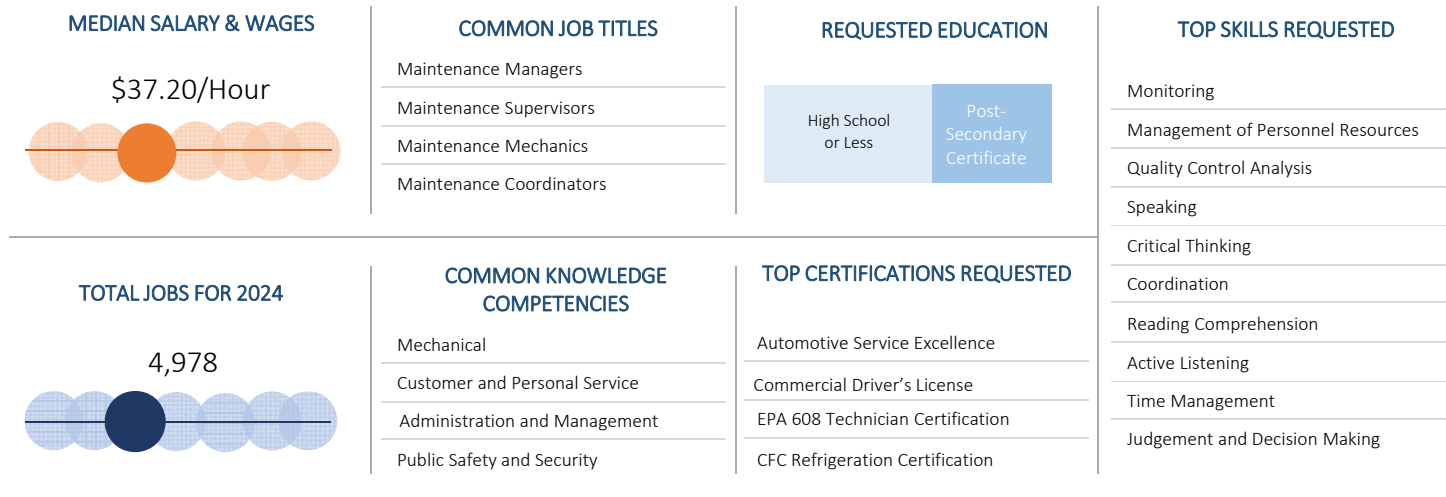


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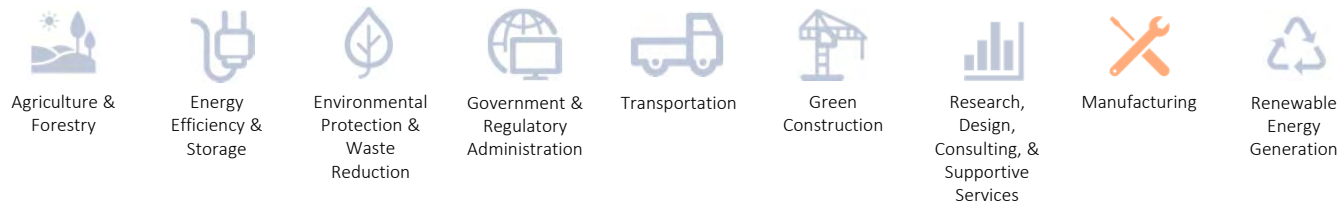


 Indicates an especially close similarity

First-Line Supervisors of Mechanics, Installers, and Repairers Occupational Profile



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First-Line Supervisors of Production and Operating Workers Occupational Profile



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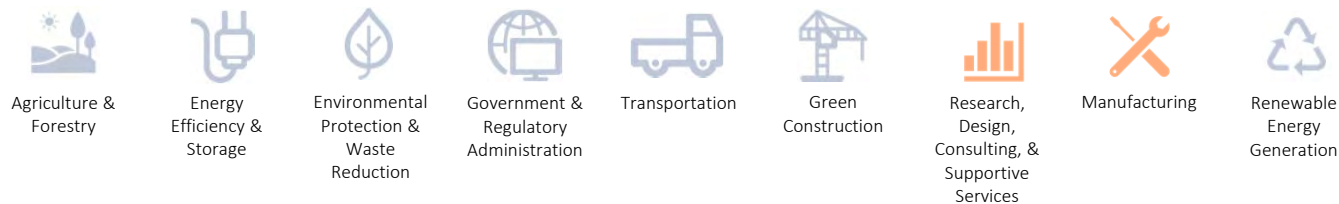



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Health and Safety Engineers, Except Mining Safety Engineers and Inspectors Occupational Profile



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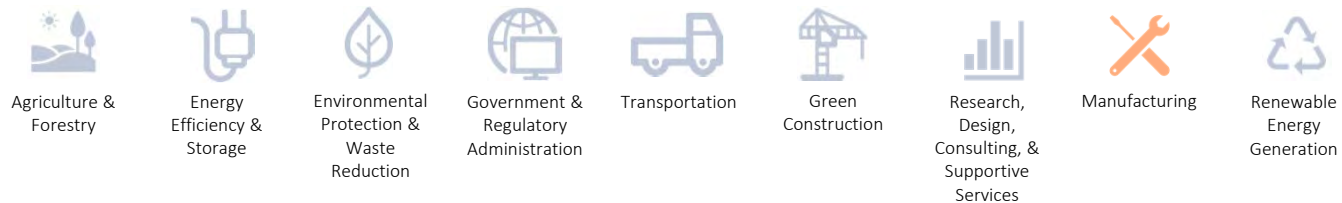


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Industrial Engineering Technicians Occupational Profile



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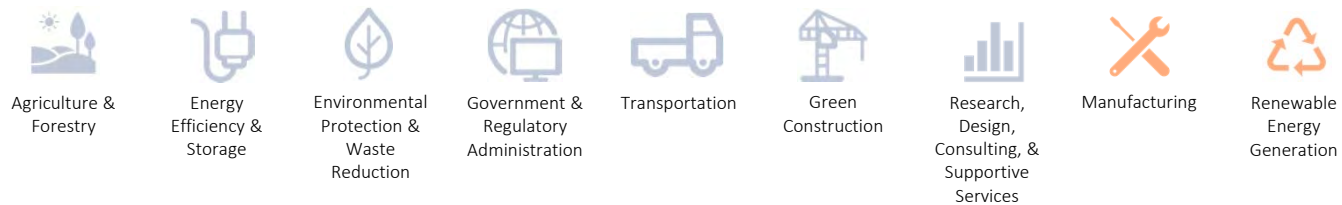


 Indicates an especially close similarity

Industrial Production Managers Occupational Profile



SIMILAR INDUSTRIES



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Inspectors, Testers, Sorters, Samplers, and Weighers Occupational Profile



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Laborers and Freight, Stock, and Material Movers, Hand Occupational Profile

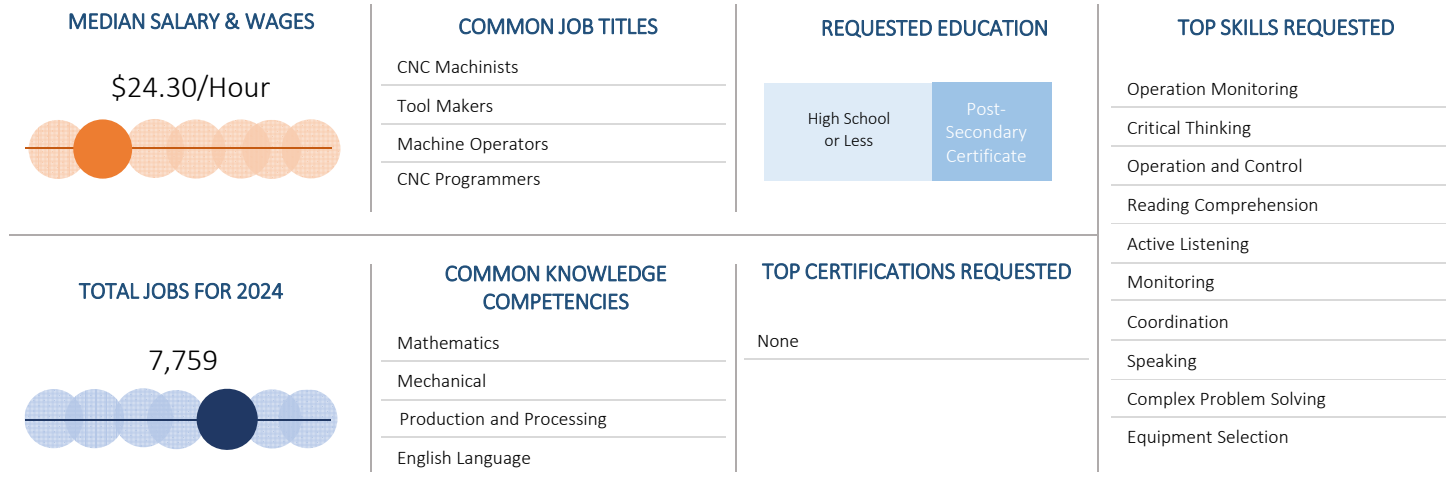


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Machinists Occupational Profile



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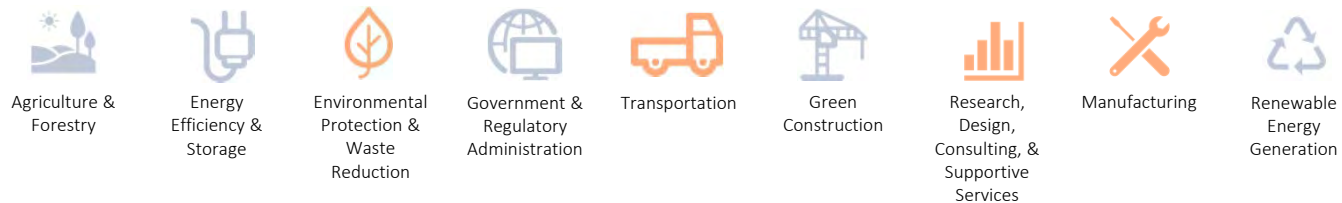



 Indicates an especially close similarity

Managers, All Other Occupational Profile



SIMILAR INDUSTRIES

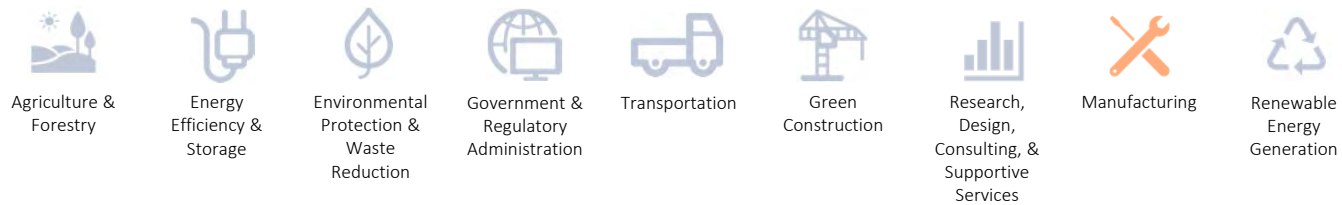


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Materials Engineers Occupational Profile



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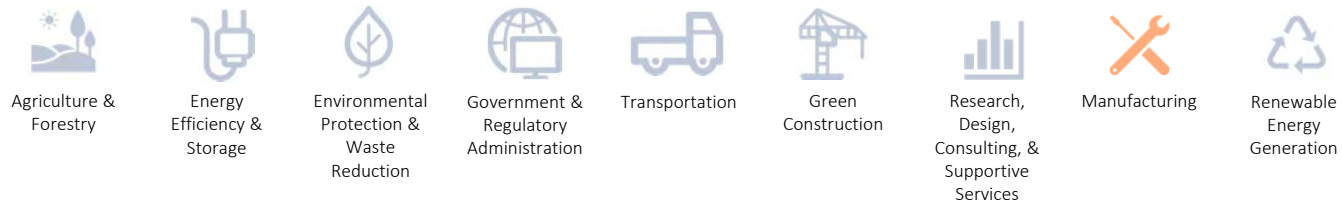


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Materials Engineers Occupational Profile

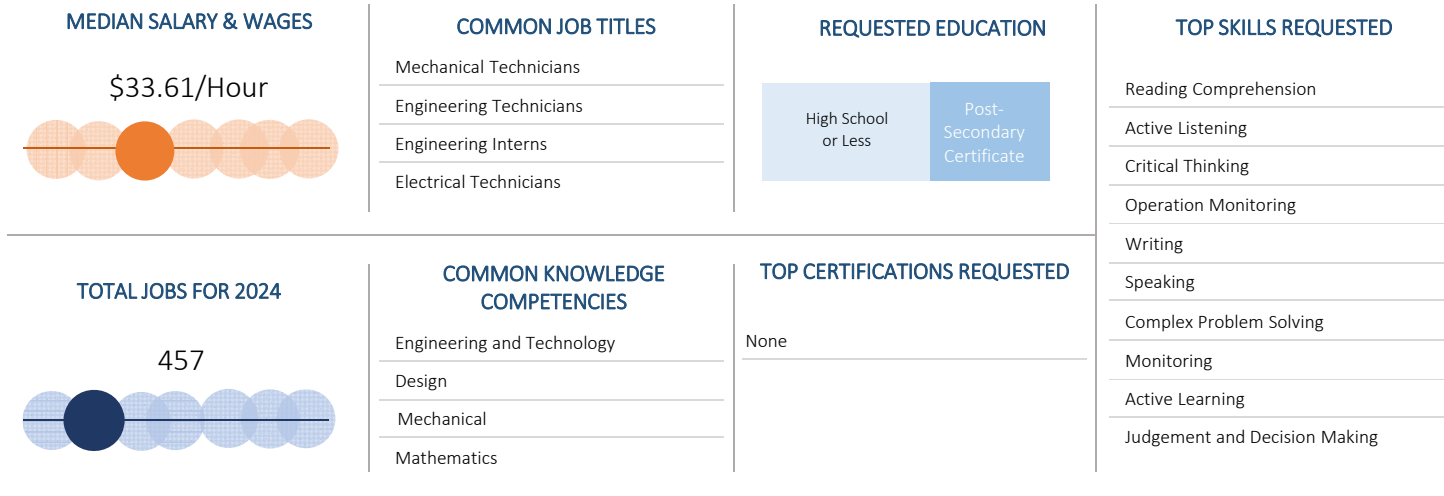


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Mechanical Engineering Technicians Occupational Profile

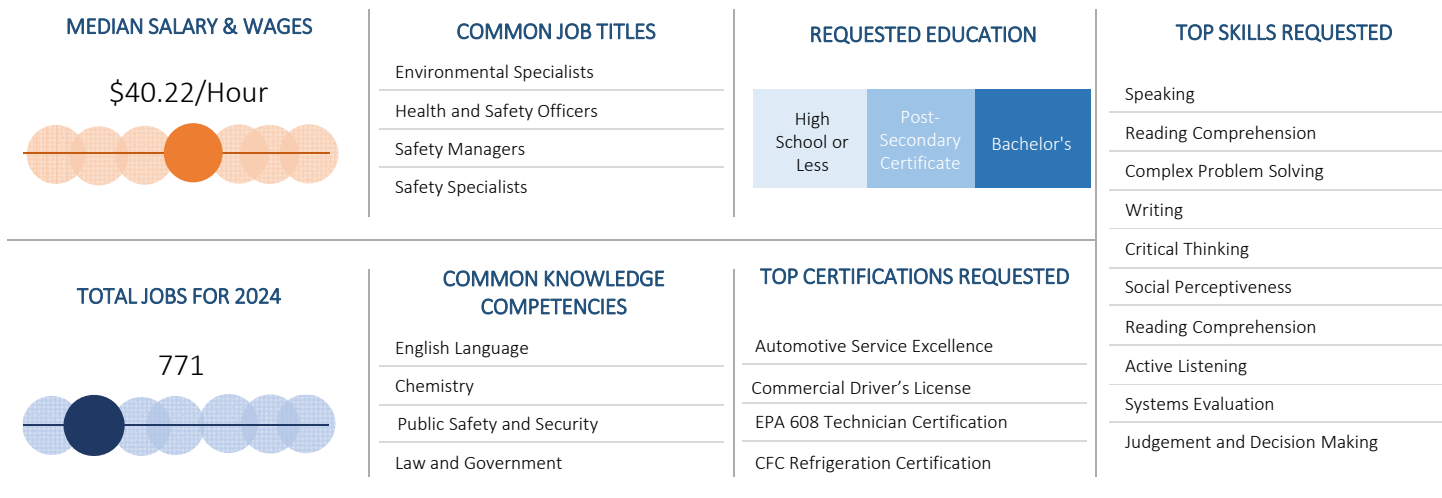


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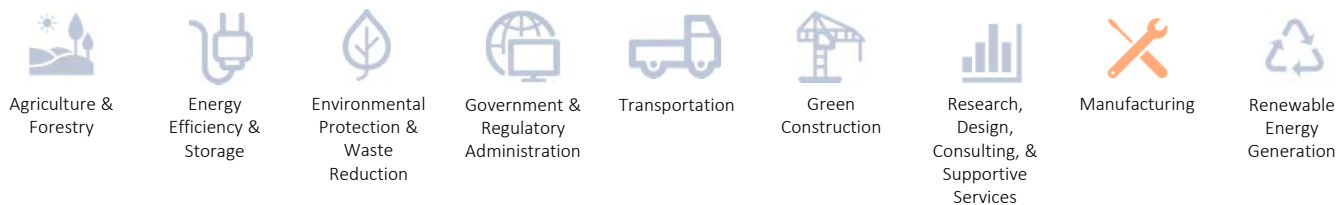


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Occupational Health and Safety Specialists Occupational Profile

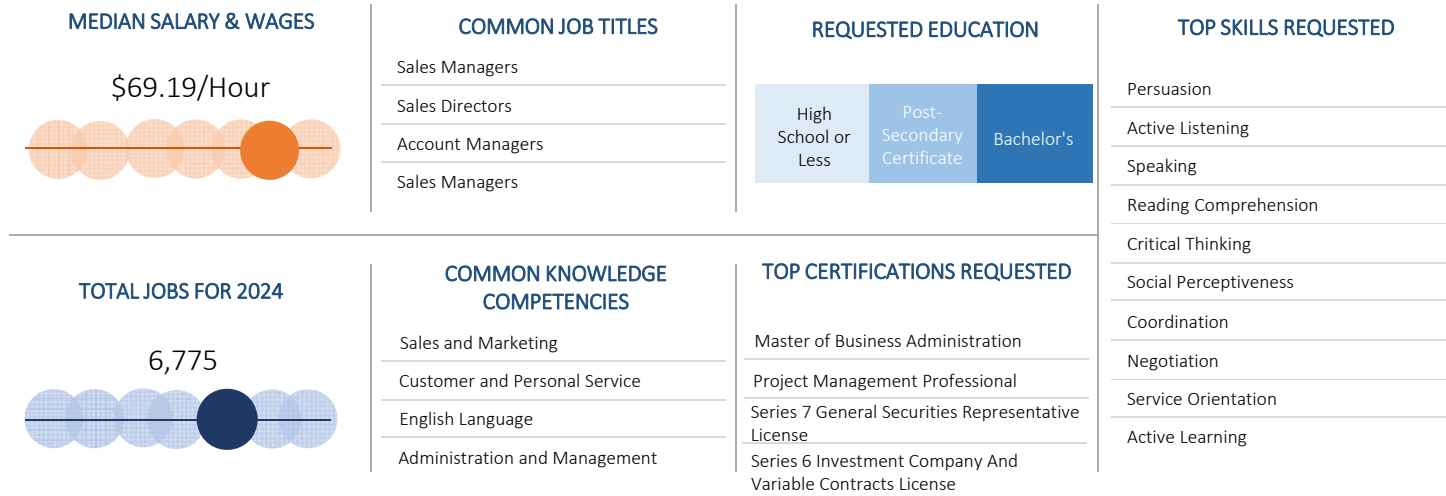


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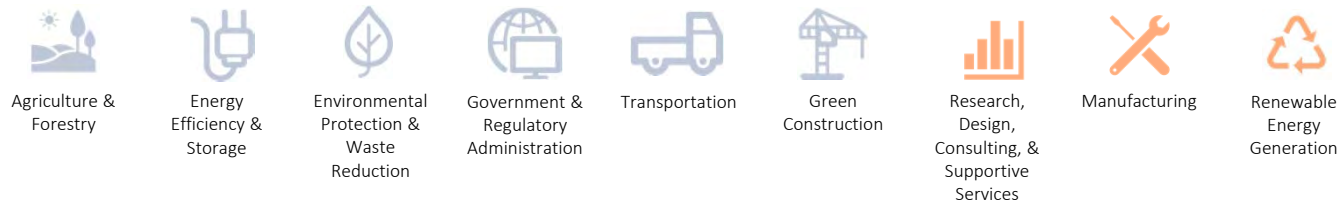


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Sales Managers Occupational Profile

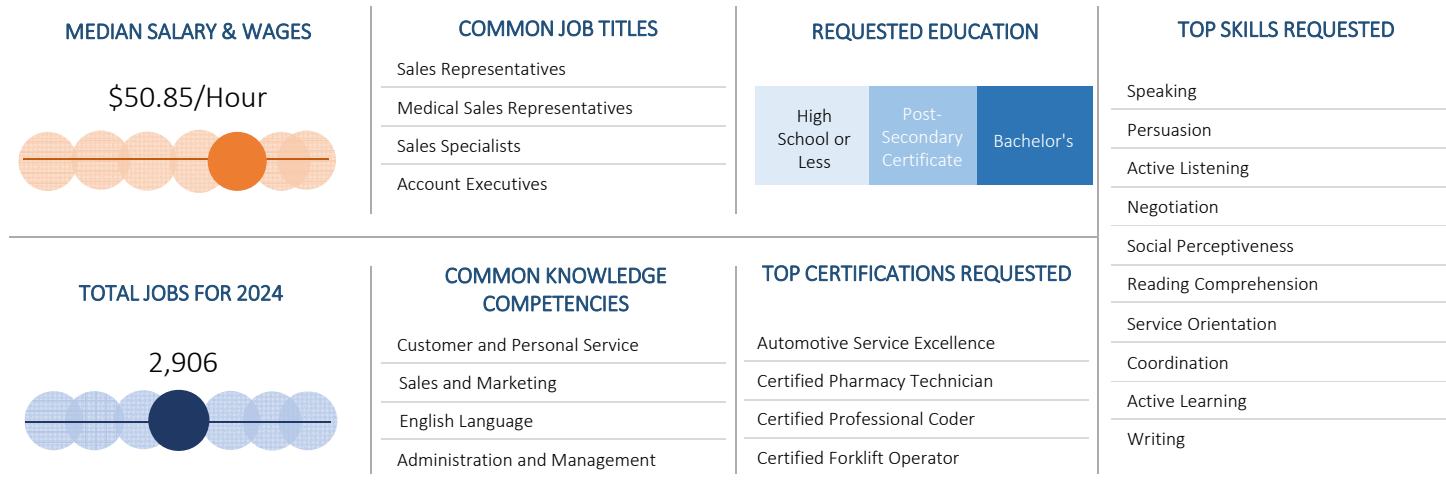


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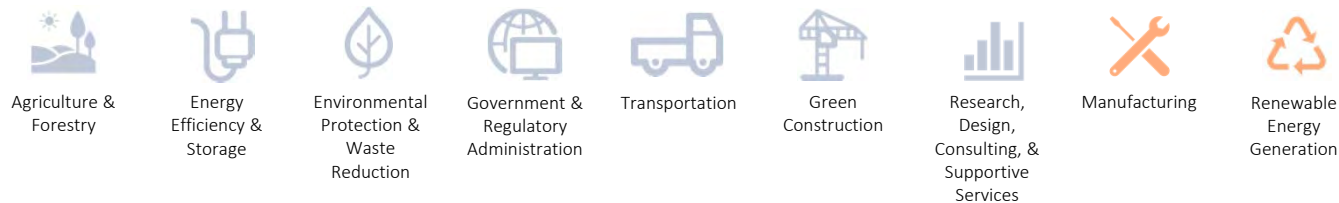


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Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products Occupational Profile



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Sheet Metal Workers Occupational Profile

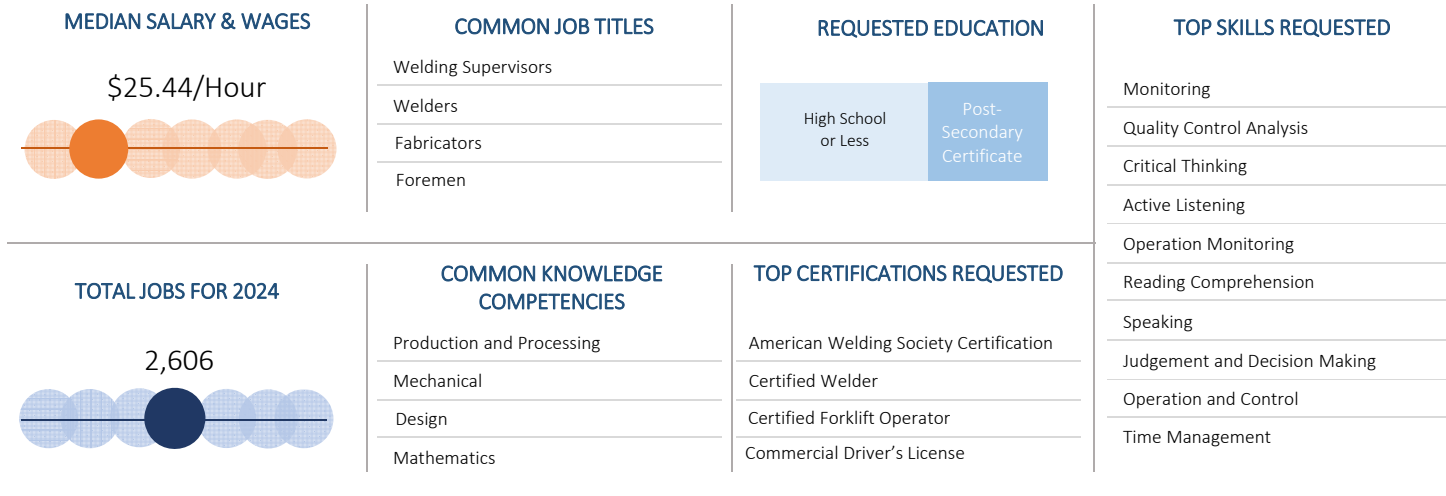


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Welders, Cutters, Solderers, and Brazers Occupational Profile



SIMILAR INDUSTRIES



 Indicates an especially close similarity

Education & Training Institutions Offerings

Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	Biochemical Engineers	Chemists	Commercial and Industrial Designers	Electrical and Electronics Repairers, Commercial and Industrial Equipment
Bristol Technical Education Center Gateway Community College Housatonic Community College	University of Connecticut, Storrs Campus	Albertus Magnus College Asnuntuck Community College Capital Community College Central Connecticut State University Connecticut College Fairfield University Gateway Community College Housatonic Community College Manchester Community College Middlesex Community College Naugatuck Valley Community College Northwestern Connecticut Community College Norwalk Community College Quinebaug Valley Community College Quinnipiac University Sacred Heart University Southern Connecticut State University Three Rivers Community College Trinity College Tunxis Community College University of Connecticut, Storrs Campus University of Hartford University of New Haven University of Saint Joseph Wesleyan University Western Connecticut State University Yale University	Capital Community College Central Connecticut State University Eversource Energy- Gas Operations Gateway Community College Housatonic Community College Manchester Community College Middlesex Community College Mitchell College Naugatuck Valley Community College Northwestern Connecticut Community College Norwalk Community College Paier College of Art Three Rivers Community College Tunxis Community College University of Bridgeport University of Connecticut, Storrs Campus University of New Haven	Bristol Technical Education Center Patrick's Academy

Education & Training Institutions Offerings

Electrical Engineering Technicians	Electromechanical Engineering Technologists	Electromechanical Technicians	Electronics Engineering Technologists
Asnuntuck Community College Central Connecticut State University Gateway Community College Housatonic Community College Naugatuck Valley Community College Northwestern Connecticut Community College Patrick's Academy Three Rivers Community College University of Hartford	AAA Refrigeration AGS HVAC Services Air TempMechanical Services Arbor Energy B T Lindsay & CO Inc. Bristol Technical Education Center Cordone & Tonucci Plumbing, Heating and Maintenance Contractors, Inc. CT Plumbers & Pipe Fitters UA LU 777JACT Devine Bros., Inc Eversource Energy- Gas Operations Gateway Community College Lennox National Account Services Lincoln Technical Institute Middlesex Community College Naugatuck Valley Community College New England Mechanical Services, INC. New England Technical Institute Nutmeg Mechanical Services, Inc. Otto Company AKA The Otto Company R.A. Levine Company Thomaston Comfort Control, Inc. Tunxis Community College Wilcox Energy	Asnuntuck Community College Central Connecticut State University Dominion Nuclear Connecticut Inc- Apprenticeship Goodwin College Tunxis Community College University of Hartford	AAA Refrigeration AGS HVAC Services Air TempMechanical Services Arbor Energy B T Lindsay & CO Inc. Bristol Technical Education Center Construction Education Center, Inc. Cordone & Tonucci Plumbing, Heating and Maintenance Contractors, Inc. CT Plumbers & Pipe Fitters UA LU 777JACT Devine Bros., Inc Eversource Energy- Gas Operations Gateway Community College Institute of Environmental Management and Technology, Inc. Lennox National Account Services Lincoln Technical Institute Middlesex Community College Naugatuck Valley Community College New England Mechanical Services, INC. New England Technical Institute Nutmeg Mechanical Services, Inc. Otto Company AKA The Otto Company R.A. Levine Company Thomaston Comfort Control, Inc. Three Rivers Community College Tunxis Community College Wilcox Energy

Education & Training Institutions Offerings

First-Line Supervisors of Mechanics, Installers, and Repairers	First-Line Supervisors of Production and Operating Workers	Industrial Engineering Technicians	Industrial Engineering Technologists
Asnuntuck Community College Central Connecticut State University Eversource (Convex Operating Group)- OJT Gateway Community College Goodwin College Southern Connecticut State University University of New Haven	Asnuntuck Community College Central Connecticut State University Eversource (Convex Operating Group)- OJT Gateway Community College Goodwin College Southern Connecticut State University University of New Haven	Asnuntuck Community College Central Connecticut State University Gateway Community College Goodwin College Manchester Community College Naugatuck Valley Community College Northwestern Connecticut Community College Three Rivers Community College University of Connecticut, Storrs Campus University of New Haven	Goodwin College

Education & Training Institutions Offerings

Industrial Production Managers	Industrial Safety and Health Engineers	Inspectors, Testers, Sorters, Samplers, and Weighers	Machinists
<p>Albertus Magnus College Asnuntuck Community College Capital Community College Central Connecticut State University Charter Oak State College Eastern Connecticut State University Eversource (Convex Operating Group)- OJT Fairfield University Gateway Community College Goodwin College Housatonic Community College Manchester Community College Middlesex Community College Mitchell College Naugatuck Valley Community College New Horizons Computer Learning Center Northwestern Connecticut Community College Norwalk Community College Post University Quinebaug Valley Community College Quinnipiac University Sacred Heart University Southern Connecticut State University Three Rivers Community College Tunxis Community College United States Coast Guard Academy University of Bridgeport University of Connecticut - Waterbury Campus University of Connecticut, School of Business University of Connecticut, Stamford University of Connecticut, Storrs Campus University of Connecticut, Tri-Campus University of Hartford University of New Haven University of Saint Joseph Western Connecticut State University Yale University</p>	<p>Connecticut College University of Connecticut, Storrs Campus University of Hartford University of New Haven Yale University</p>	<p>Asnuntuck Community College Central Connecticut State University Gateway Community College Goodwin College Naugatuck Valley Community College Quinebaug Valley Community College Tunxis Community College</p>	<p>Bristol Technical Education Center General Dynamics Electric Boat Division Housatonic Community College Manufacturing Alliance Service Corporation, Inc. Middlesex Community College Naugatuck Valley Community College Pa-Ted Spring Company, LLC. Quinebaug Valley Community College Renchel Tool Inc. TRUMPF Inc. Tunxis Community College</p>

Education & Training Institutions Offerings

Manufacturing Engineering Technologists	Manufacturing Engineers	Manufacturing Production Technicians	Materials Engineers
Eversource Energy- Gas Operations Gateway Community College Goodwin College Institute of Environmental Management and Technology, Inc. Middlesex Community College Naugatuck Valley Community College Tunxis Community College	Manufacturing Alliance Service Corporation, Inc. Quinebaug Valley Community College Three Rivers Community College University of Connecticut, Storrs Campus University of Hartford	University of Connecticut, Storrs Campus	University of Connecticut, Storrs Campus

Education & Training Institutions Offerings

Mechanical Drafters	Mechatronics Engineers	Medical Engineering Technologists	Microsystems Engineers
Gateway Community College General Dynamics Electric Boat Division Manchester Community College Naugatuck Valley Community College Patrick's Academy Quinebaug Valley Community College Three Rivers Community College Tunxis Community College	Manufacturing Alliance Service Corporation, Inc. Quinebaug Valley Community College Three Rivers Community College University of Connecticut, Storrs Campus University of Hartford	Eversource Energy- Gas Operations Gateway Community College Middlesex Community College Naugatuck Valley Community College Tunxis Community College	Quinebaug Valley Community College University of Hartford

Education & Training Institutions Offerings

Nanosystems Engineers	Occupational Health and Safety Specialists	Occupational Health and Safety Technicians	Photonics Engineers
Southern Connecticut State University University of Connecticut, Storrs Campus Yale University	Central Connecticut State University Institute of Environmental Management and Technology, Inc. University of Connecticut, Storrs Campus	Central Connecticut State University Institute of Environmental Management and Technology, Inc.	Southern Connecticut State University University of Connecticut, Storrs Campus Yale University

Education & Training Institutions Offerings

Photonics Technicians	Robotics Engineers	Robotics Technicians	Sheet Metal Workers
Capital Community College Norwalk Community College Three Rivers Community College University of Hartford	Quinebaug Valley Community College University of Hartford	Asnuntuck Community College Central Connecticut State University Goodwin College Tunxis Community College University of Hartford	Air TempMechanical Services Construction Education Center, Inc. New England Mechanical Services, INC. Sheet Metal Workers, Local Union 40, JACT Three Rivers Community College

Education & Training Institutions Offerings

Solderers and Brazers	Supply Chain Managers	Validation Engineers
<p>Asnuntuck Community College Bristol Technical Education Center Goodwin College Lincoln Technical Institute Naugatuck Valley Community College</p>	<p>Albertus Magnus College Asnuntuck Community College Capital Community College Central Connecticut State University Charter Oak State College Connecticut College Eastern Connecticut State University Fairfield University Gateway Community College Goodwin College Housatonic Community College Manchester Community College Middlesex Community College Mitchell College Naugatuck Valley Community College New Horizons Computer Learning Center Northwestern Connecticut Community College Norwalk Community College Patrick's Academy Post University Quinebaug Valley Community College Quinnipiac University Sacred Heart University Southern Connecticut State University Three Rivers Community College Tunxis Community College United States Coast Guard Academy University of Bridgeport University of Connecticut - Waterbury Campus University of Connecticut, School of Business University of Connecticut, Stamford University of Connecticut, Storrs Campus University of Connecticut, Tri-Campus University of Hartford University of New Haven University of Saint Joseph Western Connecticut State University Yale University</p>	<p>Advanced Electrical Services, Inc. Asnuntuck Community College Construction Education Center, Inc. Dominion Nuclear Connecticut Inc- Apprenticeship Dubaldo Electric Co Eversource (Convex Operating Group)- OJT Fairfield University Gateway Community College Griffin Electrical Contractors, Inc. Haskins Electric, LLC Housatonic Community College Manchester Community College Manufacturing Alliance Service Corporation, Inc. Middlesex Community College National Electrical Contractors Associates NECA & Local 90 JATC Naugatuck Valley Community College Northwestern Connecticut Community College Norwalk Community College Quinebaug Valley Community College Ray Brown Electric, LLC Sacred Heart University Southern Connecticut State University Three Rivers Community College Trinity College Tunxis Community College United States Coast Guard Academy University of Bridgeport University of Connecticut, Storrs Campus University of Hartford University of New Haven Yale University</p>

Glossary

ABILITIES – the proficiency, skills, or talent within a particular area.

CAREER PATHWAY – a career pathway means a combination of relevant, rigorous and high-quality education, training, and supportive services that aligns both vertically and horizontally across Secondary Education, Adult Basic Education, Workforce Training and Development, Career and Technical Education, and Postsecondary Education systems, pathways, and programs.

CERTIFICATION – third party accrediting or authorizing agency or person who assess, verifies, and provides an official documentation that attests a level of achievement.

COMPETENCIES – an individual’s ability to do a job properly through a set of behaviors.

INDUSTRY-ALIGNED CREDENTIAL – credentials whose standards are aligned to industry-recognized standards.

INDUSTRY-ENDORSED CREDENTIAL – credentials whose standards are aligned to and endorsed by industry.

INDUSTRY-RECOGNIZED CREDENTIAL – an industry-recognized credential is one that either is developed and offered by, or endorsed by a nationally-recognized industry association or organization representing a sizeable portion of the industry sector, or a credential that is sought or accepted by companies within the industry sector for purposes of hiring or recruitment which may include credentials from vendors of certain products.

KNOWLEDGE – the skills and information acquired through education or experience.

MEDIAN HOURLY EARNINGS – hourly earnings for the occupation reported at the 50th percentile.

REQUESTED EDUCATION – the highest level of education for workers within the given occupational category. Please note these are not the level of education of new incoming workers but of workers currently employed within these positions.

SKILLS – the ability or expertise to do something well.

TOTAL JOBS – estimated number of jobs in the given year, taken as average over a period of 12-months. This value includes both full- and part-time jobs.