

Career Clusters & Pathways

Thinking ahead and preparing for careers is helpful if you are headed to the workplace or college. Some careers that are not common today may be needed tomorrow. And all careers require flexibility, knowledge, and skills.

Source: National Career Clusters Framework

NS4ed™ Pathway2Careers™ 2018 Trademark NS4ed, LLC



Agriculture, Food & Natural Resources

- Agribusiness Systems
- Animal Systems
- Environmental Service Systems
- Food Products & Processing Systems
- Natural Resources Systems
- Plant Systems
- Power, Structural & Technical Systems

Architecture & Construction

- Construction
- Design/Pre-Construction
- Maintenance/Operations

Arts, A/V Technology & Communication

- A/V Technology & Film
- Journalism & Broadcasting
- Performing Arts
- Printing Technology
- Telecommunications
- Visual Arts

Business, Management & Administration

- Administrative Support
- Business Information Management
- General Management
- Human Resources Management
- Operations Management

Education & Training

- Administration & Administrative Support
- Professional Support Services
- Teaching/Training

Finance

- Accounting
- Banking Services
- Business Finance
- Insurance
- Securities & Investments

Government & Public Administration

- Foreign Service
- Governance
- National Security
- Planning
- Public Management & Administration
- Regulation
- Revenue & Taxation

Health Science

- Biotechnology Research & Development
- Diagnostic Services
- Health Informatics
- Support Services
- Therapeutic Services

Hospitality & Tourism

- Lodging
- Recreation, Amusements & Attractions
- Restaurants & Food/Beverage Services
- Travel & Tourism

Human Services

- Consumer Services
- Counseling & Mental Health Services
- Early Childhood Development & Services
- Family & Community Services
- Personal Care Services

Information Technology

- Information Support & Services
- Network Systems
- Programming & Software Development
- Web & Digital Communications

Law, Public Safety, Corrections & Security

- Correction Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Legal Services
- Security & Protective Services

Manufacturing

- Health, Safety & Environmental Assurance
- Logistics & Inventory Control
- Maintenance, Installation & Repair
- Manufacturing Production Process Development
- Production
- Quality Assurance

Marketing

- Marketing Communications
- Marketing Management
- Marketing Research
- Merchandising
- Professional Sales

Science, Technology, Engineering & Mathematics

- Engineering & Technology
- Science & Mathematics

Transportation, Distribution & Logistics

- Facility & Mobile Equipment Maintenance
- Health, Safety & Environmental Management
- Logistics Planning & Management Services
- Sales & Service
- Transportation Operations
- Transportation Systems/Infrastructure Planning, Management & Regulation
- Warehousing & Distribution Center Operations



Architecture & Construction



NATIONAL CAREER CLUSTERS PATHWAY:

- Construction

Regional Career Opportunities (Listed by Highest Projected Demand)

JOB ZONE 1 High School Diploma or Less

JOB ZONE 2 High School Diploma

JOB ZONE 3 Certificate or Associate's Degree

JOB ZONE 4 Bachelor's Degree

JOB ZONE 5 Master's or Doctorate Degree

FOR JOB ZONES 1-3, APPRENTICESHIP OR ON-THE-JOB TRAINING MAY ALSO SATISFY EMPLOYMENT REQUIREMENTS.

Cement Masons & Concrete Finishers

Annual Openings 60
Median Wage.....\$35,031

Construction Laborers

Annual Openings 575
Median Wage.....\$32,382

Electricians ★

Annual Openings 275
Median Wage.....\$41,227

Construction Managers

Annual Openings 115
Median Wage.....\$69,885

Few regional occupations in these pathways require education at this degree level.

Conveyor Operators & Tenders

Annual Openings 10
Median Wage.....\$59,263

Carpenters ★

Annual Openings 210
Median Wage.....\$37,178

First-Line Supervisors of Construction Trades and Extraction Workers ★

Annual Openings 245
Median Wage.....\$52,907

Few regional occupations in these pathways require education at this degree level.

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Operating Engineers & Other Construction Equipment Operators ★

Annual Openings 130
Median Wage.....\$39,670

Plumbers, Pipefitters & Steamfitters ★

Annual Openings 125
Median Wage.....\$43,768

Painters, Construction & Maintenance

Annual Openings 120
Median Wage.....\$34,899

Structural Metal Fabricators & Fitters

Annual Openings 60
Median Wage.....\$42,377

Helpers – Electricians

Annual Openings 75
Median Wage.....\$33,321

Crane & Tower Operators

Annual Openings 15
Median Wage.....\$49,027

★ Top five high-value occupations in these pathways for the East Tennessee Region. Occupations with the highest annual openings that are stable or growing with median wages above \$35,000 are considered high-value.



Architecture & Construction



NATIONAL CAREER CLUSTERS PATHWAY:

- Construction

Regional High School Requirements and Programs (Grades 9-12)

English Language Arts	Math	Science	Social Studies	Foreign Language	Physical Education	Fine Arts	Elective Focus
English I	Algebra I	Biology	World History and Geography	Foreign Language I	Lifetime Wellness	Fine Arts Selection	Minimum of Three Courses See career programs and electives below.
English II	Geometry	Chemistry	U.S. History	Foreign Language II	Physical Education (.5)	----	
English III	Algebra II	Physics	Economics / Government	----	----	----	
English IV	Higher Level Math	----	Personal Finance (.5)	----	----	----	

Career Programs	Career Program Courses and Related Courses	Additional Electives	Regional Postsecondary Schools				
<ul style="list-style-type: none"> Residential & Commercial Construction Structural Systems Mechanical, Electrical, & Plumbing (MEP) Systems <p>See other Architecture and Construction pathways for additional career programs and opportunities.</p> <p>Note: Programs and courses may vary by high school.</p>	<ul style="list-style-type: none"> Career Exploration Principles of Manufacturing and Construction Architectural Engineering & Design I-III Interior Design (multiple courses) Fundamentals of Construction 	<ul style="list-style-type: none"> Residential and Commercial Construction I & II Structural Systems I & II Industrial Electricity MEP Systems Plumbing / Electrical / HVAC Practicum or Apprenticeship 	<table border="1"> <thead> <tr> <th>Certificates and Associate's Degrees</th> <th>Bachelor's and Advanced Degrees</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Pellissippi State Community College Tennessee College of Applied Technology Roane State Community College </td> <td> <ul style="list-style-type: none"> Maryville College University of Tennessee Lincoln Memorial University </td> </tr> </tbody> </table>	Certificates and Associate's Degrees	Bachelor's and Advanced Degrees	<ul style="list-style-type: none"> Pellissippi State Community College Tennessee College of Applied Technology Roane State Community College 	<ul style="list-style-type: none"> Maryville College University of Tennessee Lincoln Memorial University
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Postsecondary Programs/Majors for Occupations in this Pathway

	Certificate or AA	Industrial Electricity	Pipefitting and Plumbing Technology	Machine Tool Technology	***	***
Bachelor's Degree	***	***	***	***	***	***
Advanced Degree	***	***	***	***	***	***

*** Limited program offerings at regional postsecondary schools.
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Architecture & Construction



NATIONAL CAREER CLUSTERS PATHWAYS:

- Design/Pre-Construction
- Maintenance/Operations

Regional Career Opportunities (Listed by Highest Projected Demand)

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JOB ZONE 3 Certificate or Associate's Degree

JOB ZONE 4 Bachelor's Degree

JOB ZONE 5 Master's or Doctorate Degree

FOR JOB ZONES 1-3, APPRENTICESHIP OR ON-THE-JOB TRAINING MAY ALSO SATISFY EMPLOYMENT REQUIREMENTS.

Landscaping & Groundskeeping Workers

Annual Openings 460
Median Wage.....\$26,822

Helpers – Installation, Maintenance & Repair Workers

Annual Openings 70
Median Wage.....\$29,902

Heating, Air Conditioning & Refrigeration Mechanics ★

Annual Openings 215
Median Wage.....\$38,313

Civil Engineers ★

Annual Openings 105
Median Wage.....\$89,561

Few regional occupations in these pathways require education at this degree level.

Septic Tank Servicers and Sewer Pipe Cleaners

Annual Openings 15
Median Wage.....\$33,229

Highway Maintenance Workers

Annual Openings 40
Median Wage.....\$32,279

First-Line Supervisors of Landscaping, Lawn Service & Groundskeeping Workers ★

Annual Openings 100
Median Wage.....\$40,368

Cost Estimators ★

Annual Openings 75
Median Wage.....\$57,315

Few regional occupations in these pathways require education at this degree level.

Grounds Maintenance Workers, All Other

Annual Openings 35
Median Wage.....\$30,644

Electrical Power-Line Installers & Repairers ★

Annual Openings 60
Median Wage.....\$76,002

Architects

Annual Openings 25
Median Wage.....\$70,794

Construction and Related Workers, All Other

Annual Openings 15
Median Wage.....\$39,720**

Civil Engineering Technicians

Annual Openings 40
Median Wage.....\$40,112

Architectural & Civil Drafters

Annual Openings 15
Median Wage.....\$50,485

Millwrights

Annual Openings 10
Median Wage.....\$47,563

Surveying and Mapping Technicians

Annual Openings 20
Median Wage.....\$47,071

Interior Designers

Annual Openings 10
Median Wage.....\$42,601

★ Top five high-value occupations in these pathways for the East Tennessee Region. Occupations with the highest annual openings that are stable or growing with median wages above \$35,000 are considered high-value.

** National data was used due to limitations in regional and state data.

Data Source: TSBA District Data Dashboard | NS4ed™ Pathway2Careers™ 2018 Trademark NS4ed, LLC

Explore careers at tsbadatadashboard.com





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English IV	Higher Level Math	----	Personal Finance (.5)	----	----	----	

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Postsecondary Programs/Majors for Occupations in this Pathway

Certificate or AA	Heating, Ventilation, Air Conditioning, and Refrigeration	Industrial Electricity	Engineering Technology – Civil Engineering	Building Information Modeling	Interior Design Technology
Bachelor's Degree	Architecture	Civil Engineering	Construction Science	Landscape and Environment	Interior Design
Advanced Degree	Architecture	Civil Engineering	Landscape Architecture	***	***

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