

T E N N E S S E E CAREERS[®]



*Architecture &
Construction*

Career Cluster Guide

2008-2009

Four Steps to Career Success

About the Architecture & Construction Career Cluster

Careers in the Architecture & Construction Career Cluster encompass designing, planning, managing, building and maintaining the built environment.

GET STARTED TODAY!

1

Assess Yourself

Identify your strengths. Then compare them with job expectations in favorite fields.

2

Check the Labor Market

See how a specific occupation fares in Tennessee. Turn to pages 4-7.

3

Find Schools and Educational Programs

Find information on education, training, financial aid, and licensing. See pages 8-11.

4

Find Employers and Job Openings

Check out the Web sites below or visit your local career centers to find out about opportunities in Tennessee.

Free Online Resources to Explore Careers

Tennessee Career Information Delivery System (TCIDS): <http://tcids.tbr.edu/>

KUDER Tennessee College and Career Planning System prepared by edamerica:

<http://www.planningyourdreams.org/>

Tennessee Department of Labor and Workforce Development:

Education, Wages, Jobs and More: <http://www.sourcetn.org>

Youth pages: <http://state.tn.us/labor-wfd/youth>

Career Center locations: <http://www.state.tn.us/labor-wfd/cc/>

Tennessee Department of Education, Career and Technical Education: <http://www.tennessee.gov/education/cte/>

Online Tennessee Board of Regents ROCC Virtual Career Center: <http://careers.rodop.org/>

College for TN, powered by xap: <http://www.collegefortn.org/>

SECONDARY PROGRAMS OF STUDY*	Specific Occupations
Design & Preconstruction	<ul style="list-style-type: none"> • Architects, Except Landscape and Naval • Architectural and Civil Drafters • Architecture Teachers, Postsecondary • Construction Managers • Civil Engineering Technicians • Cost Estimators • Construction and Building Inspectors • Electrical and Electronics Drafters • Mechanical Drafters
Interior Design	<ul style="list-style-type: none"> • Interior Designers
Landscape Design**	<ul style="list-style-type: none"> • Landscape Architects
Construction Electrical	<ul style="list-style-type: none"> • Electrical Power-Line Installers and Repairers • Electricians • Elevator Installers and Repairers • Helpers – Electricians • Security and Fire Alarm Systems Installers • Telecommunications Line Installers and Repairers
Construction Masonry & Concrete	<ul style="list-style-type: none"> • Brickmasons and Blockmasons • Cement Masons and Concrete Finishers • Helpers – Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters • Refractory Materials Repairers, Except Brickmasons • Stonemasons • Tile and Marble Setters
Construction Plumbing	<ul style="list-style-type: none"> • Pipelayers • Plumbers, Pipefitters, and Steamfitters
Construction HVAC/R	<ul style="list-style-type: none"> • Heating, Air Conditioning, and Refrigeration Mechanics and Installers
Construction Welding	<ul style="list-style-type: none"> • Welders, Cutters, Solderers, and Brazers • Welding, Soldering, and Brazing Machine Setters, Operators and Tenders
Construction Carpentry	<ul style="list-style-type: none"> • Carpenters

Tennessee
Programs of Study
 *<http://pathways.tbr.edu>

** Information on Landscape Design can be found in the Agriculture, Food & Natural Resources booklet.

Architecture & Construction Jobs in Tennessee

Title	Basic Description	Projected Total 2014 Employment	
Source: See footnote #2.	Source: See footnote #2.	Source: See footnote #1.	
Architects, Except Landscape and Naval	Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.	1,440	
Brickmasons and Blockmasons	Lay and bind building materials, such as brick, structural tile, or blocks of concrete, cinder, glass, or terra cotta, with mortar and other substances to construct walls, partitions, etc.	2,700	
Carpenters	Construct, erect, install, or repair structures and fixtures made of wood, such as frameworks (partitions, joists, studding, rafters, etc.), wood stairways, window and door frames, and hardwood floors.	19,530	
Civil Engineering Technicians	Apply civil engineering theory and principles to plan, design and oversee construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.	1,440	
Construction Managers	Plan, direct, coordinate, or budget, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems.	8,380	
Electrical Power-Line Installers and Repairers	Install or repair cables or wires used in electrical power or distribution systems. May erect poles and light or heavy duty transmission towers.	2,840	
Electricians	Install, maintain, and repair electrical wiring, equipment, and fixtures in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.	15,930	
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Install or repair heating, central air conditioning, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.	8,960	

1. Estimated wage and employment data are from the Tennessee Department of Labor and Workforce Development, Employment Security Research and Statistics Division (www.sourcetn.org).
2. Job titles and common descriptions are from the Bureau of Labor Statistics, U.S. Department of Labor, Standard Occupational Classification System (<http://www.bls.gov/soc>).

High Skill - High Wage - In Demand

Projected Number of New Jobs, 2004-2014	Annual Median Wage	Most Common Education/Training	Suggested Programs of Study	High Skill	High Wage	In Demand
Source: See footnote #1.		Source: See footnote #1.		Source: See footnote #1.		
240	\$59,619	Bachelor's Degree	Architecture	●	●	●
490	\$39,362	Long-term on-the-job training	Mason and Tile Setter	●	●	●
2,010	\$29,504	Long-term on-the-job training	Carpenter	●		●
190	\$41,975	Associate Degree	Civil Engineering Technologist/Technician; Construction/Building Technologist/Technician	●	●	●
1,150	\$55,427	Bachelor's Degree	Construction/Building Technologist/Technician	●	●	●
250	\$49,499	Long-term on-the-job training	Electrical and Power Transmission Installer, General; Lineworker	●	●	●
2,380	\$39,635	Long-term on-the-job training	Electrician	●	●	●
2,060	\$28,641	Long-term on-the-job training	Heating, Air Conditioning and Refrigeration Mechanics and Repair; Heating, Air Conditioning and Refrigeration Technologist/Technician	●		●

3. The suggested programs of study are postsecondary programs.

For updated career information go to
<http://www.sourcetn.org>.

Architecture & Construction Jobs in Tennessee

Title	Basic Description	Projected Total 2014 Employment	
Source: See footnote #2.	Source: See footnote #2.	Source: See footnote #1.	
Interior Designers	Plan, design, and furnish interiors of residential, commercial, or industrial buildings. Formulate design that is practical, aesthetic, and conducive to intended purposes.	1,200	
Mechanical Drafters	Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.	1,420	
Plumbers, Pipefitters, and Steamfitters	Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems.	8,470	
Security and Fire Alarm Systems Installers	Install, program, maintain, and repair security and fire alarm wiring and equipment. Ensure that work is in accordance with relevant codes.	1,040	
Stonemasons	Build stone structures, such as piers, walls, and abutments. Lay walks, curbstones, or special types of masonry for vats, tanks, and floors.	40	
Surveyors	Make exact measurements and determine property boundaries. Provide data relevant to the shape, contour, gravitation, location, elevation, or dimension of land or land features.	1,120	
Tile and Marble Setters	Apply hard tile, marble, and wood tile to walls, floors, ceilings, and roof decks.	860	
Welders, Cutters, Solderers, and Brazers	Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.	10,880	

1. Estimated wage and employment data are from the Tennessee Department of Labor and Workforce Development, Employment Security Research and Statistics Division (www.sourcectn.org).
2. Job titles and common descriptions are from the Bureau of Labor Statistics, U.S. Department of Labor, Standard Occupational Classification System (<http://www.bls.gov/soc>).

High Skill - High Wage - In Demand

Projected Number of New Jobs, 2004-2014	Annual Median Wage	Most Common Education/Training	Suggested Programs of Study	High Skill	High Wage	In Demand
Source: See footnote #1.		Source: See footnote #1.	See footnote #3.	Source: See footnote #1.		
190	\$41,053	Bachelor's Degree	Home Furnishings and Equipment Installers and Consultants, General; Interior Design	●	●	
150	\$42,059	Postsecondary career/technical education	Mechanical Drafting	●	●	
1,540	\$36,145	Long-term on-the-job training	Plumber and Pipefitter	●	●	●
250	\$29,572	Postsecondary career/technical education	Electrician	●		●
10	\$29,000	Long-term on-the-job training	Mason and Tile Setter	●		●
160	\$36,289	Bachelor's Degree	Surveying	●	●	●
250	\$27,942	Long-term on-the-job training	Mason and Tile Setter	●		●
1,100	\$30,121	Long-term on-the-job training	Welder/Welding Technologist	●		●

3. The suggested programs of study are postsecondary programs.

For updated career information go to
<http://www.sourceten.org>.

PROGRAMS OF STUDY

TENNESSEE TECHNOLOGY CENTERS, COLLEGES & UNIVERSITIES

Architecture & Construction Majors

	Chattanooga State Technical Community College www.chattanoogastate.edu	East Tennessee State University www.etsu.edu	Middle Tennessee State University www.mtsu.edu	Nashville State Community College www.nscc.edu	Northeast State Technical Community College www.nstcc.cc.tn.us	Pellissippi State Technical Community College www.pstcc.cc.tn.us	Southwest Tennessee Community College www.southwest.tn.edu/	Tennessee Technology Center at Athens www.athens.tec.tn.us/	Tennessee Technology Center at Chattanooga www.chattanoogastate.edu	Tennessee Technology Center at Covington www.covington.tec.tn.us/	Tennessee Technology Center at Crossville www.crossville.tec.tn.us/	Tennessee Technology Center at Crump www.crump.tec.tn.us/	Tennessee Technology Center at Dickson www.dickson.tec.tn.us/	Tennessee Technology Center at Elizabethton www.elizabethton.tec.tn.us/	Tennessee Technology Center at Harriman www.harriman.tec.tn.us	Tennessee Technology Center at Hartsville www.hartsville.tec.tn.us/	
Architectural Engineering Technology/Technician							C, A										
Architectural Environmental Design																	
Architecture																	
Civil Engineering/Civil Technology/Technician						A											
Construction Equipment Operator									C								
Construction Management			B														
Construction Trades, Other							C		C		C			C			
Drafting and Design Technology/Technician, General	C			C	A	A		C	C	C	C	C	C	C	C	C	
Drafting, General																	
Electrical and Power Transmission Installer, General									C								
Electrician				C	C		C	C									
Heating, Air Conditioning and Refrigeration Mechanic					C				C	C	C	C	C	C			
Interior Design			B			A											
Lineworker																	
Mason and Tile Setter									C		C						
Mechanical Drafting and Mechanical Drafting CAD/CADD					C												
Plumber and Pipefitter																	
Plumbing Technology/Plumber									C								
Surveying		B															
Welder/Welding Technologist					C			C	C	C	C	C		C	C	C	

C = Postsecondary Awards/Certificates/Diplomas
A = Associate Degree
B = Bachelor's Degree

M = Master's Degree
D = Doctoral Degree

This chart was based upon the best available information and is intended only to serve as a general guide for educational opportunities. Department names for programs vary among schools. Refer to related cluster booklets for other possible programs. Community Colleges (www.tbr.state.tn.us/campuses.htm) offer University Parallel Programs, which may also offer opportunities for study in this field. Contact the schools' academic departments or your school advisor for current programs and degrees: www.tbr.state.tn.us/campuses.htm and <http://www.tennessee.edu/>.

For financial aid information, go to the Tennessee Student Assistance Corporation, http://Tennessee.gov/tsac/about_us.htm, or The Source, www.sourcetn.org (Services for Individuals, Education Services, Financial Aid).

Tennessee Licensed Occupations

Job Titles and Licenses	Contacts
<p>Architects, Except Landscape and Naval Architect</p>	 <p>Board of Architectural & Engineering Examiners Division of Regulatory Boards Department of Commerce and Insurance Davy Crockett Tower, 3rd Floor 500 James Robertson Pkwy. Nashville, TN 37243 (615) 741-3221 http://tennessee.gov/commerce/boards/ae/</p>
<p>Architects, Except Landscape and Naval Sprinkler System Contractor Responsible Managing Employee</p>	 <p>Permits and Licenses Section Division of Fire Prevention Department of Commerce and Insurance Davy Crockett Tower, 3rd Floor 500 James Robertson Pkwy. Nashville, TN 37243 (615) 741-1322 http://www.state.tn.us/commerce/boards/sfm</p>

Tennessee Licensed Occupations

Job Titles and Licenses	Contacts
<p>Surveyors Land Surveyor</p>	 <p>Board of Examiners for Land Surveyors Division of Regulatory Boards Department of Commerce and Insurance Davy Crockett Tower, 2nd Floor 500 James Robertson Pkwy. Nashville, TN 37243 (615) 741-3611 http://tennessee.gov/commerce/boards/surveyors</p>
<p>Welders, Cutters, Solderers, and Brazers Gas Pipeline Welder</p>	 <p>Gas Pipeline Safety Division Tennessee Regulatory Authority 460 James Robertson Pkwy. Nashville, TN 37243 (615) 741-3939 http://tennessee.gov/tra/gassafety.htm</p>



Discover your talents

Tennessee Career Information Delivery System (TCIDS): <http://tcids.tbr.edu/>
The Source: <http://www.sourcetn.org>

Notice

The Tennessee Career Cluster Guides and accompanying Planning Guide are publications of the Tennessee Department of Education. Information contained herein is provided as a public service. While every attempt has been made to provide accurate information, there is no guarantee of the completeness or accuracy of the information provided. There is no promise or warranty that the agencies involved will continue to provide or update information. This service may be suspended or discontinued at any time. The user assumes the responsibility of verifying any information used or relied upon.

For more information on Career clusters:
<http://www.tennessee.gov/education/cte>

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Tennessee Department of Education
710 James Robertson Parkway, 6th Floor
Nashville, TN 37243-0383
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States' Career Clusters Initiative
www.careerclusters.org

