

















# Career Clusters and Pathways

Career Cluster	Career Pathway	Career Cluster	Career Pathway	Career Cluster	Career Pathway
 Agriculture, Food & Natural Resources	<ul style="list-style-type: none"> <li>• Agribusiness Systems</li> <li>• Animal Systems</li> <li>• Environmental Service Systems</li> <li>• Food Products &amp; Processing Systems</li> <li>• Natural Resources Systems</li> <li>• Plant Systems</li> <li>• Power, Structural &amp; Technical Systems</li> </ul>	 Government & Public Administration	<ul style="list-style-type: none"> <li>• Foreign Service</li> <li>• Governance</li> <li>• National Security</li> <li>• Planning</li> <li>• Public Management &amp; Administration</li> <li>• Regulation</li> <li>• Revenue &amp; Taxation</li> </ul>	 Law, Public Safety, Corrections & Security	<ul style="list-style-type: none"> <li>• Correction Services</li> <li>• Emergency &amp; Fire Management Services</li> <li>• Law Enforcement Services</li> <li>• Legal Services</li> <li>• Security &amp; Protective Services</li> </ul>
 Architecture & Construction	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Design/Pre-Construction</li> <li>• Maintenance/Operations</li> </ul>	 Health Science	<ul style="list-style-type: none"> <li>• Biotechnology Research &amp; Development</li> <li>• Diagnostic Services</li> <li>• Health Informatics</li> <li>• Support Services</li> <li>• Therapeutic Services</li> </ul>	 Manufacturing	<ul style="list-style-type: none"> <li>• Health, Safety &amp; Environmental Assurance</li> <li>• Logistics &amp; Inventory Control</li> <li>• Maintenance, Installation &amp; Repair</li> <li>• Manufacturing Production Process Development</li> <li>• Production</li> <li>• Quality Assurance</li> </ul>
 Arts, A/V Technology & Communications	<ul style="list-style-type: none"> <li>• A/V Technology &amp; Film</li> <li>• Journalism &amp; Broadcasting</li> <li>• Performing Arts</li> <li>• Printing Technology</li> <li>• Telecommunications</li> <li>• Visual Arts</li> </ul>	 Hospitality & Tourism	<ul style="list-style-type: none"> <li>• Lodging</li> <li>• Recreation, Amusements &amp; Attractions</li> <li>• Restaurants &amp; Food/Beverage Services</li> <li>• Travel &amp; Tourism</li> </ul>	 Marketing	<ul style="list-style-type: none"> <li>• Marketing Communications</li> <li>• Marketing Management</li> <li>• Marketing Research</li> <li>• Merchandising</li> <li>• Professional Sales</li> </ul>
 Business, Management & Administration	<ul style="list-style-type: none"> <li>• Administrative Support</li> <li>• Business Information Management</li> <li>• General Management</li> <li>• Human Resources Management</li> <li>• Operations Management</li> </ul>	 Human Services	<ul style="list-style-type: none"> <li>• Consumer Services</li> <li>• Counseling &amp; Mental Health Services</li> <li>• Early Childhood Development &amp; Services</li> <li>• Family &amp; Community Services</li> <li>• Personal Care Services</li> </ul>	 Science, Technology, Engineering & Mathematics	<ul style="list-style-type: none"> <li>• Engineering &amp; Technology</li> <li>• Science &amp; Mathematics</li> </ul>
 Education & Training	<ul style="list-style-type: none"> <li>• Administration &amp; Administrative Support</li> <li>• Professional Support Services</li> <li>• Teaching/Training</li> </ul>	 Information Technology	<ul style="list-style-type: none"> <li>• Information Support &amp; Services</li> <li>• Network Systems</li> <li>• Programming &amp; Software Development</li> <li>• Web &amp; Digital Communications</li> </ul>	 Transportation, Distribution & Logistics	<ul style="list-style-type: none"> <li>• Facility &amp; Mobile Equipment Maintenance</li> <li>• Health, Safety &amp; Environmental Management</li> <li>• Logistics Planning &amp; Management Services</li> <li>• Sales &amp; Service</li> <li>• Transportation Operations</li> <li>• Transportation Systems/Infrastructure Planning, Management &amp; Regulation</li> <li>• Warehousing &amp; Distribution Center Operations</li> </ul>
 Finance	<ul style="list-style-type: none"> <li>• Accounting</li> <li>• Banking Services</li> <li>• Business Finance</li> <li>• Insurance</li> <li>• Securities &amp; Investments</li> </ul>				



# Information Technology

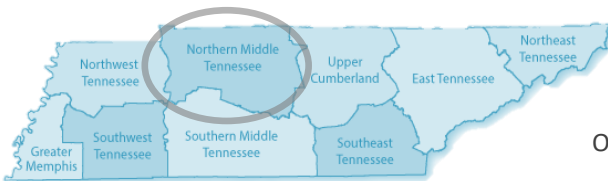
**National Career Clusters Pathways** ♦ Information Support & Services ♦ Web & Digital Communications ♦ Programming & Software Development ♦ Network Systems



## Regional Career Opportunities – Listed by Highest Projected Demand



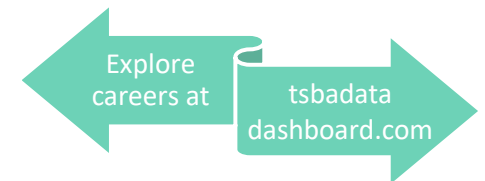
Job Zone 1 High School Diploma or Less	Job Zone 2 High School Diploma	Job Zone 3 Certificate or Associate's Degree	Job Zone 4 Bachelor's Degree	Job Zone 5 Master's or Doctorate Degree
Few regional occupations in these pathways require education at this degree level.	Few regional occupations in these pathways require education at this degree level.	<b>Computer User Support Specialists</b> Annual Openings = 342 Median Wage = \$48,489 ★	<b>Software Developers, Applications</b> Annual Openings = 304 Median Wage = \$92,750 ★	Few regional occupations in these pathways require education at this degree level.
		<b>Web Developers</b> Annual Openings = 98 Median Wage = \$63,240	<b>Computer Systems Analysts</b> Annual Openings = 291 Median Wage = \$73,635 ★	
		Few regional occupations in these pathways require education at this degree level.	<b>Software Developers, Systems Software</b> Annual Openings = 184 Median Wage = \$86,368 ★	
			<b>Network &amp; Computer Systems Administrators</b> Annual Openings = 149 Median Wage = \$82,310 ★	
<b>Data Source</b> TSBA District Data Dashboard 			<b>Information Security Analysts</b> Annual Openings = 59 Median Wage = \$80,345	



★ Top five high-value occupations in these pathways for the **Northern Middle Tennessee Region**

Occupations with the highest annual openings that are stable or growing with median wages above \$35,000 are considered high-value.

\* = state level data was used due to limitations in regional data.





# Information Technology

**National Career Clusters Pathways** ♦ Information Support & Services ♦ Web & Digital Communications ♦ Programming & Software Development ♦ Network Systems



## 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	Integrated 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	Integrated II	Chemistry	U.S. History and Geography	Foreign Language II	Physical Education (.5)	-----	
English III	Integrated III	Physics	Economics / Government	-----	-----	-----	One Additional Elective is Required
English IV	Upper Level Math	-----	Personal Finance (.5)	-----	-----	-----	

Career Programs	Career Program Courses	Additional Electives	Regional Postsecondary Schools	
<input type="checkbox"/> Coding <input type="checkbox"/> Networking Systems <input type="checkbox"/> Cybersecurity  <i>*Note: Programs and courses may vary by high school.</i>	<input type="checkbox"/> Career Exploration <input type="checkbox"/> Computer Science Foundations <input type="checkbox"/> Coding I & II <input type="checkbox"/> Cybersecurity I & II <input type="checkbox"/> Mobile App Development <input type="checkbox"/> Computer Systems <input type="checkbox"/> Networking <input type="checkbox"/> Cabling & Internetworking <input type="checkbox"/> Introduction to GIS <input type="checkbox"/> Work-Based Learning / Practicum	<b>English Language Arts</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Math</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Science</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Other</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Certificates and Associate's Degrees</b>  <b>Community Colleges</b> <ul style="list-style-type: none"> <li>Motlow State Community College</li> <li>Tennessee College of Applied Technology</li> <li>Nashville State Community College</li> </ul>	<b>Bachelor's and Advanced Degrees</b>  <b>Colleges and Universities</b> <ul style="list-style-type: none"> <li>Middle Tennessee State University</li> <li>Tennessee State University</li> <li>University of Tennessee</li> <li>Vanderbilt University</li> </ul>

## Postsecondary Programs/Majors for Occupations in these Pathways

	Computer Support Specialist	Computer Science	***	***	***
<b>Certificate or AA</b>	Computer Support Specialist	Computer Science	***	***	***
<b>Bachelor's Degree</b>	Computer Science	Computer Systems Analysis	Computer Programming	Computer and Information Sciences	Computer and Information Systems Security
<b>Advanced Degree</b>	***	***	***	***	***

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