networking systems

# INFORMATION TECHNOLOGY

*Level Four*

*Level Three*

*Level Two*

*Level One*

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| --- |
| **Industry Certifications options include:**CompTIA IT FundamentalsCompTIA Network+CompTIA A+ CertificationCisco Certified Network Associate (CCNA)Cisco Certified Entry Network Tech (CCENT) |

**ABOUT THE PROGRAM OF STUDY**

The *Networking* *Systems*program is study is designed for students interested in occupations including: computer support specialists, network and computer systems administrators, computer hardware engineers, computer network architects, and information security analysts. This program of study provides students the opportunity to acquire knowledge in both theory and practical applications pertaining to hardware, operating systems, safe mode, command prompt, security, networking, printers, peripheral devices, laptops, mobile devices, troubleshooting, and customer service management. Upon completion of the course, proficient students will have acquired skills and knowledge to install, configure, and maintain computer systems. Students will also identify types of networks, understand the layers of the open systems interconnection (OSI) model, prevent security risks, and apply troubleshooting theory to the successful execution of networking tasks. Course content covers transmission control protocol, internet protocol, wired and wireless topologies, switching and routing, network hardware, wireless networking, and network operating systems (NOS). Upon completion of this program of study, proficient students will be prepared to sit for the CompTIA Network+ exam and will be eligible to pursue the IT industry-standard credential, CompTIA’s A+ certification.

This is not an exhaustive list of all of the opportunities available in Tennessee.

**CAREER OPPORTUNITIES**

The *Networking* occupations group have different roles and responsibilities. Network Architects are different in that they design and build data communication networks such as LANs, WANs, and intranets. Database Administrators use specific software to store, organize, and secure data from unauthorized access. Computer and Information Systems Managers plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming. Network and Computer Systems Administrators are responsible for the daily operation of network systems.

**Employment Projections for *Networking* careers in Tennessee**

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**POSTSECONDARY OPTIONS**

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| --- | --- |
| **School** | **Degree Program** |
| Nashville State Community College | Network and Computer Systems Administrator |
| Tennessee State University | Computer Network Architect |
| Middle Tennessee State University | Computer and Information Systems Manager |

For more college and career planning resources, visit <http://collegefortn.org>.

****Have you registered for the Tennessee Promise? Seniors enrolled in this program have the chance to attend a two-year program at a Tennessee College of Applied Technology (TCAT), community college, or some two-year university programs for free! To learn more, please see your school counselor or visit <http://www.tennesseepromise.gov> .

***Networking* Related Occupations with the most Annual Average Openings in Tennessee (2014-2024)**

|  |  |  |  |
| --- | --- | --- | --- |
| Occupation | 2014 Estimated Employment | 2024 Projected Employment | Total Percent Change |
| Network and Computer Systems Administrator | 6,090 | 7,240 | 19.00% |
| Computer and Information Systems Manager | 5,460 | 6,710 | 23.00% |
| Computer Network User Support Specialist | 2,670 | 3,100 | 16.00% |

Tennessee Department of Labor and Workforce Development, Job4TN Online. (2017). *Occupational Projections (Long-term)*. Retrieved from <https://www.jobs4tn.gov/vosnet/analyzer/results.aspx?session=occproj>

Students in this program of study will be eligible to join TSA. In addition to school events, students will be able to compete at the regional, state, and national level. The Technology Student Association fosters personal growth, leadership, and opportunities in Science, Technology, Engineering, and Mathematics (STEM); members apply and integrate these concepts through co-curricular activities, competitions, and related programs. See your technology teacher to learn more about TSA or visit <http://www.tsaweb.org>.

**For more information, contact:**

**High School Name**

**County Name**

**CTE Director: Name**

**Email**

**Instructor: Name**

**Email**