CYBERSECURITY

# Information Technology

*Level Four*

*Level One*

*Level Three*

*Level Two*

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| **Industry Certifications options include:**  CompTIA IT Fundamentals  CompTIA A+  CompTIA Network +  CompTIA Security +  Associate of ISC2 |

**ABOUT THE PROGRAM OF STUDY**

The *Cybersecurity* program of study offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and cybersecurity-related careers in the Information Technology career cluster. Students will develop knowledge in security integration, application of cybersecurity practices and devices, ethics, and best practices management. The fundamental skills in this program covers both in house and external threats to network security and design, how to enforce network level security policies, and how to safeguard an organization’s information. This program of study also challenges students to develop advanced skills in concepts and terminology of cybersecurity, knowledge of malware threats, cryptography, wireless technologies and organizational security. Upon completion of this program, proficient students will be prepared to pursue industry certification at a technology college or more advanced coursework at a two-year or four-year postsecondary institution.

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

**CAREER OPPORTUNITIES**

The *Cybersecurity* occupations group according to the US News and World Report on education, is ranked #5 out of 11 hot college majors. Companies and government agencies are moving aggressively to protect their computer systems. Cyber-attacks have grown in frequency, and analysts will be needed to come up with innovative solutions to avert hackers from taking critical information or creating issues for computer networks. Between 2014 and 2016, the Pentagon is planning to add more than 4,000 experts at its Cyber Command. Specialists in cybersecurity can also expect to find openings in health care, energy and at security services firms.

**Employment Projections for *Cybersecurity* careers in Tennessee**

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**POSTSECONDARY OPTIONS**

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| --- | --- |
| **School** | **Degree Program** |
| Nashville State Community College | Computer Systems Analyst |
| Tennessee State University | Information Security Analysts |
| Middle Tennessee State University | Computer Network Achitect |

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> .

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

|  |  |  |  |
| --- | --- | --- | --- |
| Occupation | 2014 Estimated Employment | 2024 Projected Employment | Total Percent Change |
| Information Security Analyst | 840 | 1,140 | +36% |
| Computer Systems Analyst | 9,440 | 12,370 | +31% |
| Computer Network Architect | 1,530 | 1,900 | +25% |

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**