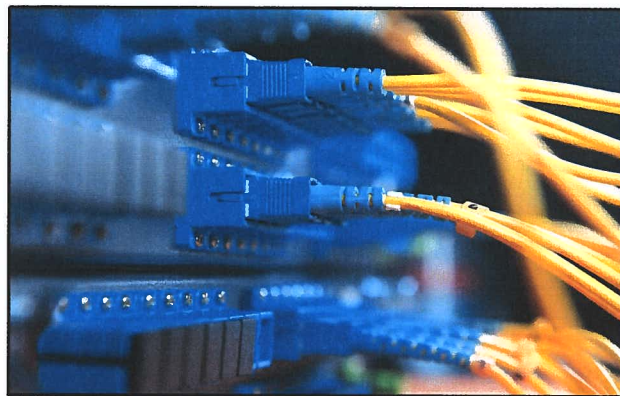


# NETWORKING

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## COURSE OBJECTIVE

Students will obtain education and skills in the field of Computer Technology, Networking and Cybersecurity along with essential career skills.

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## COURSE DESCRIPTION

This three-year program provides tenth, eleventh and twelfth graders with hands-on, career oriented e-learning solutions with an emphasis on practical experience to help students develop the fundamentals of PC Computer Technology, Networking, Computer Forensics and Cybersecurity along with essential career skills. No prior knowledge of computers or networking technology is required. This program helps students prepare for entry-level information and communication technology (ICT) career opportunities leading to certifications such as Comp TIA A+, Comp TIA ITF+, Cisco CCENT, Comp TIA Network+ and Cisco CCNA. Upon completion of the Networking Program of Study, students can select from nearly 30 courses including Cybersecurity, C, C++, and Python programming, Linux, Big Data & Analytics, Entrepreneurship, Database Fundamentals and Drone Tech.

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## COURSE TOPICS

Advanced Troubleshooting | Computer Assembly | Connecting Networks  
Introduction to the Personal Computer | Lab Procedures and Tool Use | Laptops | Mobile Devices  
Networks | Operating Systems | Preventative Maintenance | Printers | Security | The IT Professional  
Routing and Switching | Scaling Networks

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## REQUIRED SUPPLIES

Shop Shirt (Gray Polo) | Safety Glasses | Workwear Pants (Navy)

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## TEXTBOOKS

*Cisco IT Essentials*; Online Version; 7.0  
*Cisco CCNA Routing and Switching*; Online Version; 7.0

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## COOPERATING COMPANIES

Advent Communication Systems–Washington, PA  
IDI Consulting–Pittsburgh, PA

PNC Bank–Pittsburgh, PA  
Premier Technology Systems–Canonsburg, PA

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## SPECIALIZED SHOP EQUIPMENT

Cisco Routers and Switches

## CERTIFICATIONS

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CareerSafe OSHA

Cisco Systems: CCENT; CCNA

Computing Technology Industry Association: A+; IT Fundamentals; Network+

## ARTICULATION AGREEMENTS

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Pittsburgh Technical College

## POST-SECONDARY TRAINING OPTIONS

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California University of Pennsylvania—Computer Engineering Technology; Computer Science Technology  
Community College of Allegheny County

Edinboro University of Pennsylvania—Computer and Information Sciences

ICM School of Business & Medical Careers—Computer Management; Network Administration

ITT Technical Institute—Computer and Information Systems Security; Computer Programming; Computer  
Software Technology; Computer Systems Networking and Telecommunications

Penn Commercial Business and Technical School—Network Administrator

Pennsylvania College of Technology—Computer and Information Sciences; Computer System Analyst

Pittsburgh Technical College—Networking

## POTENTIAL CAREERS

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IT Specialist | Network Administrator | Network Analyst | Network Consultant | Network Engineer  
Network Systems Technician | Technical Support

## COMPUTER NETWORKING SKILLS

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**Equipment Selection** — Determining the kind of tools and equipment needed to do a job.

**Troubleshooting** — Determining causes of operating errors and deciding what to do about it.

**Complex Problem Solving** — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

**Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate and not interrupting at inappropriate times.

**Active Learning** — Understanding the implications of new information for both current and future problem-solving and decision-making.

**Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

**Installation** — Installing equipment, machines, wiring, or programs to meet specifications.

**Reading Comprehension** — Understanding written sentences and paragraphs in work related documents.

**Judgment and Decision Making** — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

**Technology Design** — Generating or adapting equipment and technology to serve user needs.

## WAGES AND EMPLOYMENT TRENDS FOR COMPUTER NETWORK SUPPORT SPECIALISTS

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Median Wages (2020)	\$31.47 Hourly, \$65,450 Annually
Number of Jobs (2019)	195,100 Employees
Job Outlook (2019-2029)	5% to 7% (Faster Than Average)
Employment Change (2019-2029)	14,800

Source: *Onetonline.org*



**WESTERN AREA CAREER & TECHNOLOGY CENTER**  
**NETWORKING**  
**2021-2022 Shop Requirements**

**Shop Uniform/Accessories**

- Polo Shirt, Gray (Use Enclosed Order Form)
- Safety Glasses (First Pair Provided by Western Area CTC)
- Workwear Pants, Navy

**APPROXIMATE COST: \$60**

Order uniform polo shirts by mailing the enclosed order form to TNT Manufacturing or by ordering online at *companycasuals.com/WACTC*. All uniform orders are delivered to Western Area and will be distributed to students after the start of the school year.

Uniform pants may be purchased at any discount chain or department store. Workwear brands such as Dickies, Dockers and Carhartt are suggested. Lost or broken safety glasses may be replaced throughout the year in the Main Office. Cost is approximately \$3.

Clinical activities/learning situations may require that any body piercings be removed and any tattoos covered.

Students may be required to wear professional clothing for vocational student organization conferences, competitions and meetings.

**All criteria is subject to change.**

2021