NETWORKING

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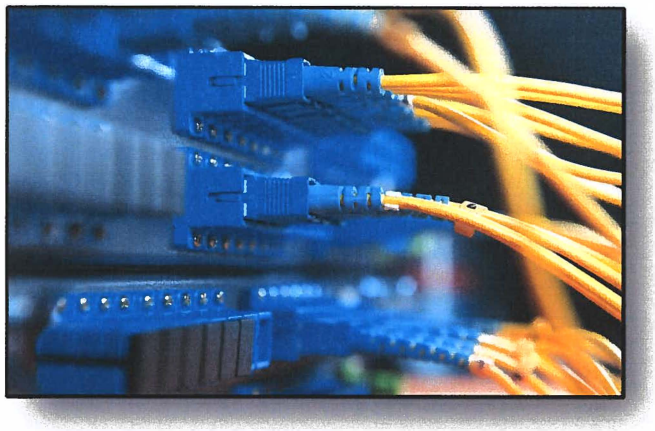

COURSE OBJECTIVE

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

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.

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

REQUIRED SUPPLIES

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

TEXTBOOKS

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

COOPERATING COMPANIES

Advent Communication Systems–Washington, PA
IDI Consulting–Pittsburgh, PA
PNC Bank–Pittsburgh, PA
Premier Technology Systems–Canonsburg, PA

SPECIALIZED SHOP EQUIPMENT

Cisco Routers and Switches

CERTIFICATIONS

CareerSafe OSHA
Cisco Systems: CCENT; CCNA
Computing Technology Industry Association: A+; IT Fundamentals; Network+

ARTICULATION AGREEMENTS

Pittsburgh Technical College

POST-SECONDARY TRAINING OPTIONS

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

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

COMPUTER NETWORKING SKILLS

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

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*