

NETWORK SYSTEMS

Network Systems prepares students for careers related to network systems analysis, planning, and implementation. Students develop skills to analyze network system needs for design, installation, maintenance, and management of network systems. Skills acquired will assist students to obtain network certifications. Essential skill areas include but are not limited to:

Operations
 Network Administration
 Basic Network Design Theory
 Network Troubleshooting

Network Security
 Network Operations Center
 Computer Hardware Maintenance
 Network Management

Sample Career Options:

Communications Analyst
 Customer Service Coordinator
 Network Administrator
 Network Architect
 Network Specialist
 Network Operations Analyst
 Network Technician
 PC Support Specialist
 PC Network Engineer
 Telecommunications Network Technician

Related Certifications/Certificates:

A + /Network + /i-Net + (CompTia)
 Brainbench Network Administration Certifications
 Certified Novell Administrator (CNA)
 CISCO Certified Network Associate (CCNA)
 CIW Associate (ProSoft Training)
 Customer Support Specialist (Help Desk Institute)
 IC3 and International Computer Driving License
 IT Essentials I & II Certificates (CISCO)
 Inet+ and Linux + (CompTia)
 Microsoft Certified Systems Eng. (MCSE)
 Microsoft Certified Systems Adm. (MCSA)
 Microsoft Certified Professional (MCP)
 Microsoft Office Specialist (Certiport)
 Unix Certificate (CISCO)
 Voice & Data Cabling Certificate (CISCO)

***Note: See complete listing of approved certifications in CTE Administrative Planning Guide**

PROGRAM SEQUENCES

Grades 9-10 (36-week course): Information Technology Fundamentals

Specializations (Grades 11-12):

Software Strand

BUS6650 Computer Network Software Operations
 BUS6651 Advanced Computer Network Operations

Hardware Strand

8452 Computer Networking Hardware Operations I
 8543 Computer Networking Hardware Operations II
 8544 Computer Networking Hardware Operations III
 8545 Computer Networking Hardware Operations IV

SKILL SETS

Network Design/Administration

Network design and administration professionals make the right connections for the Internet, intranets, extranets; as well as local and wide area networks, the public switched network and much more. They make sure traffic gets to where it needs to go and that nothing get lost along the way. Required skills include:

- Requirements analysis
- Network design
- Process, protocol and hardware planning and integration
- Performance evaluation and load balancing
- Information security plan development and implementation
- System monitoring and reporting
- On-going maintenance

Employability Skills for the IT Industry

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| <ul style="list-style-type: none"> • Project Management Skills • Interpersonal Skills • Analytical Skills • The ability to monitor and correct one's own performance • Oral and written communication skills | <ul style="list-style-type: none"> • The ability to select proper equipment and tools, apply technology to specific tasks, and maintain/troubleshoot equipment • Loyalty to the organization and commitment to finishing assignments and projects |
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Adapted from the Following Sources:

- IT Pathway Pipeline Model: Rethinking Information Technology Learning in Schools, Educational Development Center, Inc. and Information Technology Association of America.
- Cluster Concentrations/Pathways: The Ohio Information Technology Competency Profile.
- When Can You Start? Building Better Information Technology Skills and Careers, Information Technology Association of America, 2001.
- IT Career Cluster Initiative: Reinventing IT Education for Learning and Working, Educational Development Center, Inc.