

Networking 4 STUDENT PROFILE

DIRECTIONS:

Evaluate the student using the applicable rating scales below and check the appropriate box to indicate the degree of competency. The ratings 3, 2, 1, and N are not intended to represent the traditional school grading system of A, B, C, and D. The description associated with each of the ratings focuses on the level of student performance or cognition for each of the competencies listed below.

PERFORMANCE RATING

- 3 - Skilled--can perform task independently with no supervision
 2 - Moderately skilled--can perform task completely with limited supervision
 1 - Limitedly skilled--requires instruction and close supervision
 N - No exposure--has no experience or knowledge of this task

COGNITIVE RATING

- 3 - Knowledgeable--can apply the concept to solve problems
 2 - Moderately knowledgeable--understands the concept
 1 - Limitedly knowledgeable--requires additional instruction
 N - No exposure--has not received instruction in this area

A. Safety and Ethics

- 3 2 1 N
1. Identify major causes of work-related accidents in offices.
2. Describe the threats to a computer network, methods of avoiding attacks, and options in dealing with virus attacks.
3. Identify potential abuse and unethical uses of computers and networks.
4. Explain the consequences of illegal, social, and unethical uses of information technologies (e.g., piracy; illegal downloading; licensing infringement; and inappropriate uses of software, hardware, and mobile devices).
5. Differentiate between freeware, shareware, and public domain software copyrights.
6. Discuss computer crimes, terms of use, and legal issues such as copyright laws, fair use laws, and ethics pertaining to scanned and downloaded clip art images, photographs, documents, video, recorded sounds and music, trademarks, and other elements for use in Web publications.
7. Identify netiquette including the use of e-mail, social networking, blogs, texting, and chatting.

8. Describe ethical and legal practices in business professions such as safeguarding the confidentiality of business-related information.

B. Employability Skills

- 3 2 1 N
1. Identify positive work practices (e.g., appropriate dress code for the workplace, personal grooming, punctuality, time management, organization).
2. Demonstrate positive interpersonal skills (e.g., communication, respect, teamwork).

C. Student Organizations

- 3 2 1 N
1. Explain how related student organizations are integral parts of career and technology education courses.
2. Explain the goals and objectives of related student organizations.
3. List opportunities available to students through participation in related student organization conferences/competitions,

community service, philanthropy, and other activities.

4. Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development.

D. Advanced Network Implementation

- 3 2 1 N
1. Identify the basic capabilities (e.g. client support, interoperability, authentication, file and print services, application support and security) of the following server operating systems to access network resources: UNIX / Linux / Mac OS X Server, Netware, Windows, and Appleshare.
2. Identify the basic capabilities needed for client workstations to connect to and use network resources (e.g. media, network protocols, and peer and server services).
3. Identify the appropriate tool for a given wiring task (e.g. wire crimper, media tester / certifier. Punch down tool or tone generator).

- ___ ___ ___ 4. Given a remote connectivity scenario comprised of a protocol, an authentication scheme and physical connectivity, configure the connection. Includes connection to the following servers: UNIX / Linux / MAC OS X Server, Netware, Window, and Appleshare.
- ___ ___ ___ 5. Identify the purpose, benefits and characteristics of using a proxy service.
- ___ ___ ___ 6. Identify the purpose, benefits and characteristics of using a proxy service,
- ___ ___ ___ 7. Given a connectivity scenario, determine the impact on network functionality of a particular security implementation (e.g. port blocking / filtering, authentication and encryption).
- ___ ___ ___ 8. Identify the main characteristics of VLANs (Virtual Local Area Networks).
- ___ ___ ___ 9. Identify the main characteristics and purpose of extranets and intranets.
- ___ ___ ___ 10. Identify the purpose, benefits and characteristics of using antivirus software.
- ___ ___ ___ 11. Identify the purpose and characteristics of fault tolerance: Power, Link redundancy, Storage, and Services.
- ___ ___ ___ 12. Identify the purpose and characteristics of disaster recovery: backup / restore, offsite storage, Hot and cold spares, and hot, warm and cold sites.

E. Advanced Network Support

3 2 1 N

- ___ ___ ___ 1. Given a troubleshooting scenario, select the appropriate network utility from the following: Tracert / traceroute, ping, arp, netstat, nbtstat, ipconfig / ifconfig, winipcfg, and nslookup / dig.

- ___ ___ ___ 2. Given output from a network diagnostic utility (e.g. those utilities listed in objective 4.1), identify the utility and interpret the output.
- ___ ___ ___ 3. Given a network scenario, interpret visual indicators (e.g. link LEDs (Light Emitting Diode) and collision LEDs to determine the nature of a stated problem.
- ___ ___ ___ 4. Given a troubleshooting scenario involving a client accessing remote network services, identify the cause of the problem (e.g. file services, print services, authentication failure, protocol configuration, physical connectivity and SOHO router).
- ___ ___ ___ 5. Given a troubleshooting scenario between a client and the following server environments, identify the cause of a stated problem: UNIX / Linux / Mac OS X Server, Netware, Windows, and Appleshare.
- ___ ___ ___ 6. Given a scenario, determine the impact of modifying, adding or removing network services (e.g. DHCP, DNS and WINS) for network resources and users.
- ___ ___ ___ 7. Given a troubleshooting scenario involving a network with a particular physical topology (e.g. bus, star, mesh, or ring) and including a network diagram, identify the network area affected and the cause of the stated failure.
- ___ ___ ___ 8. Given a network troubleshooting scenario involving an infrastructure (e.g. wired and wireless) problem, identify the cause of a stated problem (e.g. bad media, interference, network hardware or environment).
- ___ ___ ___ 9. Given a network problem scenario, select an appropriate course of action based on a logical troubleshooting strategy.