

COMPUTER REPAIR II

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COMPUTER REPAIR II

I. COURSE DESCRIPTION

Computer Repair II is a full year study designed as a course to prepare the student TestOut's Network Pro certification—a comprehensive, real-world study consisting of all concepts of wired and wireless network implementation, Ethernet standards, network hardware and cabling, network management and troubleshooting, network security, routing, and WAN technologies. Moreover, students will learn how to spec and budget for a network based on customer needs. Acquiring the Network Pro certification will qualify and allow students, should they choose, to pursue CompTIA's Network+ certification. This course is a culmination of knowledge obtained from installation, identification, and technological theories. By studying computer repair, the students will not only prepare themselves for the exam, but they will gain a competitive edge in the IT industry. The student will also recognize current trends in the industry to better prepare them for future employment.

Students of Computer Repair II will study and gain a complete understanding of a network's necessary components, installation, maintenance, security, IP configuration, routing, and troubleshooting skills. They will design and implement a small enterprise network along with security measures. The student will also learn how to speak the correct vernacular, as well as how to perform in a professional lab environment.

II. Outline of Course

PCTI Curriculum Unit 1 Planner

Content Area:	Computer Repair II	Grade(s)	10
Unit Plan Title:	Network Architecture	Time Frame	9 Weeks
Standard(s) Addressed			
<p>9.1.12.A.1, 9.1.12.A.2, 9.1.12.A.4, 9.1.12.C.4, 9.1.12.F.2 9.4.12.K.4, 9.4.12.K.8, 9.4.12.K.25, 9.4.12.K.26, 9.4.12.K.28, 9.4.12.K.29, 9.4.12.K.45, 9.4.12.K.46, 9.4.12.K.47, 9.4.12.K.54 9.4.12.K.(1).1, 9.4.12.K.(1).2, 9.4.12.K.(1).3, 9.4.12.K.(1).4, 9.4.12.K.(1).5, 9.4.12.K.(1).6, 9.4.12.K.(2).5, 9.4.12.K.(2).9, 9.4.12.K.(2).10</p> <p>9-10.RST.1, 9-10.RST.2, 9-10.RST.3, 9-10.RST.4, 9-10.RST.5, 9-10.RST.6, 9-10.RST.7, 9-10.RST.8, 9-10.RST.9</p> <p>9-10.WHST.6, 9-10.WHST.8, 9-10.WHST.9</p>			
Essential Questions (3-5)			
<ol style="list-style-type: none"> 1. What are the basics of networking? 2. What are the types of cables and connectors used in networks? 3. What are the various types of networking devices? 4. What are the core concepts of Ethernet? 			
Anchor Text(s)			
<p><u>Mike Meyer's Guide to Managing and Troubleshooting Networks, 3rd Edition</u> – McGraw Hill 2012</p>			
Informational Texts (3-5)			
<p><u>ARTICLES</u> Network Cabling http://www.adeptnetworks.com/cable/</p> <p>How to Become a Networker http://compnetworking.about.com/od/itinformationtechnology/l/aa032601a.htm</p> <p>What is CAT 7 and do you need it? http://www.topix.com/forum/tech/cloud-computing/TIH4QIIOF9878QEJH</p> <p>Ethernet: The Dominant Network Technology http://www.10gea.org/whitepapers/ethernet-the-dominant-network-technology/</p>			
Expected Proficiencies/Career and Life Skills			
<ul style="list-style-type: none"> • Implement structured cabling • Punch cable down into a 110 block 			

- Configure TCP/IP settings
- Understand current trends in the networking field
- Connect different types of cable to network devices
- Make a patch cable
- Install and configure a network adapter
- Select and install a router

Writing Assessments (1-3)

- Students will outline their networking career path and write about what they need to do to achieve it.
- Students will research older networking technologies and write about why they lost to Ethernet.
- Design a structured cabling pamphlet with writing and corresponding pictures.
- Students will always write lab reports for their hands-on labs

Resources

- Testout's LabSim
- Blackboard
- PowerPoint
- Microsoft Word
- Instructional Videos
- Wikis
- Total Seminars Practice Exam software
- Knowledgebases
- Technical forums
- Adobe Encore
- Microsoft Visio
- Cisco Packet Tracer

Content Area:	Computer Repair II	Grade(s)	10
Unit Plan Title:	Network Implementation	Time Frame	10 Weeks
Standard(s) Addressed			
<p>9.1.12.A.1, 9.1.12.A.2, 9.1.12.A.4, 9.1.12.C.4, 9.1.12.F.2 9.4.12.K.4, 9.4.12.K.8, 9.4.12.K.25, 9.4.12.K.26, 9.4.12.K.28, 9.4.12.K.29, 9.4.12.K.45, 9.4.12.K.46, 9.4.12.K.47, 9.4.12.K.54 9.4.12.K.(1).1, 9.4.12.K.(1).2, 9.4.12.K.(1).3, 9.4.12.K.(1).4, 9.4.12.K.(1).5, 9.4.12.K.(1).6, 9.4.12.K.(2).5, 9.4.12.K.(2).9, 9.4.12.K.(2).10</p> <p>9-10.RST.1, 9-10.RST.2, 9-10.RST.3, 9-10.RST.4, 9-10.RST.5, 9-10.RST.6, 9-10.RST.7, 9-10.RST.8, 9-10.RST.9</p> <p>9-10.WHST.6, 9-10.WHST.8, 9-10.WHST.9</p>			
Essential Questions (3-5)			
<ol style="list-style-type: none"> 1. What are the features of network implementation and how are they configured? 2. What are the concepts and standards of wireless networking? 3. What are the steps to implementing a wireless network? 4. What are the characteristics of WAN technologies? 5. What are the various methods to connect to the Internet? 			
Anchor Text(s)			
Mike Meyer's Guide to Managing and Troubleshooting Networks, 3 rd Edition – McGraw Hill 2012			
Informational Texts (3-5)			
<p><u>ARTICLES</u> Virtualization: Features and Advantages http://www.nec.com/en/global/solutions/servervirtualization/merit.html</p> <p>IPv6: 5 Things You Should Know http://www.pcworld.com/article/257037/ipv6_five_things_you_should_know.html</p> <p>The Pros and Cons of Switching to VoIP Phone Services http://www.tmcnet.com/channels/ip-phones/articles/343628-pros-cons-switching-voip-phone-services.htm</p>			
Expected Proficiencies/Career and Life Skills			
<ul style="list-style-type: none"> • Configure a DHCP server • Configure a DNS server • Configure IP addresses 			

- Configure a DHCP client
- Demonstrate how routing is implemented in a network
- Configure ICS
- Configure VoIP
- Set up a wireless network and configure security
- Demonstrate how to connect to the Internet using different WAN technologies
- Create and configure a remote access location
- Configure a RADIUS solution

Writing Assessments (1-3)

- Students will be given a scenario network and then write a summary on virtualization and how it will be more cost efficient for the scenario network
- Write a position paper on why companies have yet to switch over to IPv6
- Write a position paper on whether it's beneficial to implement VoIP into medium-sized businesses
- Students will always write lab reports for their hands-on labs

Resources

- Testout's LabSim
- Blackboard
- PowerPoint
- Microsoft Word
- Instructional Videos
- Wikis
- Total Seminars Practice Exam software
- Knowledgebases
- Technical forums
- Adobe Encore
- Microsoft Visio
- Cisco Packet Tracer

PCTI Curriculum Unit 3 Planner

Content Area:	Computer Repair II	Grade(s)	10
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Unit Plan Title:	Network Management and Security	Time Frame	10 Weeks
Standard(s) Addressed			
<p>9.1.12.A.1, 9.1.12.A.2, 9.1.12.A.4, 9.1.12.C.4, 9.1.12.F.2 9.4.12.K.4, 9.4.12.K.8, 9.4.12.K.25, 9.4.12.K.26, 9.4.12.K.28, 9.4.12.K.29, 9.4.12.K.45, 9.4.12.K.46, 9.4.12.K.47, 9.4.12.K.54, 9.4.12.K.78 9.4.12.K.(1).1, 9.4.12.K.(1).2, 9.4.12.K.(1).3, 9.4.12.K.(1).4, 9.4.12.K.(1).5, 9.4.12.K.(1).6, 9.4.12.K.(2).5, 9.4.12.K.(2).9, 9.4.12.K.(2).10</p> <p>9-10.RST.1, 9-10.RST.2, 9-10.RST.3, 9-10.RST.4, 9-10.RST.5, 9-10.RST.6, 9-10.RST.7, 9-10.RST.8, 9-10.RST.9</p> <p>9-10.WHST.6, 9-10.WHST.8, 9-10.WHST.9</p>			
Essential Questions (3-5)			
<ol style="list-style-type: none"> 1. What are the security threats that can affect a network? 2. What are the methods used to detect and prevent security threats to a network? 3. What types of documentation are used to manage networks? 4. What tools can be used to manage a network? 5. What are some problems and solutions for troubleshooting networks? 			
Anchor Text(s)			
Mike Meyer's Guide to Managing and Troubleshooting Networks, 3 rd Edition – McGraw Hill 2012			
Informational Texts (3-5)			
<p><u>ARTICLES</u></p> <p>Top 10 Network Security Threats http://www.govtech.com/security/Top-10-Network-Security-Threats.html</p> <p>Social Engineering Threat Affects All http://www.zdnet.com/social-engineering-threat-affects-all-7000002527/</p> <p>Ensure your employees can recognize and avoid social engineering scams http://www.wombatsecurity.com/social-engineering-training</p>			
Expected Proficiencies/Career and Life Skills			
<ul style="list-style-type: none"> • Configure remote access • Document network activity • Manage network communication • Troubleshoot connectivity issues • Optimize network performance • Troubleshoot IP configuration • Troubleshoot name resolution 			

- Troubleshoot switching and routing
- Troubleshoot wireless configuration

Writing Assessments (1-3)

- Students will always write lab reports for their hands-on labs
- After reading the article on network security threats, students will write a comparative essay on the threats of 2010 and the threats of today
- Students will write a scripted role playing scenario depicting various social engineering tactics
- Students will write up a training pamphlet for users that will educate them on how to protect themselves from social engineering.

Resources

- Testout's LabSim
- Blackboard
- PowerPoint
- Microsoft Word
- Instructional Videos
- Wikis
- Total Seminars Practice Exam software
- Knowledgebases
- Technical forums
- Adobe Encore
- Microsoft Visio
- Cisco Packet Tracer

PCTI Curriculum Unit 4 Planner

Content Area:	Computer Repair II	Grade(s)	10
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Unit Plan Title:	The Network Administrator	Time Frame	9 Weeks
Standard(s) Addressed			
<p>9.1.12.A.1, 9.1.12.A.2, 9.1.12.A.4, 9.1.12.B.3, 9.1.12.C.4, 9.1.12.F.2 9.3.12.C.2, 9.3.12.C.4, 9.3.12.C.5, 9.3.12.C.6, 9.3.12.C.8, 9.3.12.C.23, 9.3.12.C.24 9.4.12.K.4, 9.4.12.K.8, 9.4.12.K.15, 9.4.12.K.16, 9.4.12.K.17, 9.4.12.K.20, 9.4.12.K.22, 9.4.12.K.25, 9.4.12.K.26, 9.4.12.K.28, 9.4.12.K.29, 9.4.12.K.36, 9.4.12.K.45, 9.4.12.K.46, 9.4.12.K.47, 9.4.12.K.54, 9.4.12.K.58, 9.4.12.K.60, 9.4.12.K.61, 9.4.12.K.62, 9.4.12.K.63, 9.4.12.K.66, 9.4.12.K.67, 9.4.12.K.78 9.4.12.K.(1).1, 9.4.12.K.(1).2, 9.4.12.K.(1).3, 9.4.12.K.(1).4, 9.4.12.K.(1).5, 9.4.12.K.(1).6, 9.4.12.K.(2).5, 9.4.12.K.(2).9, 9.4.12.K.(2).10</p> <p>9-10.RST.1, 9-10.RST.2, 9-10.RST.3, 9-10.RST.4, 9-10.RST.5, 9-10.RST.6, 9-10.RST.7, 9-10.RST.8, 9-10.RST.9, 9-10.RST.10</p> <p>9-10.WHST.6, 9-10.WHST.8, 9-10.WHST.9</p>			
Essential Questions (3-5)			
<ol style="list-style-type: none"> 1. What are the considerations when building a PC for a client? 2. What are the steps for installing Windows from start to finish? 3. What are the tools and features used to manage files and folders? 4. What are the tools and utilities used to manage a Windows system? 5. What are some suggestions and solutions for troubleshooting PCs? 			
Anchor Text(s)			
<p>Mike Meyer's Guide to Managing and Troubleshooting Networks, 4th Edition – McGraw Hill 2012</p>			
Informational Texts (2-5)			
<p><u>ARTICLES</u> Network Administrator Salary Range http://www.itcareerfinder.com/brain-food/it-salaries/network-administrator-salary-range.html</p> <p>Total Cost of Ownership Explained http://www.business-case-analysis.com/total-cost-of-ownership.html</p>			
Expected Proficiencies/Career and Life Skills			
<ul style="list-style-type: none"> • Put together a strong resume for a career as a network administrator • Interview professionally • Design a corporate LAN proposal • Design a corporate LAN layout using industry standard software • Convince a company to work with your company in designing a network 			
Writing Assessments (1-3)			
<ul style="list-style-type: none"> • Students must write a proposal for their corporate LAN. • Based on salary ranges for network administrators of past years, students will write about 			

the current salaries and the reasons for the change.

- Based on the article on TCO, students must write a budget proposal which will be included in their network design proposal.

Resources

- Testout's LabSim
- Blackboard
- PowerPoint
- Microsoft Word
- Instructional Videos
- Wikis
- Total Seminars Practice Exam software
- Career search engines (i.e. Careerbuilder)
- Knowledgebases
- Technical forums
- Adobe Encore
- Microsoft Visio
- Cisco Packet Tracer

III. Methods of Student Evaluation (assessment and evaluation)

Assessment in a vocational area can be divided into four general categories—formal (graded), informal (ungraded), certification, and practical application.

Formal Assessments:

- Multiple choice quizzes
- Do Now quizzes
- Research Simulated Tasks
- Lab Reports
- Oral presentations
- Notebook checks
- Tests

Some of the informal assessments include, *but are not limited to*:

- Daily closure discussion – At the end of each day, the instructor and students discuss the day’s topic and provide insight and ask questions
- Blackboard sharing – Students are always working in groups. At the end of lab time, students are to exchange information, project data, lab reports, et al with their group members via Blackboard

Certification – The ultimate goal for the end of the year is to acquire certification. Currently, Computer Repair students will be taking the Network Pro certification provided by TestOut Corporation. While this certification is not yet industry standard, it does demonstrate a strong proficiency in their area and is honored by employers. It also qualifies the student to pursue CompTIA’s Network+ certification, the current de facto industry standard certification.

Practical application is the most important component to any vocational area. It demonstrates that a student can put the learned information into action by applying it in a real-world scenario.

Some practical application assessments include, *but are not limited to*:

- Practical labs – Students will perform hands-on activities with the equipment based on a given set of instructions.
- “The Techie” – Students will often be asked to fix a computer brought in by a faculty member.
- Professional performance – While academics and discipline are separate entities, they are conjunctive in this shop because acting in a professional manner during lab is of paramount importance. Therefore, students will be assessed on their behavior in the lab
- Projects – There will be a project each marking period. Successful completion of the project demonstrates that the students can practically apply most (or all) of the unit’s concepts

Students will be evaluated in accordance with general grading policies listed in the student handbook.

- Tests – 40%
- Quizzes – 20%
- Projects/Labs – 20%
- Participation – 10%
- Homework/Notebook – 10%

IV. Instructional Strategies Based on Instructional Goals

A combination of various instructional strategies will be used based on students' learning styles and subject content. Such strategies include:

- Collaborating with teammates to complete labs and projects
- Reading and discussing current trends in the industry
- Watching instructional videos
- Performing hands on exercises in a real-world environment
- Performing lab simulation exercises akin to real-world scenarios
- Develop strategies to troubleshoot a computer problem
- Develop critical thinking skills
- Instructional delivery with PowerPoint presentations
- Providing supplement notes
- Review games
- Collaborative projects

V. Scope and Sequence

SKILLS TO BE LEARNED		I = Introduce D = Develop R = Reinforce M = Master
9.1.12.A.1	Apply critical thinking and problem-solving strategies during structured learning experiences.	M
9.1.12.A.2	Participate in online strategy and planning sessions for course-based, school-based, or outside projects.	R
9.1.12.A.4	Justify problem-solving strategies used in the development of a particular innovative product or practice in the United States and in another country.	R
9.1.12.B.3	Assist in the development of innovative solutions to an onsite problem by incorporating multiple perspectives and applying effective problem-solving strategies during structured learning experiences, service learning, or volunteering.	R
9.1.12.C.4	Demonstrate leadership and collaborative skills when participating in online learning communities and structured learning experiences.	M
9.1.12.F.2	Demonstrate a positive work ethic in various settings, including the classroom and during structured learning experiences.	M
9.3.12.C.2	Characterize education and skills needed to achieve career goals, and take steps to prepare for postsecondary options, including making course selections, preparing for and taking assessments, and participating in extra-curricular activities.	R
9.3.12.C.4	Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.	R
9.3.12.C.5	Identify transferable skills in career choices and design alternative career plans based on those skills.	R
9.3.12.C.6	Develop job readiness skills by participating in structured learning experiences and employment seeking opportunities.	R
9.3.12.C.8	Interpret how changing economic and societal needs influence employment trends and future education.	R

9.3.12.C.23	Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.	R
9.3.12.C.24	Analyze why employers use different interview techniques.	R
9.4.12.K.4	Select and employ appropriate reading and communication strategies to learn and use technical concepts and vocabulary in practice.	M
9.4.12.K.8	Use correct grammar, punctuation, and terminology to write and edit documents.	M
9.4.12.K.15	Demonstrate how to develop positive customer relations to build and maintain a customer base in this cluster.	R
9.4.12.K.16	Demonstrate how to perform scheduling functions to meet customer needs in this cluster.	R
9.4.12.K.17	Employ critical thinking skills (e.g., analyze, synthesize, and evaluate) independently and in teams to solve problems and make decisions.	R
9.4.12.K.20	Conduct technical research to gather information necessary for decision-making.	R
9.4.12.K.22	Implement problem-solving processes to evaluate and verify the nature of problems in this cluster.	R
9.4.12.K.25	Operate electronic mail applications to communicate.	M
9.4.12.K.26	Operate Internet applications to perform tasks.	M
9.4.12.K.28	Operate presentation applications to prepare and deliver presentations.	M
9.4.12.K.29	Employ spreadsheet applications to organize and manipulate data.	M
9.4.12.K.36	Analyze and summarize the use of information technology to enhance business effectiveness.	R
9.4.12.K.45	Employ leadership skills to accomplish goals and objectives.	R
9.4.12.K.46	Employ organizational skills to foster positive working relationships and accomplish organizational goals.	R
9.4.12.K.47	Employ teamwork skills to achieve collective goals and use team members' talents effectively.	R
9.4.12.K.54	Identify and demonstrate positive work behaviors and personal qualities needed to succeed in the classroom and/or to be employable.	R
9.4.12.K.58	Demonstrate skills in evaluating and comparing employment opportunities in order to accept employment positions that match career goals.	R

9.4.12.K.60	Identify and explore careers in one or more career pathways to build an understanding of the opportunities available in the cluster.	R
9.4.12.K.61	Examine requirements for career advancement to plan for continuing education and training.	R
9.4.12.K.62	Research professional development opportunities needed to keep current on relevant trends and information within the cluster.	R
9.4.12.K.63	Examine licensing, certification, and credentialing requirements at the national, state, and local levels to maintain compliance with industry requirements.	R
9.4.12.K.66	Employ information management techniques and strategies to assist in decision-making.	R
9.4.12.K.67	Employ planning and time management skills and tools to enhance results and complete work tasks.	R
9.4.12.K.78	Recognize and analyze potential information technology security threats to develop and maintain security measures.	R
9.4.12.K.(1).1	Identify and analyze an individual's or a business organization's network system needs and requirements to design a network.	D, R
9.4.12.K.(1).2	Analyze a network system to determine if it meets specifications.	D, R
9.4.12.K.(1).3	Design a network system using industry-specific technologies, tools, and standards to demonstrate a basic understanding of network architecture.	D, R
9.4.12.K.(1).4	Perform network system installation and configuration to launch a network system.	R
9.4.12.K.(1).5	Perform network administration and monitoring to maintain a network system.	D, R
9.4.12.K.(1).6	Perform network maintenance and user support services to maintain a network system.	D, R
9.4.12.K.80	Provide support and training to maintain proper network functioning	D, R
9.4.12.K.(2).1	Perform user support to maintain service.	M
9.4.12.K.(2).5	Perform network administration and monitoring to maintain a network system.	D, R
9.4.12.K.(2).9	Employ technical writing and documentation skills to keep records necessary for an information system.	R
9.4.12.K.(2).10	Identify and implement quality assurance processes to maximize information system operation .	R

9-10.RST.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.	R
9-10.RST.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.	R
9-10.RST.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases, or exceptions defined in the text.	R
9.10.RST.4	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9—10 texts and topics.	R
9-10.RST.5	Analyze the structure of the relationships among concepts in a text, including relationships among key terms.	R
9-10.RST.6	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing the experiment in a text, defining the question the author seeks to address.	R
9-10.RST.7	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.	R
9-10.RST.8	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.	R
9-10.RST.9	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.	R
9-10.RST.10	By the end of grade 10, read and comprehend science/technical texts in the grades 9—10 text complexity band independently and proficiently.	R

9-10.WHST.6	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	R
9-10.WHST.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	R
9-10.WHST.9	Draw evidence from informational texts to support analysis, reflection, and research	R

VI. Computer Repair II Proficiencies Handout

COURSE DESCRIPTION

Computer Repair II is a full year study designed as a course to prepare the student TestOut's Network Pro certification—a comprehensive, real-world study consisting of all concepts of wired and wireless network implementation, Ethernet standards, network hardware and cabling, network management and troubleshooting, network security, routing, and WAN technologies. Moreover, students will learn how to spec and budget for a network based on customer needs. Acquiring the Network Pro certification will qualify and allow students, should they choose, to pursue CompTIA's Network+ certification. This course is a culmination of knowledge obtained from installation, identification, and technological theories. By studying computer repair, the students will not only prepare themselves for the exam, but they will gain a competitive edge in the IT industry. The student will also recognize current trends in the industry to better prepare them for future employment.

Students of Computer Repair II will study and gain a complete understanding of a network's necessary components, installation, maintenance, security, IP configuration, routing, and troubleshooting skills. They will design and implement a small enterprise network along with security measures. The student will also learn how to speak the correct vernacular, as well as how to perform in a professional lab environment.

PROFICIENCIES

- A. Demonstrate how to work safely in professional environment.
- B. Use resources to examine trends, certifications, and careers.
- C. Identify the layers of the OSI and TCP/IP models.
- D. Identify network cables by sight or name.
- E. Identify network cable speed capabilities.
- F. Identify network connectors by sight or name.
- G. Make a patch cable.
- H. Test network connectivity.
- I. Select and install cables for communication between computers and networking devices.
- J. Select and install an appropriate network card in given scenario.
- K. Select and install an appropriate networking device in a given scenario.

- L. Select and install an appropriate networking device for a VoIP scenario.
- M. Select and install appropriate wireless networking devices in a given scenario.
- N. Configure a wireless network connection.
- O. Add and configure a wireless profile.
- P. Identify and select valid IP addresses and classful and classless subnet masks.
- Q. Configure IP address information on a Windows system.
- R. Configure Internet Connection Sharing.
- S. Identify necessary networking protocols and services given a scenario.
- T. Identify UDP and TCP ports of common network protocols.
- U. Identify public and private interfaces and addresses for NAT implementation.
- V. Identify and select the DHCP scope, reservations, and options to meet network requirements.
- W. Configure the Windows firewall.
- X. Configure security protocols.
- Y. Identify network threats.
- Z. Implement network security.
- AA. Identify specific security features on network devices.
- BB. Select and install network security devices given a scenario.
- CC. Use TCP/IP utilities to troubleshoot network issues.
- DD. Configure Remote Desktop.
- EE. Design and implement a small enterprise network.
- FF. Demonstrate how structured cabling is implemented.
- GG. Design a small enterprise network.
- HH. Monitor network connectivity and conditions.