Password Technical College
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San Germán, PR 00683
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SYLLABUS

GENERAL INFORMATION

Course Title: CompTIA Network +

Code: N10-008

Contact Hours: 40

Academic Term: TBA

COURSE DESCRIPTION

This course will include the knowledge and skills required to troubleshoot, configure, and manage common network wireless and wired devices, establish basic network design and connectivity, understand and maintain network documentation, identify network limitations and weaknesses, and implement network security, standards, and protocols. The student will have a basic understanding of emerging technologies including unified communications, mobile, cloud, and virtualization technologies. This course will prepare the student to take the exam certification for CompTIA Network + N10-008.

GENERAL OBJECTIVES

Upon successful completion of this course, students will be equipped with the fundamental knowledge and skills necessary for a comprehensive understanding of network infrastructure and operations. Specifically, the course aims to enable students to:

1. Define key concepts in network architecture and operations.
2. Apply principles of network security and execute network troubleshooting procedures.
3. Understand and utilize industry standards, practices, and network theories.
4. Explain the OSI model layers and the TCP/IP suite, crucial frameworks for understanding network functions.
5. Differentiate between various media types and access methods and configure and monitor network interfaces.
6. Compare and contrast different network topologies and network types to choose the appropriate one for specific situations.

7. Configure IPv4 addressing components and use command line tools to test IP interfaces.
8. Describe the characteristics of routing, the uses of ports and protocols, and the function of name resolution services.
9. Understand and explain the roles of network applications, voice services, advanced networking devices, virtualization, and network storage services.
10. Summarize cloud service concepts and proficiently monitor network interfaces and logs.
11. Apply a structured approach to network troubleshooting methodology and address common network service issues effectively.

COURSE CONTENT

Lesson 1: Comparing OSI Model Network Functions

Lesson 2: Deploying Ethernet Cabling

Lesson 3: Deploying Ethernet Switching

Lesson 4: Troubleshooting Ethernet Networks

Lesson 5: Explaining IPv4 Addressing

Lesson 6: Supporting IPv4 and IPv6 Networks

Lesson 7: Configuring and Troubleshooting Routers

Lesson 8: Explaining Network Topologies and Types

Lesson 9: Explaining Transport Layer Protocols

Lesson 10: Explaining Network Services

Lesson 11: Explaining Network Applications

Lesson 12: Ensuring Network Availability

Lesson 13: Explaining Common Security Concepts

Lesson 14: Supporting and Troubleshooting Secure Networks

Lesson 15: Deploying and Troubleshooting Wireless Networks

Lesson 16: Comparing WAN Links and Remote Access Methods

Lesson 17: Explaining Organizational and Physical Security Concepts

Lesson 18: Explaining Disaster Recovery and High Availability Concepts

Lesson 19: Applying Network Hardening Techniques

Lesson 20: Summarizing Cloud and Datacenter Architecture

EVALUATION CRITERIA

CRITERIA	Grade total
1 Mid-Term Exam	100
1 Final Exam	100
Quizzes	100
Homework or Assessments	100
Laboratories	100
Total	**500**

Assignments are always due in class on the day designated. You are responsible for any work lost due to technical problems, etc. Late papers will lose a letter grade for each day that they are late. Any exceptions must be properly documented and discussed in advance for an extension to be arranged.

EDUCATIONAL RESOURCES

Pengelly, J. (2021). The Official CompTIA A + Core 1 Student Guide (Exam 220-1101). eBook CompTIA. Downers Grove, Illinois
ISBN: 978-1-64274-356-2

Neo LMS (2024). CompTIA A+ Core 1. passwordtech.edu20. https://passwordtech.edu20.org/