**SYLLABUS**

**GENERAL INFORMATION**

Course Title: CompTIA Network + Exam Review

Code: RCSE 1020

Contact Hours: 45 hours

Academic Term: July 21, 2021 to August 3, 2021

Professor: Joel Vargas Ramos

Email: jvargas@passwordpr.com

**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 + N10-007.

**GENERAL OBJECTIVES**

It is expected that at the end of the course, the student can:

* Establishment the basic design of the network and connectivity.
* Define Network Operations.
* Understanding and maintaining network documentation.
* Execute Network Troubleshooting.
* Identify the limitations and weaknesses of the network.
* Implementation of network security, standards and protocols.

**SPECIFIC OBJECTIVES**

**Lesson 10: Installing and Configuring Security Devices**

* Install and Configure Firewalls and Proxies
* Explain the Uses of IDS/IPS and UTM

**Lesson 11: Explaining Authentication and Access Controls**

* Explain Authentication Controls and Attacks
* Explain the Uses of Authentication Protocols and Directory Services
* Explain the Uses of Port Security and NAC
* Implement Network Device Hardening
* Explain Patch Management and Vulnerability Scanning Processes

**Lesson 12: Deploying and Troubleshooting Cabling Solutions**

* Deploy Structured Cabling Systems
* Deploy Twisted Pair Cabling Solutions
* Test and Troubleshoot Twisted Pair Cabling Solutions
* Deploy Fiber Optic Cabling Solutions

**Lesson 13: Implementing and Troubleshooting Wireless Technologies**

* Install and Configure Wireless Technologies
* Troubleshoot Wireless Performance Issues
* Secure and Troubleshoot Wireless Connectivity

**Lesson 14: Comparing and Contrasting WAN Technologies**

* Compare and Contrast WAN Core Service Types
* Compare and Contrast WAN Subscriber Service Types
* Compare and Contrast WAN Framing Service Types
* Compare and Contrast Wireless and IoT WAN Technologies

**Lesson 15: Using Remote Access Methods**

* Use Remote Access VPNs
* Use Remote Access Management Methods

**Lesson 16: Identifying Site Policies and Best Practices**

* Manage Networks with Documentation and Diagrams
* Summarize the Purposes of Physical Security Devices
* Compare and Contrast Business Continuity and Disaster Recovery Concepts
* Identify Policies and Best Practices

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| **Days** | **Modules** | **Works** |
| Class #1**Module 10** | **Installing and Configuring Security Devices*** Install and Configure Firewalls and Proxies
* Explain the Uses of IDS/IPS and UTM
 | * Pre-Test Comprehension
 |
| Class #2**Module 11** | **Explaining Authentication and Access Controls*** Explain Authentication Controls and Attacks
* Explain the Uses of Authentication Protocols and Directory Services
 | * Lab 1- Configure Firewall Settings
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| Class #3**Module 11** | * Explain the Uses of Port Security and NAC
* Implement Network Device Hardening
* Explain Patch Management and Vulnerability Scanning Processes
 | * Quiz 1
 |
| Class #4**Module 12** | **Deploying and Troubleshooting Cabling Solutions*** Deploy Structured Cabling Systems
* Deploy Twisted Pair Cabling Solutions
* Test and Troubleshoot Twisted Pair Cabling Solutions
* Deploy Fiber Optic Cabling Solutions
 | * Lab 2- Qualys SSL Labs
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| Class #5**Module 13** | **Implementing and Troubleshooting Wireless Technologies*** Install and Configure Wireless Technologies
* Troubleshoot Wireless Performance Issues
* Secure and Troubleshoot Wireless Connectivity
 | * Quiz 2
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| Class #6**Module 14** | **Comparing and Contrasting WAN Technologies*** Compare and Contrast WAN Core Service Types
* Compare and Contrast WAN Subscriber Service Types
 | * Mid-Term Exam
 |
| Class #7**Module 14** | * Compare and Contrast WAN Framing Service Types
* Compare and Contrast Wireless and IoT WAN Technologies

  | * Quiz 3
 |
| Class #8**Module 15** | **Using Remote Access Methods*** Use Remote Access VPNs
* Use Remote Access Management Methods
 | * Post-Test Comprehension
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| Class #9**Module 16** | **Identifying Site Policies and Best Practices*** Manage Networks with Documentation and Diagrams
* Summarize the Purposes of Physical Security Devices
* Compare and Contrast Business Continuity and Disaster Recovery Concepts
* Identify Policies and Best Practices
 | * Final Exam
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**LABORATORIES:**

* Lab 1- Configure Firewall Settings
* Lab 2- Qualys SSL Labs

**EVALUATION CRITERIA**

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| --- | --- |
| **CRITERIA** | **Grade total** |
| Mid-Term Exam | 100 |
| Quizzes | 100 |
| Laboratories 1-2 | 100 |
| Final Exam | 100 |
|  |  |
| Total | 400 |

**EDUCATIONAL RESOURCES**

* Pengelly, J. (2020). The Official CompTIA Network + Student Guide (Exam

N10-007). Ebook CompTIA. Downers Grove, Illinois

* + Sequeira, A. (2016*).* CompTIA Network + N10-007 Cert Guide: Learn, Prepare

and practice for exam Success*.* Indianapolis, Indiana. Pearson.

* + Neo LMS (2021). CompTIA Network +. *passwordtech.edu20*.

<https://passwordtech.edu20.org/>

**NOTES**

* **Reasonable Accommodation:** Any student who requires reasonable accommodation must request them at the beginning of the course or as soon acquire the required knowledge that through the Professor in charge and be notifying the Academic Director.
* **Honesty, fraud, plagiarism:** Dishonesty, fraud, plagiarism and any other inappropriate behavior about the student's academic performance, constitute violations of the catalog of the institution, its Rules of Conduct and Duties of Student. Major infractions, as provided in the catalog may result in the suspension of the institution for a defined time or permanent expulsion as stipulated in the Rules of Conduct and Duties of Student.