

Syllabus

GENERAL INFORMATION

Title: CompTIA Network + Course
School Code: CCNA 1030
Contact Hours: 57
Academic Term: June 15, 2021 to July 11, 2021
Professor: Joel Vargas Ramos
Email: jvargas@passwordpr.com

COURSE DESCRIPTION

The course objective is to obtain the skills necessary to apply and implement technical knowledge of network operating systems and technologies, their vulnerabilities and troubleshooting. The student will acquire knowledge of major networking technologies, skills, systems and tools used in the day to day operations of modern network environments and how to secure them. This course will prepare the student to take the N10-008 CompTIA Network+ Certification exam.

OBJECTIVES

Upon completion of this course, the student will be able to become familiar with the basic concepts of networking, including the OSI model and the TCP/IP model, and the protocols and applications that function within these models; understand VLANs and their benefits and drawbacks; become familiar with common network devices, such as routers and switches, and work with wireless technologies to create a functional wireless network; know different types of network media, including twisted pair cable, coaxial cable, fiber optic cable, and wireless media and how to troubleshoot them; understand WAN technologies and the properties of LANs including topologies; understand the methods used to manage and monitor networks as well as the hardware and software tools used in the troubleshooting process; understand security in wired and wireless environments, the threats and how they can be mitigated; and understand the properties and operations of firewalls.

Course Content:

- Chapter 1- Communicating in a Connected World
- Chapter 2- Internet Access Technology
- Chapter 3- Build a Small Network
- Chapter 4- Network Protocols and Communication
- Chapter 5- Application Layer

Skills Distribution:

Days	Modules	Works
Class #1 Module 1	Lesson 1: Communication in a Connected World <ul style="list-style-type: none"> • What is the Network • Type of Network Media 	<ul style="list-style-type: none"> • Pre-Test Comprehension
Class #2 Module 1	<ul style="list-style-type: none"> • Transmitting data on the network • Network Components 	<ul style="list-style-type: none"> • Lab 1- Tracing Internet Connectivity
Class #3 Module 1	<ul style="list-style-type: none"> • Network are Everywhere • Others Types of Network Media 	<ul style="list-style-type: none"> • Quiz 1- Display Devices
Class #4 Module 2	Lesson 2: Internet Access Technician <ul style="list-style-type: none"> • Intermediary Network Devices • Network Representation • Intranet and Extranet 	<ul style="list-style-type: none"> • Lab 2- Determine the Mac Address of a Host
Class #5 Module 3	Lesson 3: Build a Small Network <ul style="list-style-type: none"> • Small network Topologies • IP Addressing • Traffic Management 	<ul style="list-style-type: none"> • Quiz 2- Hardware and Storage
Class #6 Module 3	<ul style="list-style-type: none"> • Voice and Video Applications • Security Threats • Network Attack Mitigations 	<ul style="list-style-type: none"> • Lab 3- Incident Handling
Class #7 Module 4	Lesson 4: Network Protocols and Communications <ul style="list-style-type: none"> • Communication Fundamentals • Protocol Interaction 	<ul style="list-style-type: none"> • Mid-Term Exam

Class #8 Module 4	<ul style="list-style-type: none"> • Rule Establishment • Network Protocols • TCP/IP Communication Process 	<ul style="list-style-type: none"> • La 4- Compare data with Hash
Class #9 Module 5	<p>Lesson 5: Application Layer</p> <ul style="list-style-type: none"> • Presentation Layer and session layer • How applications interact with end-user 	<ul style="list-style-type: none"> • Quiz 3- Network and Infrastructure
Class #10 Module 5	<ul style="list-style-type: none"> • Peer 2 Peer Networks • Web and Email Protocols 	<ul style="list-style-type: none"> • Post-Test
Class #11 Module 5	<ul style="list-style-type: none"> • IP Addressing Services • File Sharing Services 	<ul style="list-style-type: none"> • Final Exam

Laboratories

- Lab 1- Tracing Internet Connectivity
- Lab 2- Determine the Mac Address of a Host
- Lab 3- Incident Handling
- Lab 4- Compare Data with Hash

Lab Policy

1. For the student's and equipment's safety **no eating and/or drinking** is allowed in the classroom or laboratory.
2. Students must always use safety measures
3. Students must have unplugged electronic devices from electric outlets before any lab procedure
4. No illegal copying of ANY materials
5. Keep sound levels to a minimum
6. Respect your classmates, no disruptive behavior will be allowed

Evaluation Criteria

CRITERIA	Grade total	Final Grade %
3 Exams	300	50
1 Final Exam or equivalent	100	25
Attendance *25 Points will be deducted for each non-excused absence	100	15
Assignments (Out of work Class)	100	10
Total	600	100

Educational Resources

- Pengelly, J. (2022). The Official Network + Student Guide (Exam N10-008). Ebook CompTIA. Downers Grove, Illinois
- Neo LMS (2022). Network + Exam Review (CCNA 1030). *passwordtech.edu20*.
<https://passwordtech.edu20.org/>

Notes

• **Reasonable Accommodation:** Any student who requires a reasonable accommodation should do the request at the beginning of the course or as soon as he / she acquires knowledge of what it requires, through the Professor in charge and this notifying the Academic Director.

• **Honesty, fraud, plagiarism:** The lack of honesty, fraud, plagiarism and / or any other inappropriate behavior in relation to the student's academic performance constitute violations of the Institution's Catalog, its Rules of Conduct and Student Duties. Major infractions, as determined by the Catalog, may result in the suspension of the Institution for a definite time or permanent expulsion as stipulated in the Norms of Conduct and Duties of the Student.