

COURSE 1. Technical Support Fundamentals

WEEK 1

Introduction to IT Support

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/F3fZT/program-introduction>

- **Video:** Program Introduction
- **Video:** What is IT
- **Video:** What does an IT Support Specialist do?
- **Video:** Course Introduction
- Take a minute to set yourself up for success
- **Reading:** Navigating Coursera
- **Reading:** Program Surveys
- Google IT Cert Participant Entry Survey
- **Reading:** How to use Discussion Forums
- **Reading:** Get to Know Your Fellow October Completers
- **Discussion Prompt:** Meet and Greet

History of Computing

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/CbFlp/from-abacus-to-analytical-engine>

- **Video:** From Abacus to Analytical Engine
- **Video:** The Path to Modern Computers
- **Discussion Prompt:** Your History of Computing
- **Video:** Kevin Career

Digital Logic

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/BLZaB/computer-language>

- **Video:** Computer Language
- **Video:** Character Encoding
- **Video:** Binary
- **Reading:** Supplemental Reading on Logic Gates
- **Video:** How to Count in Binary
- **Practice Quiz:** Binary

Computer Architecture Layer

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/10AG6/abstraction>

- **Video:** Abstraction
- **Video:** Computer Architecture Overview
- **Video:** Kevin: Advice
- **Practice Quiz:** Computer Architecture

Graded Assessments

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/supplement/lz0YJ/about-graded-plugins>

- **Reading:** About Graded Plugins
- **Quiz:** How to Count in Binary

WEEK 2

The Modern Computer

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/alelg/module-introduction>

- **Video:** Module Introduction
- **Video:** Introduction to Computer Hardware
- **Video:** Programs and Hardware
- **Reading:** Supplement Reading for CPUs
- **Discussion Prompt:** Overclocking
- **Video:** Joe: Diversity
- **Practice Quiz:** Modern Computer

Components

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/KUjWx/cpu>

- **Video:** CPU
- **Video:** Supplemental Reading for CPU architecture
- **Video:** RAM
- **Video:** Motherboards
- **Video:** Storage
- **Reading:** Supplemental Reading for Data Storage
- **Video:** Power Supplies
- **Video:** Mobile Devices
- **Video:** Batteries and Charging Systems
- **Reading:** Supplemental Readings for Batteries and Charging Systems
- **Video:** Peripherals
- **Reading:** Supplemental Reading for USB Peripherals
- **Reading:** Supplemental Reading for Projectors
- **Discussion Prompt:** Taking Tech Apart
- **Practice Quiz:** Components

Starting It Up

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/wtJUp/bios>

- **Video:** BIOS
- **Video:** Ben's Advice
- **Video:** Putting it all Together
- **Video:** Mobile Device Repair
- **Practice Quiz:** Starting It Up

Hardware: Graded Assessment

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/1LLGG/one-program-many-futures>

- **Video:** One program, many futures
- **Reading:** About Graded Plugins
- **Quiz:** Assemble a Computer

WEEK 3

What's an Operating System?

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/l3n9l/module-introduction>

- **Video:** Module Introduction
- **Video:** Remote Connection and SSH
- **Video:** Remote Connections on Windows
- **Reading:** Supplemental reading for Remote Connections in Windows
- **Video:** Components of an Operating System
- **Reading:** Supplemental Reading for Chrome OS
- **Video:** Files and System
- **Reading:** Supplemental Reading for ReFS File System
- **Video:** Process Management
- **Video:** Memory Management
- **Video:** I/O Management
- **Video:** Interacting with the OS: User Space
- **Video:** Logs
- **Video:** The Boot Process
- **Video:** Mobile Operating Systems
- **Video:** Cindy Drive & Career Path
- **Practice Quiz:** What is an Operating System?

Installing an Operating System

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/HojBo/choosing-an-operating-system>

- **Video:** Choosing an Operating System
- **Discussion Prompt:** What's Your Favorite OS?
- **Reading:** Supplemental Reading for Choosing an OS
- **Video:** Virtual Machines
- **Video:** Installing Windows
- **Video:** Installing Linux
- **Reading:** Supplemental Reading for Ubuntu
- **Video:** What is Chrome OS?
- **Video:** Installing Mac OS X
- **Video:** Tri Ngo Obstacles & How to be successful in IT
- **Practice Quiz:** Installing an Operating System
- **Video:** Introduction to Qwiklabs

Graded Assessments

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/supplement/dtCrZ/instructions-for-accessing-linux-and-windows-qwiklabs>

- **Reading:** Instructions for Accessing Linux and Windows Qwiklabs
- **Quiz:** Accessing Qwiklabs
- **Graded External Tool:** Creating a Folder with Windows
- **Graded Internal Tool:** Creating a Folder with Linux

WEEK 4

What is Networking

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/NvANk/module-introduction>

- **Video:** Module Introduction
- **Video:** Basics of Networking
- **Video:** Networking Hardware
- **Video:** Language of the Internet
- **Video:** The Web
- **Video:** Victor First Job

Limitations of The Internet

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/EObzZ/history-of-the-internet>

- **Video:** History of the Internet
- **Video:** Limitations of the Internet
- **Video:** Changing Careers
- **Discussion Prompt:** Limitations of the Internet
- **Practice Quiz:** Limitations of the Internet

Impact of The Internet

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/Q0g6N/impact>

- **Video:** Impact
- **Discussion Prompt:** The Internet and You

- **Video:** Internet of Things
- **Reading:** Supplemental Reading for Internet of Things
- **Video:** Gian What he does in Android Security
- **Video:** Privacy and Security
- **Video:** Heather Adkins Keeping Hackers Out
- **Video:** Learner Story: Melinda

Graded Assessments

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/exam/vYcXs/networking>

- **Quiz:** Networking

WEEK 5

Introduction to Software

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/i1Fed/module-introduction>

- **Video:** Module Introduction
- **Video:** What is Software?
- **Video:** Types of Software
- **Reading:** Supplemental Reading for Software Versioning
- **Video:** Revisiting Abstraction
- **Video:** Recipe for Computing
- **Video:** Phelan Navy
- **Practice Quiz:** Introduction to Software

Interacting with Software

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/8kNiH/managing-software>

- **Video:** Managing Software
- **Video:** Installing, Updating, and Removing Software on Windows
- **Video:** Installing, Updating, and Removing Software on Linux
- **Video:** Software Automation
- **Discussion Prompt:** Your Favorite Software
- **Practice Quiz:** Interacting with Software

Graded Assessment

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/gradedLti/9o9z5/installing-updating-and-removing-software-in-windows>

- **Graded External Tool:** Installing, Updating, and Removing Software in Windows
- **Graded External Tool:** Installing, Updating and Removing Software in Linux

WEEK 6

Trouble Shooting Best Practices

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/yyGRU/module-introduction>

- **Video:** Module Introduction
- **Video:** Ask Questions!
- **Video:** Isolating the Problem
- **Video:** Follow the Cookie Crumbs
- **Video:** Start with the Quickest Step First
- **Video:** Troubleshooting Pitfalls to Avoid
- **Discussion Prompt:** Troubleshooting in Daily Life
- **Practice Quiz:** Troubleshooting Best Practices
- **Video:** Amir Attributes

Customer Service

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/7CKEv/intro-to-soft-skills>

- **Video:** Intro to Soft Skills
- **Video:** Anatomy of an Interaction
- **Video:** How to Deal with Difficult Situations
- **Practice Quiz:** Ungraded Plugin: Customer Service
- **Practice Quiz:** Customer Service

Documentation

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/OWWVd/ticketing-systems-and-documenting-your-work>

- **Video:** Ticketing Systems and Documenting Your Work
- **Video:** Process Documentation
- **Video:** Documenting in Ticketing Systems

Getting Through a Technical Interview

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/lecture/r1f1Q/your-opportunity-for-success>

- **Video:** Your Opportunity for Success
- **Video:** Standing Out from the Crowd
- **Reading:** Crafting your Resume
- **Video:** Getting Ready for the Interview
- **Reading:** Creating Your Elevator Pitch
- **Video:** What to Expect During the Technical Interview
- **Video:** Showing Your Best Self During the Interview
- **Video:** Interview Role Play: Customer Service

Graded Assessment

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/exam/0z7yn/writing-effective-documentation>

- **Quiz:** Writing Effective Documentation

Course Wrap Up

Link to resources: -->

<https://www.coursera.org/learn/technical-support-fundamentals/discussionPrompt/RMkKv/your-learning-journey>

- **Discussion Prompt:** Your Learning Journey
- **Video:** Course Wrap Up
- **Video:** Sabrina: No Degree
- **Video:** Congratulations!

COURSE 2. The Bits and Bytes of Computer Networking

WEEK 1

Introduction to Computer Networking

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/7WFyg/course-introduction>

- **Video:** Course Introduction
- **Reading:** Navigating Coursera
- **Reading:** Program Surveys
- **Reading:** How to Use Discussion Forums
- **Reading:** Get to Know Your Classmates
- **Discussion Prompt:** Meet and Greet
- **Reading:** Earn a dual Google/CompTIA A+ credential

The TCP/IP Five-Layer Network Model

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/BTLgy/the-tcp-ip-five-layer-network-model>

- **Video:** The TCP/IP Five-Layer Network Model
- **Reading:** Supplementary Reading for The OSI Networking Model
- **Video:** Alex Why Networking
- **Practice Quiz:** TCP/IP

The Basics of Networking Devices

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/WAp4V/cables>

- **Video:** Cables
- **Video:** Hubs and Switches
- **Video:** Routers
- **Video:** Servers and Clients
- **Video:** Sergio - Being A Network Engineer
- **Discussion Prompt:** Setting Up a Network
- **Practice Quiz:** Networking Devices

The Physical Layer

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/Nihjd/moving-bits-across-the-wire>

- **Video:** Moving Bits Across the Wire
- **Video:** Twisted Pair Cabling and Duplexing
- **Reading:** Supplemental Reading for Ethernet Over Twisted Pair Technologies
- **Video:** Network Ports and Patch Panels
- **Practice Quiz:** The Physical Layer

The Data Link Layer

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/z8FEX/ethernet-and-mac-addresses>

- **Video:** Ethernet and MAC Addresses
- **Video:** Unicast, Multicast, and Broadcast
- **Video:** Dissecting an Ethernet Frame
- **Video:** Victor Escobedo: Practical Experience in IT
- **Practice Quiz:** The Data Link Layer

Graded Assessments

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/supplement/wuyOp/graded-plugin>

- **Reading:** Graded Plugin
- **Quiz:** Layers in Networking Models
- **Quiz:** Networking Basics

WEEK 2

Introduction

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/6rvhj/introduction-to-the-network-layer>

- **Video:** Introduction to The Network Layer

The Network Layer

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/AexeX/the-network-layer>

- **Video:** The Network Layer
- **Video:** IP Addresses
- **Video:** IP Datagrams and Encapsulation
- **Video:** IP Address Classes
- **Video:** Address Resolution Protocol
- **Discussion Prompt:** Looking up IP Addresses
- **Video:** Sergio Path
- **Practice Quiz:** The Network Layer

Subnetting

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/z23kl/subnetting>

- **Video:** Subnetting
- **Video:** Subnet Masks
- **Video:** Basic Binary Math
- **Video:** CIDR
- **Video:** Motivation
- **Practice Quiz:** Subnetting

Routing

Link to resources: -->

<https://www.coursera.org/learn/computer-networking/lecture/eCwJA/basic-routing-concepts>

- **Video:** Basic Routing Concepts
- **Video:** Routing Tables
- **Video:** Interior Gateway Protocols
- **Video:** Exterior Gateway Protocols
- **Reading:** Supplemental Reading for Routing Protocol Examples
- **Video:** Non-Routable Address Space
- **Reading:** Supplemental Reading for RFCs and Standards
- **Video:** Alex Good Story
- **Practice Quiz:** Routing

Graded Assessments

Link to resources: →

<https://www.coursera.org/learn/computer-networking/supplement/yUxg2/graded-plugin>

- **Reading:** Graded Plugin
- **Quiz:** Routing Paths and Subnets
- **Quiz:** The Network Layer

WEEK 3

Introduction to the Transport and Application Layers

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/AiSvC/introduction-to-the-transport-and-application-layers>

Video: Introduction to the Transport and Application Layers

The Transport Layer

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/cboIM/the-transport-layer>

- **Video:** The Transport Layer
- **Video:** Dissection of a TCP Segment
- **Video:** TCP Control Flags and the Three-way Handshake
- **Video:** TCP Socket States
- **Video:** Connection-oriented and Connectionless Protocols
- **Reading:** Supplemental Reading for System Ports versus Ephemeral Ports
- **Video:** Firewalls
- **Practice Quiz:** The Transport Layer

The Application Layer

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/nH1nC/the-application-layer>

- **Video:** The Application Layer
- **Video:** The Application Layer and the OSI Model
- **Video:** All the Layers Working in Unison
- **Video:** Learner Story: Daniel
- **Practice Quiz:** The Application Layer

Graded Assessments

Link to resources: →

<https://www.coursera.org/learn/computer-networking/exam/qZ5st/the-transport-and-application-layer>

- **Quiz:** The Transport and Application Layer
- **Quiz:** The Five-Layer Network Model

WEEK 4

Introduction to Network Services

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/sTVA9/introduction-to-network-services>

- **Video:** Introduction to Network Services

Name Resolution

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/aZPjv/why-do-we-need-dns>

- **Video:** Why do we need DNS?
- **Video:** The Many Steps of Name Resolution
- **Video:** DNS and UDP
- **Video:** Sergio IT Great Field
- **Discussion Prompt:** Your Personal Website
- **Practice Quiz:** Name Resolution

Name Resolution in Practice

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/a6Fwe/resource-record-types>

- **Video:** Resource Record Types
- **Video:** Anatomy of a Domain Name
- **Video:** DNS Zones
- **Practice Quiz:** Name Resolution in Practice

Dynamic Host Configuration Protocol

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/FmEsd/overview-of-dhcp>

- **Video:** Overview of DHCP

- **Video:** DHCP in Action
- **Practice Quiz:** Dynamic Host Configuration Protocol

Network Address Translation

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/UnK05/basics-of-nat>

- **Video:** Basics of NAT
- **Video:** NAT and the Transport Layer
- **Video:** NAT, Non-Routable Address Space and the Limits of IPv4
- **Reading:** Supplemental Reading for IPv4 Address Exhaustion
- **Practice Quiz:** Network Address Translation

VPNs and Proxies

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/c9tV0/virtual-private-networks>

- **Video:** Virtual Private Networks
- **Video:** Proxy Services
- **Discussion Prompt:** VPNs: Legal or Illegal?
- **Practice Quiz:** VPNs & Proxies

Graded Assessments

Link to resources: →

<https://www.coursera.org/learn/computer-networking/supplement/sNQrV/graded-plugin>

- **Reading:** Graded Plugin
- **Quiz:** Networking Services Simulation
- **Quiz:** Networking Services

WEEK 5

Introduction to Connecting to the Internet

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/CHM69/introduction-to-connecting-to-the-internet>

- **Video:** Introduction to Connecting to the Internet

POTS and Dial-up

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/ZlPw5/dial-up-modems-and-point-to-point-protocols>

- **Video:** Dial-up, Modems and Point-to-Point Protocols
- **Practice Quiz:** POTS and Dial-up

Broadband Connections

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/Aq8AR/what-is-broadband>

- **Video:** What is broadband?
- **Video:** T-Carrier Technologies
- **Video:** Digital Subscriber Lines
- **Video:** Cable Broadband
- **Video:** Fiber Connections
- **Reading:** Supplemental Reading for Broadband Protocols
- **Practice Quiz:** Broadband Internet

WANs

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/rVjn6/wide-area-network-technologies>

- **Video:** Wide Area Network Technologies
- **Reading:** Supplemental Reading for WAN Protocols
- **Video:** Point-to-Point VPNs
- **Practice Quiz:** WANs

Wireless Networking

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/RgXEN/introduction-to-wireless-networking-technologies>

- **Video:** Introduction to Wireless Networking Technologies
- **Reading:** Supplemental Reading for Alphabet Soup
- **Video:** Wireless Network Configurations
- **Video:** Wireless Channels

- **Video:** Wireless Security
- **Video:** Cellular Networking
- **Video:** Mobile Device Networks
- **Reading:** Supplemental Readings for Mobile Device Networks
- **Discussion Prompt:** Your Daily Connection
- **Practice Quiz:** Wireless Networking

Graded Assessments

Link to resources: →

<https://www.coursera.org/learn/computer-networking/supplement/bJWtQ/graded-plugin>

- **Reading:** Graded Plugin
- **Quiz:** Wireless Channels
- **Quiz:** Connecting to the Internet

WEEK 6

Introduction to Troubleshooting and the Future of Networking

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/Dkg5o/introduction-to-troubleshooting-and-the-future-of-networking>

- **Video:** Introduction to Troubleshooting and the Future of Networking

Verifying Connectivity

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/iHEWf/ping-internet-control-message-protocol>

- **Video:** Ping: Internet Control Message Protocol
- **Video:** Traceroute
- **Video:** Testing Port Connectivity
- **Reading:** Supplemental Reading for Testing Port Connectivity
- **Practice Quiz:** Verifying Connectivity

Digging into DNS

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/FaM1l/name-resolution-tools>

- **Video:** Name Resolution Tools
- **Video:** Public DNS Servers
- **Video:** DNS Registration and Expiration
- **Video:** Host Files
- **Practice Quiz:** Digging into DNS

The Cloud

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/TXgpc/what-is-the-cloud>

- **Video:** What is The Cloud?
- **Video:** Everything as a Service
- **Video:** Cloud Storage
- **Discussion Prompt:** Digital Footprints in the Cloud
- **Practice Quiz:** The Cloud

IPv6

Link to resources: →

<https://www.coursera.org/learn/computer-networking/lecture/MOcQY/ipv6-addressing-and-subnetting>

- **Video:** IPv6 Addressing and Subnetting
- **Video:** IPv6 Headers
- **Video:** IPv6 and IPv4 Harmony
- **Reading:** Supplemental Reading for IPv6 and IPv4 Harmony
- **Practice Quiz:** IPv6
- **Video:** Interview Role Play: Networking

Graded Assessments

Link to resources: →

<https://www.coursera.org/learn/computer-networking/supplement/tlyy6/graded-plugin>

- **Reading:** Graded Plugin
- **Quiz:** IPv6 Compression
- **Quiz:** Troubleshooting and the Future of Networking

Course Wrap Up

Link to resources:→

<https://www.coursera.org/learn/computer-networking/discussionPrompt/PCyi8/your-learning-journey>

- **Discussion Prompt:** Your Learning Journey
- **Video:** Course Wrap Up
- **Video:** Alex Career Path
- **Video:** Congratulations!

COURSE 3. Operating Systems and You: Becoming a Power User

WEEK 1

Introduction to Operating Systems and Becoming a Power User

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/tVQ51/course-introduction>

- **Video:** Course Introduction
- **Reading:** Navigating Coursera
- **Reading:** Program Surveys
- **Reading:** How to Use Discussion Forums
- **Reading:** Get to Know Your Classmates
- **Discussion Prompt:** Meet and Greet

Basic Commands

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/3hEko/lesson-overview-practice-tips>

- **Video:** Lesson Overview & Practice Tips
- **Reading:** Supplemental Reading for Windows CLI & Unix Bash
- **Video:** List Directories in a GUI
- **Reading:** Supplemental Reading for 'Size' vs 'Size of Disk' in Windows
- **Video:** Windows: List Directories in CLI
- **Video:** Linux: List Directories
- **Video:** Windows: Changing Directories in the GUI
- **Video:** Windows: Changing Directories in the CLI
- **Video:** Linux: Changing Directories in Bash
- **Video:** Windows: Make Directories in the GUI & CLI
- **Video:** Linux: Make Directories in Bash
- **Video:** Windows: Command History
- **Video:** Linux: Command History
- **Video:** Windows: Copying Files & Directories
- **Video:** Linux: Copying Files and Directories
- **Video:** Windows: Moving and Renaming Files, Directories
- **Video:** Linux: Moving and Renaming Files, Directories
- **Video:** Windows: Removing Files & Directories
- **Video:** Linux: Removing Files & Directories
- **Discussion Prompt:** Your Favorite OS
- **Video:** Cindy Why OS is Important
- **Video:** Learner Story: Chelsea
- **Practice Quiz:** Basic Commands

File and Text Manipulation

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/pSJMZ/windows-display-file-contents>

- **Video:** Windows: Display File Contents
- **Video:** Linux: Display File Contents
- **Video:** Windows: Modifying Text Files
- **Video:** Supplemental Reading for Notepad++
- **Video:** Linux: Modifying Text Files
- **Reading:** Supplemental Reading for GNU Documentation
- **Video:** Windows Powershell
- **Video:** Windows: Searching within Files
- **Video:** Windows: Searching within Directories
- **Video:** Linux: Searching within Files
- **Video:** Windows: Input, Output, and the Pipeline

- **Video:** Linux: Input, Output and Pipeline
- **Video:** Windows and Linux Advanced Navigation
- **Reading:** Supplemental Reading for Windows PowerShell
- **Video:** Ben First Tech Job
- **Discussion Prompt:** What did you learn about OS?
- **Practice Quiz:** File and Text Manipulation

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/os-power-user/supplement/eDGnk/instructions-for-accessing-linux-and-windows-qwiklabs>

- **Reading:** Instructions for Accessing Linux and Windows Qwiklabs
- **Quiz:** Accessing Qwiklabs
- **Graded External Tool:** Creating, Modifying, and Removing Files and Folders in Windows
- **Graded External Tool:** Creating, Modifying and Removing Files and Folders in Linux

WEEK 2

Users and Groups

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/lm9Na/users-administrators-and-groups-oh-my>

- **Video:** Users, Administrators, and Groups, Oh My!
- **Video:** Windows: View User and Group Information
- **Video:** Windows: View User and Group Information using CLI
- **Video:** Linux: Users, Superuser and Beyond
- **Video:** Windows: Passwords
- **Reading:** Supplemental Reading for Windows Passwords
- **Video:** Linux: Passwords
- **Video:** Windows: Adding and Removing Users
- **Video:** Linux: Adding and Removing Users
- **Video:** Mobile Users and Accounts
- **Reading:** Supplemental Readings for Mobile Users and Accounts
- **Video:** Ben Life as a CIO

Permissions

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/inhY4/windows-file-permissions>

- **Video:** Windows: File Permissions
- **Reading:** Supplemental Reading for Windows ACL
- **Video:** Linux: File Permissions
- **Video:** Windows: Modifying Permissions
- **Video:** Linux: Modifying Permissions
- **Video:** Windows: Special Permissions
- **Reading:** Supplemental Reading for Special Permissions in Windows
- **Video:** Linux: SetUID, SetGID, Sticky Bit
- **Discussion Prompt:** Your File & Folder Permissions
- **Practice Quiz:** Permissions

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/os-power-user/gradedLti/SRjHB/creating-modifying-and-removing-file-and-folder-permissions-in-windows>

- **Graded External Tool:** Creating, Modifying, and Removing File and Folder Permissions in Windows
- **Graded External Tool:** Creating, Modifying, and Removing File and Folder Permissions in Linux

WEEK 3

Software Distribution

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/0tomv/module-introduction>

- **Video:** Module Introduction
- **Video:** Windows: Software Packages
- **Reading:** Supplemental Reading for Windows Software Packages
- **Video:** Linux: Software Packages
- **Video:** Mobile App Packages
- **Reading:** Supplemental Reading for Mobile App Packages
- **Video:** Windows: Archives

- **Reading:** Supplemental Reading for 7-Zip and PowerShell Zips
- **Video:** Linux Archives
- **Reading:** Supplemental Reading for the Linux Tar Command
- **Video:** Windows: Package Dependencies
- **Reading:** Supplemental reading for Windows Package Dependencies
- **Video:** Linux: Package Dependencies
- **Reading:** Supplemental Reading for Linux Package Dependencies
- **Practice Quiz:** Software Distribution

Package Manager

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/L767R/windows-package-manager>

- **Video:** Windows: Package Manager
- **Reading:** Supplemental Reading for Windows Package Managers
- **Video:** Linux: Package Manager Apt
- **Reading:** Supplemental Reading for Linux PPAs
- **Reading:** Supplemental Reading on GIMP
- **Practice Quiz:** Package Managers

What's Happening in The Background?

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/wKmkx/windows-underneath-the-hood>

- **Video:** Windows: Underneath the Hood
- **Reading:** Supplemental Reading for Windows Installers and Process Monitors
- **Video:** Linux: Underneath the Hood
- **Practice Quiz:** What's happening in the background?

Device Software Management

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/GSoFA/windows-devices-and-drivers>

- **Video:** Windows: Devices and Drivers
- **Reading:** Supplemental Reading Windows Devices and Drivers
- **Video:** Linux: Devices and Drivers
- **Reading:** Supplemental reading for Linux Devices and Drivers
- **Video:** Windows: Operating System Updates
- **Reading:** Supplemental Reading for Windows Update
- **Video:** Linux: Operating System Updates

- **Reading:** Supplemental Reading for Linux Update
- **Discussion Prompt:** What would you do?
- **Practice Quiz:** Device Software Management

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/os-power-user/gradedLti/n4X9C/software-packaging-and-file-archiving-on-windows>

- **Graded External Tool:** Software Packaging and File Archiving on Windows
- **Graded External Tool:** Software Packaging and File Archiving on Linux

WEEK 4

Filesystem Types

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/VDNsh/module-introduction>

- **Video:** Module Introduction
- **Video:** Review of Filesystems
- **Reading:** Supplemental Reading for FAT32 File System
- **Video:** Disk Anatomy
- **Video:** Windows: Disk Partitioning and Formatting a Filesystem
- **Reading:** Supplemental Reading for Disk Partitioning and Formatting in Windows
- **Video:** Windows: Mounting and Unmounting a Filesystem
- **Video:** Linux: Disk Partitioning and Formatting a Filesystem
- **Video:** Linux: Mounting and Unmounting a Filesystem
- **Reading:** Supplemental reading Mounting and Unmounting a Filesystem in Linux
- **Video:** Windows: Swap
- **Reading:** Supplemental Reading for Windows Paging
- **Video:** Linux: Swap
- **Reading:** Supplemental Reading for Linux Swap
- **Video:** Supplemental Reading for Linux Swap
- **Reading:** Supplemental Reading on NTFS File System
- **Video:** Linux: Files
- **Video:** Windows: Disk Usage
- **Reading:** Supplemental Reading for Windows Disk Usage
- **Video:** Linux: Disk Usage
- **Reading:** Supplemental reading for Linux Disk Usage

- **Video:** Windows: Filesystem Repair
- **Video:** Linux: Filesystem Repair
- **Reading:** Supplemental Reading for Linux Filesystem Repair
- **Video:** Ben Passion
- **Discussion Prompt:** Disk Partitioning
- **Practice Quiz:** Filesystem Types

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/os-power-user/gradedLti/TN7YL/partitioning-and-formatting-a-disk-drive-in-windows>

- **Graded External Tool:** Partitioning and Formatting a Disk Drive in Windows
- **Graded External Tool:** Partitioning and Formatting a Disk Drive in Linux

WEEK 5

Life of a Process

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/1MnoC/module-introduction>

- **Video:** Module Introduction
- **Video:** Programs vs Processes Revisited
- **Video:** Windows: Process Creation and Termination
- **Reading:** Supplemental Reading for Process Creation and Termination in Windows
- **Video:** Linux: Process Creation and Termination
- **Video:** Jess Passions
- **Practice Quiz:** Life of a Process

Managing Process

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/Y0tRW/windows-reading-process-information>

- **Video:** Windows: Reading Process Information
- **Reading:** Supplemental Reading for Reading Process Information in Windows
- **Video:** Linux: Reading Process Information

- **Reading:** Supplemental Reading for Reading Process Information in Linux
- **Video:** Windows: Signals
- **Video:** Linux: Signals
- **Reading:** Supplemental Reading for Windows Signal
- **Video:** Windows: Managing Processes
- **Reading:** Supplemental Reading for Managing Processes in Windows
- **Video:** Linux: Managing Processes
- **Video:** Mobile App Management
- **Reading:** Supplemental Readings for Mobile App Management
- **Practice Quiz:** Managing Processes

Process Utilization

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/A0jQf/windows-resource-monitoring>

- **Video:** Windows: Resource Monitoring
- **Reading:** Supplemental Reading Resource Monitoring in Windows
- **Video:** Linux: Resource Monitoring
- **Reading:** Supplemental reading for Resource Monitoring in Linux
- **Discussion Prompt:** Your CPU
- **Practice Quiz:** Process Utilization

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/os-power-user/gradedLti/mLzxl/maintain-efficient-process-utilization-on-windows>

- **Graded External Tool:** Maintain Efficient Process Utilization on Windows
- **Graded External Tool:** Maintain Efficient Process Utilization on Linux

WEEK 6

Remote Access

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/r0c5h/introduction>

- **Video:** introduction

- **Video:** Remote Connection and SSH
- **Video:** Remote Connections on Windows
- **Discussion Prompt:** Performing remotely as an IT Support Specialist
- **Reading:** Supplemental reading for Remote Connections in Windows
- **Video:** Remote Connection File Transfer
- **Video:** Remote Connection File Transfer on Windows
- **Reading:** Supplemental Reading for Remote Connection File Transfer in Windows
- **Discussion Prompt:** Remote Desktop
- **Practice Quiz:** Remote Access

Virtualization

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/LVdHV/virtual-machines>

- **Video:** Virtual Machines
- **Reading:** Supplemental reading for Virtual Machines
- **Discussion Prompt:** VMs

Logging

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/3ttpf/system-monitoring>

- **Video:** System Monitoring
- **Video:** The Windows Event Viewer
- **Video:** Linux Logs
- **Reading:** Supplemental Reading for Linux Logs
- **Video:** Working with Logs
- **Practice Quiz:** Logging

Operating Systems Deployment

Link to resources:→

<https://www.coursera.org/learn/os-power-user/lecture/VTy6a/imaging-software>

- **Video:** Imaging Software
- **Video:** Operating Systems Deployment Methods
- **Reading:** Supplemental Reading for OS Deployment Methods
- **Video:** Mobile Device Resetting and Imaging
- **Reading:** Supplemental Readings for Mobile Device Resetting and Imaging
- **Video:** Interview Role Play: Operating Systems

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/os-power-user/gradedLti/ZtxDN/using-logs-to-help-you-track-down-an-issue-in-windows>

- **Graded External Tool:** Using Logs to Help You Track Down an Issue in Windows
- **Graded External Tool:** Using Logs to Help You Track Down an Issue in Linux

Course Wrap Up

Link to resources:→

<https://www.coursera.org/learn/os-power-user/discussionPrompt/BveJO/your-learning-journey>

- **Discussion Prompt:** Your Learning Journey
- **Video:** Course Wrap Up
- **Video:** Heather Early Career Advice
- **Video:** Congratulations!

Course 4. System Administration and IT Infrastructure Services

WEEK 1

Introduction to System Administration and IT Infrastructure Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/rcBaU/course-introduction>

- **Video:** Course Introduction
- **Reading:** Navigating Coursera
- **Reading:** Program Surveys
- **Reading:** How to Use Discussion Forums
- **Reading:** Get to Know Your Classmates
- **Discussion Prompt:** Meet and Greet

What is System Administration?

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/Be4gM/what-is-systems-administration>

- **Video:** What is Systems Administration?
- **Video:** Servers Revisited
- **Reading:** The Cloud
- **Practice Quiz:** What is System Administration?

Systems Administration Tasks

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/KLqxL/organizational-policies>

- **Video:** Organizational Policies
- **Video:** IT Infrastructure Services
- **Video:** User and Hardware Provisioning
- **Video:** Routine Maintenance
- **Video:** Vendors
- **Video:** Troubleshooting and Managing Issues
- **Video:** In Case of Fire, Break Glass
- **Practice Quiz:** Systems Administration Tasks
- **Video:** Dion Michelle Obama Story

Applying Changes

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/qhPW5/with-great-power-comes-great-responsibility>

- **Video:** With Great Power Comes Great Responsibility
- **Reading:** Recording Your Actions
- **Video:** Never Test in Production
- **Video:** Assessing Risk
- **Video:** Fixing Things the Right Way

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/exam/nqfzP/what-is-system-administration>

- **Quiz:** What is System Administration?

WEEK 2

Intro to IT Infrastructure Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/3Xs0m/what-are-it-infrastructure-services>

- **Video:** What are IT Infrastructure Services?
- **Video:** The Role of IT Infrastructure Services in SysAdmin
- **Video:** Types of IT Infrastructure Services
- **Reading:** Supplemental Reading for IT Infrastructure Services
- **Practice Quiz:** Intro to IT Infrastructure Services
- **Video:** How do Qwiklabs Work?
- **Video:** Heather: First Tech Job

Physical Infrastructure Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/91PFv/server-operating-systems>

- **Video:** Server Operating Systems
- **Reading:** Supplemental Reading for Server Operating Systems
- **Video:** Virtualization
- **Video:** Remote Access Revisited
- **Reading:** Supplemental Reading for Remote Access and SSH
- **Practice Quiz:** Physical Infrastructure Services

Network Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/Rc1KQ/ftp-sftp-and-tftp>

- **Video:** FTP, SFTP, and TFTP
- **Reading:** Supplemental Reading for FTP Clients
- **Video:** NTP
- **Video:** Network Support Services Revisited
- **Video:** DNS
- **Video:** DNS for Web Servers
- **Video:** DNS for Internal Networks
- **Reading:** Supplemental Reading for BIND/PowerDNS
- **Video:** DHCP
- **Reading:** Supplemental Reading for DNS and DHCP
- **Practice Quiz:** Network Services

Troubleshooting Network Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/0o5TU/unable-to-resolve-a-hostname-or-domain-name>

- **Video:** Unable to Resolve a Hostname or Domain Name

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/exam/x6MMT/network-services>

- **Quiz:** Network Services

Managing System Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/Ovk5i/what-do-services-look-like-in-action>

- **Video:** What do Services Look Like in Action
- **Video:** Managing Services in Linux
- **Video:** Managing Services in Windows
- **Video:** Configuring Services in Linux
- **Video:** Configuring Services in Windows
- **Quiz:** Qwiklabs: Service Management in Linux
- **UnGraded External Tool:** [Optional] Qwiklabs Assessment: Managing Services in Linux

- **Quiz:** Qwiklabs: Service Management in Windows
- **UnGraded External Tool:** [Optional] Qwiklabs Assessment: Managing Services in Windows

Configuring Network Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/5dQlq/cofiguring-dns-with-dnsmasq>

- **Video:** Configuring DNS with Dnsmasq
- **Video:** Configuring DHCP with Dnsmasq
- **Quiz:** Qwiklabs: Getting familiar with DNS and DHCP
- **UnGraded External Tool:** [Optional] Qwiklabs assessment: Get Familiar with DNS and DHCP

WEEK 3

Software Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/Zei0o/module-introduction>

- **Video:** Module Introduction
- **Video:** Configuring Communication Services
- **Reading:** Supplemental Reading for Chat Communication Services
- **Video:** Configuring Email Services
- **Reading:** Supplemental Reading for Email Services
- **Video:** Configuring User Productivity Services
- **Video:** Configuring Security Services
- **Video:** Heather Managing Self Doubt
- **Practice Quiz:** Software Services

File Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/wStCJ/what-are-file-services>

- **Video:** What are file services?
- **Reading:** Supplemental Reading for File Services
- **Video:** Network File Storage
- **Reading:** Supplemental Reading for Network File Storage
- **Video:** Mobile Synchronization
- **Reading:** Supplemental Readings for Mobile Synchronization

Print Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/kgk3r/configuring-print-services>

- **Video:** Configuring Print Services
- **Reading:** Supplemental Reading for Print Services

Platform Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/GD0xw/web-servers-revisited>

- **Video:** Web Servers Revisited
- **Reading:** Supplemental Reading for Web Servers (Revisited)
- **Video:** What is a database server?
- **Reading:** Supplemental Reading for Database Admin Jobs
- **Practice Quiz:** File, Print, and Platform Services
- **Quiz:** Qwiklabs: Managing websites with Apache2
- **UnGraded External Tool:** [Optional] Qwiklabs Assessment: Manage Websites With Apache2

Troubleshooting Platform Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/LFE3A/is-the-website-down>

- **Video:** Is the website down?
- **Reading:** Supplemental Reading for Troubleshooting with Developer Tools
- **Practice Quiz:** Troubleshooting Platform Services

Managing Cloud Resources

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/04Jhi/cloud-concepts>

- **Video:** Cloud Concepts
- **Video:** Typical Cloud Infrastructure Setups
- **Video:** When and How to Choose Cloud
- **Reading:** Managing Cloud Resources

Graded Assessment

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/exam/3EVU1/software-and-platform-services>

- **Quiz:** Software and Platform Services

WEEK 4

Introduction to Directory Services

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/bc8OH/module-introduction>

- **Video:** Module Introduction
- **Video:** What is a directory server?
- **Video:** Implementing Directory Services
- **Practice Quiz:** Introduction to Directory Services
- **Quiz:** Qwiklabs: Using Active Directory
- **UnGraded External Tool:** [Optional] Qwiklabs Assessment: Utilizing Active Directory

Centralized Management

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/yW3Di/what-is-centralized-management>

- **Video:** What is centralized management?
- **Reading:** Supplemental Reading for Centralized Management

LDAP

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/yZwdw/what-is-ldap>

- **Video:** What is LDAP?
- **Reading:** Supplemental Reading for LDAP
- **Video:** What is LDAP Authentication?
- **Reading:** Supplemental Reading for Kerberos
- **Practice Quiz:** Centralized Management and LDAP
- **Video:** Heather Overcoming Obstacles

Active Directory

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/0BVxn/what-is-active-directory>

- **Video:** What is Active Directory?
- **Reading:** Supplemental Reading for Active Directory
- **Video:** Managing Active Directory
- **Video:** Managing Active Directory Users and Groups
- **Reading:** Supplemental Reading for Group Security Principles
- **Video:** Managing Active Directory User Passwords
- **Reading:** Supplemental Reading for EFS Features
- **Video:** Joining an Active Directory Domain
- **Reading:** Supplemental Reading for DFL & FFL
- **Video:** What is Group Policy?
- **Video:** Group Policy Creation and Editing
- **Video:** Group Policy Inheritance and Precedence
- **Video:** Group Policy Troubleshooting
- **Reading:** Supplemental Reading for Group Policy Troubleshooting
- **Video:** Mobile Device Management (MDM)
- **Reading:** Supplemental Readings for Mobile Device Management (MDM)
- **Practice Quiz:** Active Directory

OpenLDAP

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/p8TdM/what-is-openldap>

- **Video:** What is OpenLDAP?
- **Reading:** Supplemental Reading for OpenLDAP
- **Video:** Managing OpenLDAP
- **Reading:** Supplemental Reading for Managing OpenLDAP

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/exam/NrzJ8/directory-services>

- **Quiz:** Directory Services

WEEK 5

Planning for Data Recovery

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/vERV9/module-introduction>

- **Video:** Module Introduction
- **Video:** What is Data Recovery?
- **Reading:** Supplemental Reading for GitLabs Data Recovery
- **Video:** Backing Up Your Data
- **Video:** Backup Solutions
- **Reading:** Supplemental Reading for Backup Solutions
- **Video:** Job transition
- **Video:** Testing Backups
- **Video:** Types of Backup
- **Reading:** Supplemental Reading for RAID Levels
- **Video:** User Backups

- **Discussion Prompt:** Backing Up Your Data
- **Practice Quiz:** Planning for Data Recovery

Disaster Recovery Plans

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/F40L4/whats-a-disaster-recovery-plan>

- **Video:** What's a Disaster Recovery Plan?
- **Video:** Designing a Disaster Recovery Plan
- **Practice Quiz:** Disaster Recovery Plans

Post-Mortems

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/Fd1Yl/whats-a-post-mortem>

- **Video:** What's a Post-mortem?
- **Video:** Writing a Post-Mortem
- **Practice Quiz:** Post-Mortems
- **Video:** Interview Role Play: Sys Admin

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/exam/R8i6V/data-recovery-backups>

- **Quiz:** Data Recovery & Backups

WEEK 6

Final Project

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/lecture/tWerb/final-project-introduction>

- **Video:** Final Project Introduction
- **Quiz:** System Administration Consultation
- **Video:** Alex passion & success

Course Wrap Up

Link to resources:→

<https://www.coursera.org/learn/system-administration-it-infrastructure-services/discussionPrompt/WwDxi/your-learning-journey>

- **Discussion Prompt:** Your Learning Journey
- **Video:** Congratulations!

COURSE 5. IT Security: Defense Against the Digital Dark Arts

WEEK 1

Introduction to IT Security

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/nGswJ/course-introduction>

- **Video:** Course Introduction
- **Reading:** Navigating Coursera
- **Reading:** Program Surveys
- **Reading:** How to Use Discussion Forums
- **Reading:** Get to Know Your Classmates
- **Discussion Prompt:** Meet and Greet

Malicious Software

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/IXfpY/the-cia-triad>

- **Video:** The CIA Triad
- **Video:** Essential Security Terms
- **Video:** Malicious Software
- **Video:** Malware Continued
- **Reading:** Supplemental Reading for Malicious Software
- **Practice Quiz:** Malicious Software

Network Attacks

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/MKhab/network-attacks>

- **Video:** Network Attacks
- **Reading:** Supplemental Reading for Network Attacks
- **Video:** Denial-of-Service
- **Reading:** Supplemental Reading for DDoS Attacks
- **Practice Quiz:** Network Attacks

Other Attacks

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/S8azN/client-side-attacks>

- **Video:** Client-Side Attacks
- **Video:** Password Attacks
- **Video:** Deceptive Attacks
- **Discussion Prompt:** Malicious Software & Attacks
- **Practice Quiz:** Other Attacks

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/it-security/exam/PjhNL/understanding-security-threats>

- **Quiz:** Understanding Security Threats

WEEK 2

Symmetric Encryption

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/rYxA/cryptography>

- **Video:** Cryptography
- **Reading:** Supplemental Reading for The Future of Cryptanalysis
- **Video:** Symmetric Cryptography
- **Video:** Symmetric Encryption Algorithms
- **Reading:** Supplemental Reading for Symmetric Encryptions
- **Practice Quiz:** Symmetric Encryption
- **Video:** Rob What a Security Engineer Does

Public Key or Asymmetric Encryption

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/vPx7X/asymmetric-cryptography>

- **Video:** Asymmetric Cryptography
- **Video:** Asymmetric Encryption Algorithms
- **Reading:** Supplemental Reading for Asymmetric Encryption Attack
- **Practice Quiz:** Public Key or Asymmetric Encryption

Hashing

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/bl7FQ/hashing>

- **Video:** Hashing
- **Video:** Hashing Algorithms
- **Reading:** Supplemental Reading for SHA1 Attacks
- **Video:** Hashing Algorithms (continued)
- **Practice Quiz:** Hashing

Cryptography Applications

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/tjlhH/public-key-infrastructure>

- **Video:** Public Key Infrastructure
- **Reading:** Supplemental Reading for the X.509 Standard
- **Video:** Cryptography in Action
- **Reading:** Supplemental Reading for PGP
- **Video:** Securing Network Traffic
- **Reading:** Supplemental Reading for Securing Network Traffic
- **Video:** Cryptographic Hardware
- **Reading:** Supplemental Reading for TPM Attacks
- **Video:** Rejection
- **Practice Quiz:** Cryptography Applications

Graded Assessment

Link to resources:→

<https://www.coursera.org/learn/it-security/quiz/xCg5J/week-two-practice-quiz>

- **Practice Quiz:** Week Two Practice Quiz
- **Graded External Tool:** Creating/inspecting key pair, encrypting/decrypting and sign/verify using OpenSSL
- **Graded External Tool:** Hands-on with Hashing

WEEK 3

Authentication

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/vim4c/authentication-best-practices>

- **Video:** Authentication Best Practices
- **Video:** Multifactor Authentication
- **Reading:** Supplemental Reading for Authentication
- **Video:** Certificates
- **Video:** LDAP
- **Video:** RADIUS
- **Video:** Kerberos
- **Video:** TACACS+
- **Video:** Single Sign-On
- **Practice Quiz:** Authentication
- **Video:** Rob Path to IT

Authorization

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/yZN9c/authorization-and-access-control-methods>

- **Video:** Authorization and Access Control Methods
- **Video:** Access Control
- **Reading:** Supplemental Reading for Authorization
- **Video:** Access Control List

Accounting

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/C2GiS/tracking-usage-and-access>

- **Video:** Tracking Usage and Access
- **Practice Quiz:** Authorization and Accounting
- **Video:** Rob Important Skills in Security

Graded Assessment

Link to resources:→

<https://www.coursera.org/learn/it-security/exam/c6uXo/aaa-security-not-roadside-assistance>

- **Quiz:** AAA Security (Not Roadside Assistance)

WEEK 4

Secure Network Architecture

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/T3IID/network-hardening-best-practices>

- **Video:** Network Hardening Best Practices
- **Reading:** Supplemental Reading for Network Hardening Best Practices
- **Video:** Network Hardware Hardening

- **Reading:** Supplemental Reading on IEEE 802.1X
- **Video:** Network Software Hardening
- **Reading:** Supplementary reading on HAProxy, nginx and Apache HTTP server
- **Practice Quiz:** Secure Network Architecture
- **Video:** Joe Personal Obstacle

Wireless Security

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/rVi6O/wep-encryption-and-why-you-shouldn-t-use-it>

- **Video:** WEP Encryption and Why You Shouldn't Use It
- **Reading:** Supplementary reading for WEP Encryption and Why You Shouldn't Use It
- **Video:** Let's Get Rid of WEP! WPA/WPA2
- **Reading:** Supplementary reading on WiFi Protected Setup (WPS) PIN brute force vulnerability
- **Video:** Wireless Hardening
- **Practice Quiz:** Wireless Security
- **Video:** Heather Social Engineering

Network Monitoring

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/fhcOl/sniffing-the-network>

- **Video:** Sniffing the Network
- **Video:** Wireshark and tcpdump
- **Reading:** Supplemental Reading for Promiscuous Mode
- **Video:** Intrusion Detection/Prevention Systems
- **Reading:** Supplemental reading for Intrusion Detection/Prevention System
- **Practice Quiz:** Network Monitoring

Graded Assessment

Link to resources:→

<https://www.coursera.org/learn/it-security/quiz/9yRaQ/week-four-practice-quiz>

- **Practice Quiz:** Week Four Practice Quiz
- **Graded External Tool:** Introduction to tcpdump

WEEK 5

System Hardening

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/3FPzh/intro-to-defense-in-depth>

- **Video:** Intro to Defense in Depth
- **Video:** Disabling Unnecessary Components
- **Video:** Host-Based Firewall
- **Video:** Logging and Auditing
- **Reading:** Supplemental Reading for Logging and Auditing
- **Video:** Antimalware Protection
- **Reading:** Supplemental Readings for Antimalware Protection
- **Video:** Disk Encryption
- **Reading:** Supplemental Reading for Disk Encryption
- **Practice Quiz:** System Hardening
- **Video:** Heather Self Learning

Application Hardening

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/swuJC/software-patch-management>

- **Video:** Software Patch Management
- **Video:** Application Policies
- **Practice Quiz:** Application Hardening

Graded Assessment

Link to resources:→

<https://www.coursera.org/learn/it-security/exam/Jv6am/defense-in-depth>

- **Quiz:** Defense in Depth

WEEK 6

Risk in the Workplace

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/OptVI/security-goals>

- **Video:** Security Goals
- **Video:** Measuring and Assessing Risk
- **Reading:** Supplemental Reading for Risk in the Workplace
- **Video:** Privacy Policy
- **Practice Quiz:** Risk in the Workplace

Users

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/C09O7/user-habits>

- **Video:** User Habits
- **Reading:** Supplemental Reading for User Habits
- **Video:** Third-Party Security
- **Reading:** Supplemental Reading for Vendor Security Assessment Questionnaires
- **Video:** Security Training
- **Discussion Prompt:** Your Security Habits
- **Practice Quiz:** Users
- **Video:** Alex Grit Story

Incident Handling

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/H7GKw/incident-reporting-and-analysis>

- **Video:** Incident Reporting and Analysis
- **Video:** Incident Response and Recovery
- **Video:** Mobile Security and Privacy
- **Reading:** Supplemental Readings for Mobile Security and Privacy
- **Practice Quiz:** Incident Handling
- **Video:** Amir Interview
- **Video:** Ari Interview
- **Video:** Interview Role Play: Security
- **Reading:** Invitation to Sign Up for Big Interview

Graded Assessments

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/7TIK5/final-assessment>

- **Video:** Final Assessment
- **Quiz:** Creating a Company Culture for Security
- **Quiz:** Creating a Company Culture for Security - Design Document

- **Reading:** Final Project - Sample Submission
- **Discussion Prompt:** Browse the Job Platform

Course Wrap Up

Link to resources:→

<https://www.coursera.org/learn/it-security/lecture/eW6nJ/framing-yourself>

- **Video:** Framing yourself
- **Reading:** How to Add Google IT Support Certificate to Your Resume and LinkedIn Profile
- **Reading:** Common Job Search Terms
- **Discussion Prompt:** Your Learning Journey
- **Video:** Congratulations!
- **Reading:** Information and FAQs about badges
- **Practice Quiz:** Your Access to Google Job Search Resources
- Google IT Cert Participant Exit Survey