

IT Support Syllabus

Instructor Information

Instructor	Email

General Information

Description

The A+ Class (12) weeks is an intensive and comprehensive hands-on oriented technical training. During the first eight(8) weeks the training is designed to provide successful candidates with the knowledge and skills required to assemble, refurbish, upgrade, configure and troubleshoot personal computers. It also includes the installation of multiple operating systems (OS), installation of drivers, navigation, management, performance optimization, data management, and security and troubleshooting OS related problems. Preventive maintenance of printers, laptops, and mobile devices will also be discussed as well as the fundamentals of networking. At the end of the eight weeks, students are expected to take and pass the CompTIA A+ Certification Exam.

To receive the CompTIA A+ Certification, graduates must pass two (2) exams with the current codes 220-1001 and 220-1002

This program does not cover only the development of the technical skills needed in the job market. One day per week, the students will also attend a career development class for 9 weeks. In career development, the students will learn resume and cover letter preparation, interviewing skills, job hunting, basics of customer service and interpersonal communication.

All assignments can be found on the Per Scholas Academy. Students will be graded per the following criteria for in-class assignments

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- Hands-on Assignments **20%**
- Quizzes **20%**
- Tests - **35%**
- Midterm/Final- **25%**

Please note that Per Scholas has a strict academic integrity policy. Plagiarism is considered cheating. Any student caught plagiarizing will automatically be dismissed from the course. Plagiarism includes but is not limited to copying answers or assignments from another student and/or a website. You are allowed to reference material as long as it is properly cited.

Lab/Assignments Policy

- Student needs to complete all Lab/Assignments according to the schedule given by the instructor

Required Materials and Online Tools

- Course Slides - These will be distributed by the instructor
- Mike Meyers' CompTIA A+ Guide to Managing and Troubleshooting PCs, Sixth Edition (Exams 220-1001 & 220-1002)
- <https://perscholas.instructure.com/login/canvas>

Course Schedule

Week	Chapter/ Slides Topics	Quizzes/Exam	PS Academy Lab	PS Academy Supporting Content	Google Quiz	Google Assignment
Student Onboarding	<p><u>Students Must Complete the Per Scholas Onboarding Course</u></p> <p><u>* Instructor Must Fill out page Topic: 0.2.5 in the onboarding course with contact information</u></p> <p><u>!!!!!!!</u></p> <p><u>Students Must Complete the GSuite Module</u></p>		Google Drive. Google Calendar Google Documents Google Slides Google Sheets Google Forms Google Sites Google Mail Google & Canvas Introduction to Canvas for Students.			

Week 1	Google Coursera course 1 - IT Support Fundamentals Chapter 1- Safety and Professionalism Chapter 2- The Visible Computer Chapter 3 - CPU's Chapter 4 - RAM	Quiz: Chapter 1 (Home) (A+) Quiz: Chapter 2 (Home) (A+) Quiz: Chapter 3 (Home) (A+) Quiz: Chapter 4 (Home) (A+) These quizzes can be moved to HW, and non graded Week 1 Exam	<u>Lab A1: Job Opportunities</u> <u>Lab A2: Computer Hardware A/D (HO)</u> = <u>Lab A3: Identifying CPU Charateristics- HW</u> <u>Lab A3.1: Identifying CPU Charateristics Server</u> <u>Lab A4: Identifying Ram Characteristics- HW</u> <u>Lab A4.1: Upgrading Hardware- HW</u> <u>Lab A4.2: Research Laptop Ram- HW</u> <u>Lab A4.3: Virtual Memory Windows 8 (HO)</u> <u>Lab A4.3a: Virtual Memory Windows 7 (HO)</u>	Video A2: Introduction how computers work Video A3 : Cpu, Memory, Input and Output Video A4: What is Ram ?	Quiz: How to count in Binary (Google) Quiz: Accessing qwiklabs (Google) Quiz: Networking (Google) Quiz: Writing Effective Documentaion (Google)	Create a folder with windows Create a folder with Linux install update and remove software in windows install update and remove software for Linux
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Week 2	<p><u>Chapter 22 - Virtualization</u></p> <p><u>Chapter 5 - Firmware</u></p> <p><u>Chapter 6 - Motherboards</u></p> <p><u>Chapter 7 - Power Supplies</u></p> <p><u>Chapter 8 - Mass Storage Technology</u></p>	<p>Quiz: Chapter 1 (Home) (A+)</p> <p>Quiz: Chapter 2 (Home) (A+)</p> <p>Quiz: Chapter 3 (Home) (A+)</p> <p>Quiz: Chapter 4 (Home) (A+)</p> <p>These quizzes can be moved to HW, and non graded</p> <p>Week 2 Exam</p>	<p>Lab A22: Install Linux using VMWare-</p> <p>Lab A22: Install MAC OS (HO)</p> <p>Lab A22a: MAC OS User Accounts</p> <p>Lab A22b: Terminal MAC OS</p> <p>Lab A6: Identifying MotherBoards -</p> <p>Lab A6.1 Checking for updates windows 7 (HO)-</p> <p>Lab A8: Create a Partition in Windows 10 (SIM LAB)</p> <p>Lab A8.1: Creating a Bootable USB</p> <p>Lab A8.2a: Formatting a USB (in class)</p> <p>Lab A5: BIOS File Search</p> <p>Lab A5.1: Boot BIOS</p> <p>Lab A5.2: Bios and UEFI Configuration.</p> <p>Lab A8.2b: Creating a Bootable USB using Diskpart</p>	<p>Video A22: What is Virtualization ?</p> <p>Video A22.1: Creating a Virtual Machine With Vmware</p> <p>Video A22.2 - Containers Emulation and Virtualization</p> <p>Video A7: How to use a Multimeter</p> <p>Video A8: How initialize and Format a hard drive in windows* Exam sim</p>		
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			(in class)			
Week 3	<u>Chapter 9 - Implementing Mass Storage</u> <u>Chapter 10 - Essential Peripherals</u> <u>Chapter 11 - Building a PC</u> <u>Chapter 12 - Windows Under the Hood</u>	Quiz: Chapter 9 (Home) (A+) Quiz: Chapter 10 (Home) (A+) Quiz: Chapter 11 (Home) (A+) Quiz: Chapter 12 (Home) (A+) Week 3 Exam	Lab A9: Partition and Dual Boot Ubuntu/Win 7* Exam Sim Lab A10.1: Linux Desktops-- google (onsite) Lab A11.1: Installing an Operating system Via Bootable USB- Lab A11.2: Task Manager Windows 8- Lab A11.3: Device Manager in Windows 7- Lab A12: Using Process Explorer- Lab A12a: Task Manager- Lab A12.1: Managing The startup Folder in Win 7- Lab A12.2: Monitor and Manage Resources Win 7-	Video A9: What is RAID ? Video A9.1: Configure RAID in Windows 10 Video A10: Installing a Network PCI card Video A10.1: Installing M2 SSD Video A10.2: Installing SLI Graphics Card Video A11: How to Build a Gaming PC Video A11.1: TroubleShoot a computer Build Video A12: Using Task Manager to Troubleshoot Video A12a: Windows Admin Tools		

<p>Week 4</p>	<p>Google Coursera Course 3</p> <p>Chapter 13 - Users Groups and Permissions</p> <p>Chapter 14 - Maintaining and Optimizing Operating Systems</p> <p>Chapter 15 - Working with the Command-Line Interface</p> <p>Chapter 16 - Troubleshooting Operating Systems</p>	<p>Quiz: Chapter 13 (Home) (A+)</p> <p>Quiz: Chapter 14 (Home) (A+)</p> <p>Quiz: Chapter 14a Windows tools Activity (A+) *</p> <p>Quiz: Chapter 15 (Home) (A+)</p> <p>Quiz: Chapter 15 A15a Command Prompt</p> <p>Quiz: Chapter 16 (Home) (A+)</p> <p>Quiz: Chapter A16a - Troubleshooting Operating Systems</p> <p>Week 4 Exam</p>	<p>Lab A13a: Managing users in windows 10</p> <p>Lab A13b: Managing users from CMD (in class)</p> <p>Lab A13.1: Managing users in Linux</p> <p>Lab A14: Data Recovery</p> <p>Lab A14.1: Windows 7 Backup and Recovery</p> <p>Lab A14.2: Managing System Files in Windows</p> <p>Lab A14.3: Task Scheduler</p> <p>Lab A15: Intro to Windows CLI (SIM LAB)</p> <p>Lab A15.1: Intro to Mac OS Terminal</p> <p>Lab A15.2: Intro to Linux Terminal Ubuntu (in Class)</p> <p>Lab A15.2a: Linux Command Line</p> <p>Lab A16: System Restore Windows 8</p> <p>Lab A16.1: Remote Assistance Windows</p>	<p>Video A13: Managing Users in Windows</p> <p>VIDEO A14: Optimizing windows 10</p> <p>ARTICLE A14: Operating Systems Mac and Linux</p> <p>ARTICLE A14: Windows tools Activity</p> <p>VIDEO A15: Windows Commands to know</p> <p>SLIDES A15: Server scripting and Configuration Management</p> <p>VIDEO A16: Using Windows tools for troubleshooting</p> <p>VIDEO A16a: Troubleshooting Common Computer Issues</p> <p>ARTICLE A16a: Troubleshooting operating systems</p>	<p>Quiz: Accessing Qwiklabs (Google)</p>	<p>Lab: Create,Modify and Remove Files and Folders Windows (Google)</p> <p>Lab: Create,Modify and Remove Files and Folders Linux (Google)</p> <p>Lab: Create,Modify and Remove Files and Folders Permissions Windows (Google)</p> <p>Lab: Create,Modify and Remove Files and Folders Permissions Linux (Google)</p>
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Week 5	<u>Chapter 17 - Display Technologies</u> <u>Chapter 18 - Essentials of Networking</u> <u>Chapter 19 - Local Area Networks</u> <u>Chapter 20 - Wireless Networking</u>	Quiz: Chapter 17 (Home) (A+) Quiz: Chapter 18 (Home) (A+) Quiz: Chapter 19 (Home) (A+) Quiz: Chapter 20 (Home) (A+) Week 5 Exam	Lab A17: GPU-Z Lab A17.1: Research laptop screen Lab A17.2: Monitor Maintenance ***Students must Sign up for Packet Tracer and complete course*** Lab A18: Windows host File Lab A18.1: RDP Windows 7 Lab A18.3: Cable a simple Network (PKT) Lab A19: Connecting a router to a LAN pkt Lab A19a: Interworking Devices (PKT) Lab A19.1: Sharing Resources in Windows Lab A19.2: Researching Network Standards Lab A19.3 Mapping the Internet Lab A20: Connect to a wireless Router (PKT) Lab A20a: FING Lab A20.a: Connect a wireless computer to a wireless router (PKT) Lab A20.2: Introduction to WEP,WPA,RADIUS (PKT)	VIDEO A17: Comparing Display Technologies VIDEO A18: Wires, Cables and Wifi VIDEO A19: Network Types VIDEO A19a: Packets Routers and Reliability VIDEO A20: Configure a wireless Router VIDEO A20a: FING Mac		
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Week 6	Google Coursera Course 2 Chapter 21 - The Internet Chapter 23 - Portable Computing Chapter 24 - Understanding Mobile Devices Chapter 25 - Care and Feeding of Mobile Devices	Quiz: Chapter 21 (Home) (A+) Quiz: Chapter 23 (Home) (A+) Quiz: Chapter 24 (Home) (A+) Quiz: Chapter 25 (Home) (A+) Week 6 Exam	Lab A21: Configure Windows Firewall Win 7 Lab A21a: Configure Browser Settings Lab A21.1: Creating a Cyber World (PKT) Lab A21.2: Testing a wireless connection (PKT) Lab A21.3: Syncing Gmail to Thunderbird Linux Lab A23a: BlueStacks Lab A23b: Android OS Mobile Device Lab A24: Mobile Device Information Lab A24a: Mobile Device Features Lab A25: Mobile Device Management System Lab A25a: Working with Apple OS Lab A25b: Working with Android OS	VIDEO A21: what is the Internet VIDEO A21a: What is HTTP and HTML VIDEO A23: Evolution of the Laptop VIDEO A23a: What is BlueStacks ARTICLE A23: AWS overview ARTICLE A24: IOS vs Android VIDEO A24: Evolution of the Mobile Phone VIDEO A24a: Mobile Device Tear Down VIDEO A25: Cisco Meraki MDM OverView VIDEO A25a: Setting up your Iphone	Quiz: Layers in Networking Models (Google) Quiz: Networking Basics (Google) Quiz: Routing Paths and Subnets (Google) Quiz: The Network Layer (Google) Quiz: The Transport and Application Layer (Google) Quiz: The Five-layer Network Model (Google) Quiz: Networking Services Simulation (Google) Quiz: Wireless Channels (Google) Quiz: Connecting to the Internet (Google) Quiz: IPv6 Compression	
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					(Google) Quiz: Troubleshooting and the future of Networks (Google)	
Week 7	Google Coursera course 5 Chapter 26 - Printers and Multifunction Devices Chapter 27 - Securing Computers Chapter 28 - Operational Procedures Cisco Meraki MDM	Quiz: Chapter 26 (Home) (A+) Quiz: Chapter 27 (Home) (A+) Quiz: Chapter 28 (Home) (A+) Week 7 Exam	Lab A26: Install a printer Lab A26a: Sharing a printer in Windows 10 (in class) Lab A27: Securing Computers Lab A27a: Antivirus Malware Lab A27.1: Encrypting Data Lab A27.2: Introduction to File and Data Encryption (PKT) Lab A27.3: Configure wireless Security (PKT) Lab A27.4: Steganography Lab A28: System Utilities in Windows Lab A28.1: NOC Certs & Jobs Lab A28.2: Support Websites Lab MDM 1.0 Android / iOS- in class Lab MDM 2.0 Android / iOS Lab MDM 3.0 Android / iOS	VIDEO A26: Troubleshooting a Laser Printer VIDEO A26a: Sharing a printer VIDEO A27: Windows Hardening VIDEO A27a: Removing a Virus VIDEO A27b: Cybersecurity and Crime SLIDE A27: Security in the Data Center VIDEO A28: Why SOP ? VIDEO A28.1: Standard IT Operational Procedures	Quiz: Understanding Security Threats Quiz: AAA Security Quiz: Layers in Networking Models (Google) Quiz: Defense in Depth (Google) Quiz: Creating a Company Culture for Security (Google) Quiz: Creating a Company culture for Security 2 (Google)	Lab: Create/inspect key pair, encrypt/decrypt Lab: Hands on with Hashing Lab: Introducing TCPDump

Week 8	<u>Exam Prep</u> <u>Week 1001</u> <u>A+ 1001 End of</u> <u>week.</u>	A+ Prep Daily 1 A+ Prep Daily 2 A+ Prep Daily 3 A+ Prep Daily 4 A+ Prep Daily 5 Final Exam 1001 Qualification Exam 1001	SBA - IT 1001 Support Build 1 Windows - IN CLASS SBA - IT 1001 Support Build 2 Linux - IN CLASS			
Week 9	Google Coursera Course 4 Exam Prep Week 1002 A + 1002 End of Week 9	A+ Prep Daily 1 A+ Prep Daily 2 A+ Prep Daily 3 A+ Prep Daily 4 A+ Prep Daily 5 Final Exam 1002 Qualification Exam 1002			Quiz: What is system Administratio n (Google) Quiz: Qwiklabs: Production and Test (Google) Quiz: Network Services (Google) Quiz: Software and Platform Services (Google) Quiz: Directory Services (Google) Quiz: Data Recovery &	Qwiklabs: Service Managment in Linux Qwiklabs: Service Managment in Windows Qwiklabs: Getting Familiar with DNS Qwiklabs: Managing Websites with Apache Qwiklabs: Managing Cloud Resources Qwiklabs: Using Active Directory Qwiklabs: Using BackupPC to manage Backups

					Backups (Google) Quiz: System Administratio n Consultant (Google)	
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Week 10	Students Take their Certifications this WEEK- and complete all Google+ // Students Complete intro to Cloud Training.
!!! ALL GOOGLE IT SUPPORT CONTENT SHOULD BE COMPLETED BY WEEK 9 !!! !!! ALL GOOGLE IT SUPPORT CONTENT SHOULD BE COMPLETED BY WEEK 10 !!! !!! ALL GOOGLE IT SUPPORT CONTENT SHOULD BE COMPLETED BY WEEK 10 !!! !!! ALL GOOGLE IT SUPPORT CONTENT SHOULD BE COMPLETED BY WEEK 10 !!!	

<p><u>Windows Server</u></p> <p><u>Day 1 - intro to Windows Server</u></p> <p><u>Day 2 - Managing users.groups.ou</u></p> <p><u>Day 3 - Working with Group Policy Objects</u></p> <p><u>Day 4 - intro to MDT and ADK</u></p> <p><u>Day 5 - Deploying images with WDS</u></p>	<p>*** Completed on Canvas LMS***</p> <p>Day 1 Quiz</p> <p>Day 2 Quiz</p> <p>Day 3 Quiz</p> <p>Day 4 Quiz</p> <p>Week Final Exam</p> <p>Skill Based Assessment</p>	<p>***LABS ARE SUBMITTED ON PS ACADEMY CANVAS LMS***</p> <p>Lab - Network Setup and Basic Server Config</p> <p>Lab - Installing ADDS,DNS,DHCP ,WDS</p> <p>Lab - Configuring AD DS</p> <p>Lab - Configuring DHCP</p> <p>Lab - Joining a Computer to a domain (SIM LAB)</p> <p>Lab - Creating User Accounts, Groups, OU's</p> <p>Lab - Setting up Network Share, Home folder</p> <p>Lab - Mapping a network Drive (SIM LAB)</p> <p>Lab - Setting up Roaming Profiles</p> <p>Lab - Rdp with windows 7</p> <p>Lab - basic security GPO</p> <p>Lab - Deploying software with using a GPO</p> <p>Lab - Denying user access with a GPO</p>	<p>- Windows Server Video Course</p> <p>- Windows server 2016 Reference Guide</p>	<p>Assignments are completed in class and results uploaded to canvas for verification.</p>	<p>Internet Connection Laptop/Desktop</p> <p>Hypervisor</p> <p>Linux ISO</p> <p>Windows 10 iso</p> <p>Windows server 2016</p> <p>Packet Tracer</p>
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		<p>Lab - windows MDT and ADK install</p> <p>Lab - Deploying an image using WDS & PXE boot</p> <p>Lab - Drive encryption with Bitlocker</p> <p>Lab - USB encryption using Bitlocker</p> <p>Lab - 2.0.1.2 - Identify Running Processes</p> <p>Lab - 2.1.2.10 - Exploring Processes, Threads, Handles and Windows Registry</p> <p>Lab - 2.2.1.11 - using windows Powershell</p> <p>Lab - 2.2.1.12 - Windows Task Manager</p> <p>Lab - 2.2.1.13 - Monitor and Manage system resources in Windows.</p>				
<p><u>Capstone Activity and presentations</u></p> <p><u>Off Boarding Interview</u></p> <p><u>Graduation</u></p>	<p>- Complete Student Action Plan</p> <p>- Capstone presentations</p>					

Days Off

Per Scholas will be closed on the following dates, you are expected to work on classwork and projects during days when school is not in session: