1.1

Compare/contrast common OS's, functions & features

	Mobile types:	Apple iOS
		Android
		Windows Phone
		Blackberry
	Workstation types:	Windows
		Mac
		Linux
		Chrome OS
	Open source vs commercial	

Software compatibility for different OS types and versions

Awareness of hardware compatibility for OS support	32bit vs. 64bit operating systems
Basic functions of an operating system	Interface between user and machine
	Coordination of hardware components
	Provides environment for software to function
	Monitors system health and functionality

1.1 (cont)

Displays structure / directories for data management

1.2

dentify common programs, applications and their purpose

Types:	Productivity Software	- Word processing
		- Spreadsheet software
		- Email software
		- Basic database software
		- PDF viewers/creators
		- Presentation software
		- Desktop publishing software
		- Personal Information Manager
		- Remote desktop software
	Collaboration Software	- Online workspace
		- Document storage/sharing
		- Screen sharing software
		- Video conferencing software
		- nstant messaging software
		- Email software
	Utility Software	- Utility Software
		- Software firewalls
		- Diagnostic/maintenance software
		- Compression software
	Specialized Software	- CAD
		- Graphic design
		- Medical
		- Scientific
		- Financial
		- Gaming
		- Entertainment
	Open source vs. commercial	
Platforms	Mobile	
	Desktop	
	Web-based	
Common file-types	Documents	txt, rtf, doc/docx, xls/xlsx, ppt/pptx, pdf
	Audio	mp3, wav, flac, aac, m4a
	Images	jpg, gif, tiff, pag, bmp
	Video	mpg, mp4, flv, wmv, avi
	Executables	exe, msi, app, bat, scexe
	Compression formats	rar, tar, zip, dmg, iso, 7zip/7z, gzip/gz, jar

1.3

Given a scenario, use software management best practices	
nstall / uninstall	OS features
	Applic-ations
	Drivers
Patching / updates for OS, drivers, applications and security software	Scheduling
	Frequency
	Automatics updates
Software version identification and compat-ibility	
Licensing	Products keys
	Single/mu-lti-license

1.4

Identify the following alternative techno-logies and their purpose	
Virtualization	Physical machine vs. virtual machine
Cloud Computing	Streaming media(aud-io/video)
Web applications	
VoIP	
Telepresence	
Gesture-based interaction	Swiping
	Pinch-to-zoom
	Kinetics

1.5

Explain the basic software features and functions of wireless devices	
Unlocking/security	
Bluetooth pairing	Hands free
	Data transfer

1.5 (cont)

Wireless connection setup	Verify wireless capabi-lities
	Turn on WiFi
	Locate SSID
	Enter wireless passwo-rd(if applicable)
	Verify Internet connection
Email config-uration	POP3
	IMAP
	SMTP
Screen orientation	
Synchronization configuration	
Airplane mode	
Stores for mobile applications	

2.0

Identify basic wired and wireless periph-erals and their purpose		
Putput devices	Printer:	- Laser
		- Inkjet
		- Thermal
	Display devices:	- Flatscreen
		- CRT
		- Projection
	Speakers	
Input devices	Keyboard	
	Pointing devices	Mouse
		Touchpad
		- Joystick
		Stylus pen
		Trackball
	Scanner	
	Microphone	

2.0 (cont)

	Webcam	
Input & Output devices	Fax	
	External storage devices	Flash drive
		External hard drive
		CD/DVD/Blu-Ray
		Network Attached Storage
		Memory card
		Mobile media players
		Smart phone
	Touchscreen display	

2.2

Compare and contrast common computer connector types	
Video	VGA, DVI, HDMI, Display port/T-hunderbolt, USB, S-video, Component - RGB
FireWire	
eSATA	
Thunderbolt	
USB	
PS/2	
Parallel	
Serial	
RJ-45	
RJ-11	
Audio	
Power	AC/DC

2.3

Identify the purpose of internal computer components	
CPU	
Power Supply	
RAM	
Storage	- Optical drive
	- Hard drive
	- Solid state drive
Expansion cards	- Video card
	- Audio card
	- NEtwork card
	- Modem
Motherboard/mainboard	
System cooling	- Case fans
	CPU fans
	Liquid cooling

3.1 Security

Define basic security threats	
Malware	Virus
	Trojan
	Spyware
	Ransomware
Phishing	
Social engineering	
Spam	
Password cracking	
Physical security	- Hardware theft
	- Software/license theft
	- Shoulder surfing
	- Dumpster diving

3.2

Given a scenario, use security best practices		
Password management	Password complexity	
	Change default passwords	
	Password confidentiality	
	Password expiration	
	Password reuse	
	Awareness of Single Sign On	
Device hardening	Disable unused features	- Disable Bluetooth
		- Disable NFC
	Timeout/lock options	
	Enable security oftware/f-eatures	- Software firewall
		- Anti-m-alware
	Encryption options	
Open WiFi vs. secure WiFi		
Multifactor authentication		
Suspicious emails	- Attachments	
	- Hyperlinks	
Act on security software alerts		
Admin vs.user vs. guest account		

3.3

Given a scenario, use web-browsing best practices		
Recognize...	... a secure connection/website	https, lock symbol
	... invalid certificate warnings	

3.3 (cont)

	...suspicious links	
	...suspicious banner ads	
	...adware symptoms	- constant popups
		- homepage redirection
		- Search engine redirections
Limit the use of personal information (PII)		
Update browsers and plugins	- Avoid use of legacy browsers	
Disable unneeded/suspicious browser plugins, toolbars and extensions		
Disable autofill forms/passwords		
Clear browser cache/history/cookies		
Recognize untrusted source warnings		
Risks of using public workstations		

4.1

Given a scenario, set up and configure a basic SOHO router (wired / wireless)
- Verify wired connection, if applicable
Set WEP vs. WPA vs. WPA2
Change SSID from default
Apply a new wireless password
Change admin password for router
Connect to the new network
Verify internet connectivity
Update firmware if necessary

4.2

Compare and contrast cellular, wireless and wired data connections
High vs. low mobility
High vs. low availability
High vs. low throughput/bandwidth
High vs. low reliability
Connection delay
Number of concurrent connections
Levels of security

4.3

Compare and contrast different methods of sharing and storage		
HTTP vs. HTTPS	- Browser-based file downloads	
FTP vs. FTPS vs. SFTP (Secure File Transfer Protocol)		
Local vs. hosted storage	Cloud--based services	- Cloud-based collaborative applications
		Cloud-based storage
	File and print sharing	Workgroup
		Homegroup
	Network drives	
	Network attached storage	
	Direct attached storage	
	External hard drives	
Peer-to-peer	Local adhoc network	- Bluetooth sharing
		Online peer-to-peer network
Network vs. local printing	USB	
		Wireless/wired network

5.1

Perform appropriate steps to set up a basic workstation	
Plug in cables	
Power on computer	
Follow initial operating system setup wizard	-Localization settings
	- Screen resolution
	- Audio settings
Install security software	
Configure peripherals (if applicable)	
Uninstall unneeded software (if applicable)	
Configure and verify internet connection	
Install additional software (if applicable)	
Run software and security updates	
Other user accounts (if applicable)	
Basic cable management	

5.2

Explain the basic methods of navigating an operating system	
Executing programs	
Difference between shortcuts and files	
Manipulating files	Open
	Edit
	Save
	Move
	Copy
	Cut
	Paste
	Delete
	Rename
Read-only vs. modifiable files	
Navigate a file structure	
Search, sort and display files	
Create screen captures	
Navigate with hot keys	
Folder and file size	
Accessibility options	
Folder and file permissions	

5.3

Given a scenario, implement basic support concepts	
Check for external issues	Loose cables / connections
	Power
	Physical damage
Manufacturer documentation	
Manufacturer websites	
Technical community groups	
Internet search engine	
Contact technical support	

5.4

Explain basic backup concepts	
Importance of backups	
Scheduling	
Frequency	
Storage mediums	- Locally attached storage
	- Offsite/cloud-based
	-Network attached storage
Backup verification and testing	

5.5		
Describe the importance and impact of various environmental and safety concepts		
Propoer disposal methods	RoHS	
	CRT monitors	
	Scanners	
	Batteries	
	Ink/Toner	
	Hard drives	
Power	Energy efficient devices	
	Power profiles	Power options
		Sleep/-Hibern-ation
	UPS vs surge protector vs power strip	Power limita-tions
	International power differ-ences	
Device placement	Airflow	
	Humidity	
	Temperature	
	Dust accumulation	
	EMI	
Electrostatic discharge concepts		
Ergonomic concepts	Proper keyboard and mouse placement	
	Sitting positions	
	Monitor level placement	
Follow manufacturer safety guidelines		