

IT Essentials: PC Hardware and Software v4.0

Chapter 11 - 16 Detailed Syllabus

This syllabus for chapters 11 – 16 will include:

1. Hours based on a 70 hour time table: 5 one hour classes per week. Class time includes: lecture, some curriculum reading, labs, and quiz and exam time. Worksheets and some curriculum readings and labs are assigned as homework.
2. Homework
3. Required labs
4. Hardware/software required for each lab
5. Required worksheets
6. Sections that are typically found difficult by students
7. Lecture pointers
8. Chapter-by-Chapter Summary

Difficulty level: The rating system indicates where the average student will require the most help

(B) – Basic material: should require no help from teacher

(M) – Moderate material: may require some help from teacher

(D) – Difficult material: will require help from teacher

Lectures

The lecture for each chapter should cover all sections in that chapter, but the main focus should be on the “Moderate” and “Difficult” material. I find the following most helpful for the students:

- 1) Summarize and organize the information in each section. This is most helpful when there are a lot of terms and numeric values that the student needs to memorize.
- 2) Diagrams, charts, tables and pictures are a good way to help explain abstract concepts, skills and to organize information.
- 3) If you have time, go deeper into a concept and how it relates to other concepts in computing. This will help broaden the students’ understanding. This in turn is helpful when they need to troubleshoot computer problems.
- 4) A projector connected to the instructor’s computer with internet access is great for lectures and demonstrations.

Labs and Worksheets

Important instructional information about each lab and worksheet is provided on the next page after each chapter syllabus. Labs should be done in class whereas worksheets can be done as homework. You can also develop labs and worksheets for the sections that do not have any. Cisco’s FTP site is a great place for extra instructor resources.

Remember: This course is designed to prepare the student for his/her CompTIA A+ certification exam. Just covering the basics will not do it. You and your students need to dig deep into what makes a computer function. It is a necessity to provide for the students the time to explore all of the nuances of computer hardware and software systems.

NOTE: Students will need administrator permissions for the majority of the labs that use Windows OS.

EXAMS and QUIZZES

Chapter 11 – 16 Quiz

After each chapter there is a quiz that the students must complete. The quiz includes questions from all sections in a chapter.

Advanced: Final Exam Chapter 11 - 16

After chapter 16 there is a final exam that the students must complete. The exam includes questions from all the content covered from chapters 11 – 16.

Timetable Adjustments

Not every academy follows the same timeline for this course. So information is included in the chapter by chapter schedule below, which allows you to easily adjust this 70 hour timetable to your own needs. At the top and middle of each chapter's timetable, you will see the following information: ex. **(4.2 hours) (6% of 70 hours)**. The **(4.2 hours)** indicates the average amount of class time needed to teach the chapter. The **(6% of 70 hours)** is the percentage of total time required for the chapter. Use this information to help plan your daily activities, and to adjust the timetable to your own academy needs. For example, if your academy runs classes based on a 100 hour timetable, then allow 6 hours (6% of 100 hours) for the chapter. If you use a 50 hour timetable, then allow 3 hours for the chapter. **IMPORTANT:** The percentage of time allotted to each chapter is an average based on years of experience. Dynamics of student ability, hardware and software resources in a classroom should be considered when designing your own schedule.

Chapter 11: Advanced Personal Computers

ITE v4	(10.5 hours) (15.0% of 70 hours)
Advanced Personal Computer	<p>Day 1: (1 hour) – Introduction: Account setup and Cisco Academy website</p> <ol style="list-style-type: none"> 1) Class introduction, handouts, and demonstrate the Cisco site for students: course and exams. 2) Have students logon to: www.cisco.com/web/learning/netacad/index.html. They will set up their profile and change their username and password. (IMPORTANT, you will need to setup the student’s accounts before this class.) 3) Introduce the online curriculum: demonstrate how to get to the online content and how the course is laid out. <p>Homework: Explore Cisco Academy website</p> <p>Day 2: (1 hour) – Introduce Chapter 11 then lecture on: section 11.1 (B), 11.2 (B)</p> <ol style="list-style-type: none"> 1) Start off with an overview of the chapter. Next go over section 11.1, talk about A+ certification. Have the students explore CompTIA website for information about 220-602, 220-603, and 220-604 exams. Make up a worksheet for recording information. 2) Explain to students how chapter 11 labs will be done. For section 11.2 (explain lab safety and tool use.) Assign lab groups and hand out worksheet 11.1.1. <p>Homework: Chapter sections: 11.1 take notes, Worksheet 11.1.1, Read chapter 11 labs</p> <p>Day 3 - 8: (6 hours) - Chapter 11: section 11.3 (B), 11.4 (B), 11.5 (B)</p> <ol style="list-style-type: none"> 1) Mark worksheets in class. 2) The information in these sections is well done but there are a few complex concepts that you need to focus on: Start off with an overview of the 3 sections then focus on section: 11.3.6 (compare and contrast PATA, SATA and SCSI, use figures 1 – 3 as resources) 3) After the lecture assign students to their tasks. Review with the students what they will be working on: labs, taking notes, etc. 4) See lab skill instructions on next page for suggestions on how to organize and run the labs. 5) Your time should be spent working with students while they complete chapter 11 labs. 6) NOTE: If classroom resources are limited and you can not get these labs completed in the allotted time, students could do lab 11.4.4 as homework. <p>Homework: Chapter: sections 11.3 – 11.5 take notes; Worksheets 11.3.7; Chapter 11 labs</p> <p>Day 9, 10: (2 hours) - Chapter 11: section 11.6 (M)</p> <ol style="list-style-type: none"> 1) Mark worksheets in class. 2) A short lecture on: 11.6 (discuss open and close ended question techniques, and troubleshooting computers.) 3) After the lecture hand out Labs 11.6.3 (Remote Technician Boot Problem). Have students read over the section and do the lab. Mark lab before the end of the second class. 4) If time available review for chapter 11 exam. <p>Homework: End of chapter quiz, study for chapter exam</p> <p>Day 11: (0.5 hour) – Chapter 11: Review and exam</p> <ol style="list-style-type: none"> 1) 10 minute review, 20 minutes for chapter 11 exam. 2) Start Chapter 12, see chapter 12 schedule

Chapter 11: Worksheets and Lab Skills Instruction

Computer with Windows XP, which the students can install and configure hardware. Set up several stations for the different labs if possible. **Always use an antistatic wrist strap.**

Difficulty level: Basic – should require no help from teacher
 Moderate – may require some help from teacher
 Difficult – will require help from teacher

Chapter 11: Advanced Personal Computers			
Worksheets			
11.0	Worksheet description and materials	Worksheet difficulty	
11.1	Job Opportunities: Covers sections 11.1, research computer related jobs. Use the internet.	Basic: Assign as homework.	
11.3.7	Research Computer Components: Covers sections 11.3.1 – 11.3.7, research computer parts. Use the internet, newspaper, and local store.	Moderate: Students should be able to do this assignment but it would be a good idea to discuss the importance of compatibility between components.	
Lab skills			
11.0	Lab materials	Estimated time	Lab difficulty
11.4.1	Install a NIC: A computer with Windows XP (2000 will also work) and a NIC installed. A second NIC and drivers for the NIC. Screwdriver and anti-static strap and bag/mat.	20 min.	Basic: Instructions are well done. Students have done these skills before but never all together. Students will like this lab and can do in groups.
11.4.3	Install Additional RAM: A computer with Windows XP (2000 will also work) and an empty RAM slot. An addition RAM module. Screwdriver and anti-static strap and bag/mat.	20 min.	Basic: Instructions are well done.
11.4.4	BIOS File Search: A computer with Windows XP (2000 will also work), and internet access.	10 min.	Basic: Instructions are well done. Students can do the lab for homework.
11.4.5	Install, Configure, and Partition a Second Hard Drive: A computer with Windows XP (2000 will also work). A second hard drive that can be reformatted. Screwdriver and anti-static strap and bag/mat.	30 min.	Moderate: Instructions are well done. Students may need help setting hard drive to master and slave.
11.6.3	2x Repair Boot Problem: A computer with Windows XP (2000 will also work) and screwdriver.	20 min.	Moderate: Students should be familiar with this type of lab. The difficult part will be solving the problem.

Chapter 12: Advanced Operating Systems

ITE v4	(14 hours) (20.0% of 70 hours)
Advanced Operating Systems	<p>Day 1: (0.5 hour) - Chapter 12: section 12.1 (B)</p> <ol style="list-style-type: none"> 1) Introduce chapter 12 then start up a class discussion on the different operating systems: section 12.1 (desktop, server: Linux, Apple, Windows, UNIX). It is important students have a general understanding of why there are different operating systems and what those differences are. 2) Students should read over section 12.1 and take detailed notes. <p>Homework: Chapter: sections 12.1 take notes</p> <p>Day 2: (1 hour) - Chapter 12: section 12.2 (B), 12.3 (B), 12.4 (B)</p> <ol style="list-style-type: none"> 1) This section is well done. Focus lecture on: (what and why we would want to do a custom OS install, why a person would need 2 OSs installed on one computer, and explain the upgrade path for Window OSs.) 2) Explain to students how chapter 12 labs will be done. Assign chapter 12 labs for reading. <p>Homework: Chapter: read chapter labs 12.2.2, 12.2.3, 12.2.4, 12.2.5, 12.4.1, and 12.5.3 (Operating System Problem)</p> <p>Day 3 – 12 (10 hours) - Chapter 12: Labs and notes</p> <ol style="list-style-type: none"> 1) Assign students to their tasks. Review with the students what they will be working on: labs, taking notes, etc. 2) See lab skill instructions on next page and this page for suggestions on how to organize and run the labs. The labs are very useful in helping students understand this chapter. 3) Your time should be spent working with students while they complete chapter 12 labs. <p>Homework: Chapter: sections 12.2 – 12.4 take notes; Chapter 12 labs</p> <p>Day 13, 14: (2 hours) - Chapter 12: section 12.5 (M)</p> <ol style="list-style-type: none"> 1) A short lecture on: 12.5 (discuss open and close ended question techniques, and troubleshooting operating systems.) 2) After the lecture hand out Labs 12.5.3 (Remote Technician Operating System Problem). Have students read over the section and do the lab. Mark lab before the end of the class. 3) If time available review for chapter 12 exam. <p>Homework: Study for chapter quiz (Chapter 12 and 13 have a combined exam to be taken after completion of Chapter 13.)</p> <p>Day 15: (0.5 hour) – Chapter 12: Review</p> <ol style="list-style-type: none"> 1) 10 minute review. 2) Start Chapter 13, see chapter 13 schedule

Chapter 12: Worksheets and Lab Skills Instruction

For all these labs you will need a computer for installing Windows XP Pro and for performing configurations. If you have 2 computers one could be for the installation while the other computer is used for the other labs. This will speed things up in the lab. Minimum hardware: high-end Pentium II, 256 RAM (512 better), 3 GB hard drive, and CD drive. A faster computer will help reduce the time required to complete the labs.

Difficulty level: Basic – should require no help from teacher
 Moderate – may require some help from teacher
 Difficult – will require help from teacher

Chapter 12: Advanced Operating Systems			
Worksheets			
12.0	Worksheet description and materials	Worksheet difficulty	
	No Worksheets: Instructor will need to make them for this section.		
Lab skills			
12.0	Lab materials	Estimated time	Lab difficulty
12.2.2	Advanced Installation of Windows XP; Create a Partition in Windows XP Pro; and Customize Virtual Memory Settings: Doing these labs together will save you time. A computer with a new installation of Windows XP, Windows XP CD, at least a 5GB hard drive, a black formatted floppy, and internet access.	60 min.	Difficult: There are a lot of steps required to set up an answer file. Students often make mistakes doing this lab. Instructions are well done but can be confusing. Students will make several partitions; one for each of these 3 labs. (Note: if you do not do these labs together you will need to reformat the hard drive after each time the student does lab 12.2.3. Best to do in small groups.
12.2.3		30 min.	
12.2.4		30 min.	
12.2.5	Install an Alternate Browser (Optional): A computer with Windows XP, and internet access.	15 min.	Basic: Students will need to download and install Firefox. Since this is an optional lab students could do this for homework.
12.4.1	Schedule Task Using GUI and at Command: A computer with Windows XP.	20 min.	Moderate: You will need to help most students with some of the command typed in the command window.
12.5.3	Correct an operating system problem: A computer with Windows XP, and internet access.	30 min.	Moderate: Students should be familiar with this type of lab. The difficult part will be solving the problem.

Chapter 13: Advanced Laptops and Portable Devices

Chapter 13	(6 hours) (8.6% of 70 hours)
Advanced Laptops and Portable Devices	<p>Day 1: (0.5 hour) - Chapter 13: section 13.1 (M)</p> <ol style="list-style-type: none"> 1) Introduce chapter 13 then start up a class discussion on the different communication methods used by laptops and portable devices: section 13.1 (Bluetooth, Infrared, Cellular WAN, WiFi, Satellite). It is important student have a good understanding of these technologies, there characteristics and limitations. 2) Students should read over section 13.1 and take detailed notes. <p>Homework: Chapter: sections 13.1 take notes</p> <p>Day 2 - 4: (3 hours) - Chapter 13: section 13.2 (B), 13.3 (B), 13.4 (B)</p> <ol style="list-style-type: none"> 1) This section is well done. Focus lecture on: give an over view of each section. 2) Assign the 6 worksheets, set up a schedule for marking: 2 every day for the next 3 days. <p>Homework: Chapter: sections 13.2 – 13.4 take notes; Worksheets 13.2, 13.3.1, 13.2.2, 13.2.3, 13.2.4</p> <p>Day 5, 6: (2 hours) - Chapter 13: section 13.5 (M)</p> <ol style="list-style-type: none"> 1) A short lecture on: 13.5 (discuss open and close ended question techniques, and troubleshooting laptops.) 2) After the lecture hand out Worksheet 13.5.3 (Verify work order information) Have students read over the section and do the worksheet. Mark all worksheets before the end of the class. 3) If time available review for chapter 13 exam. <p>Homework: End of chapter quiz, study for Chapter 12-13 exam</p> <p>Day 7: (0.5 hour) – Chapter 13: Review and chapter 12-13 exam</p> <ol style="list-style-type: none"> 1) 10 minute review, 20 minutes for chapter 12-13 exam. 2) Start Chapter 14, see chapter 14 schedule

Chapter 13: Worksheets and Lab Skills Instruction

No equipment required.

Difficulty level: Basic – should require no help from teacher
 Moderate – may require some help from teacher
 Difficult – will require help from teacher

Chapter 13: Advanced Laptops and Portable Devices			
Worksheets			
13.0	Worksheet description and materials	Worksheet difficulty	
13.2	Investigating Repair Centers: Covers sections 13.2, research repair centers. Use the internet.	Basic: Assign as homework.	
13.3.1	Laptop Batteries: Covers sections 13.3.1, research battery specification. Use the internet.	Basic: Assign as homework. Have laptop model number ready for students to use.	
13.3.2	Docking Station: Covers sections 13.3.2, research battery specification. Use the internet.	Basic: Assign as homework. Have laptop model number ready for students to use.	
13.3.3	Research DVD Drive: Covers sections 13.3.3, research battery specification. Use the internet.	Basic: Assign as homework. Have laptop model number ready for students to use.	
13.3.4	Laptop RAM: Covers sections 13.3.4, research battery specification. Use the internet.	Basic: Assign as homework. Have laptop model number ready for students to use.	
13.5.3	Verify Work Order Information: Covers sections 13.5 – 13.5.3, reword level-one questions.	Basic: Assign as homework.	
Lab skills			
13.0	Lab materials	Estimated time	Lab difficulty
	No Labs: I suggest not adding any more labs.		

Chapter 14: Advanced Printers and Scanners

ITE v4	(9 hours) (12.9% of 70 hours)
Advanced Printers and Scanners	<p>Day 1: (0.5 hour) - Chapter 14: section 14.1 (B)</p> <ol style="list-style-type: none"> 1) Introduce chapter 14 then start up a class discussion on section 14.1: (printers and scanners safety issues.) 2) Students should read over section 14.1 and take detailed notes. Assign chapter 14 labs for reading. <p>Homework: Chapter: sections 14.1 take notes; read chapter 14 labs for next class</p> <p>Day 2: (1 hour) - Chapter 14: section 14.2 (M)</p> <ol style="list-style-type: none"> 1) The section is well done. Focus lecture on: 14.2.2 (compare and contrast PostScript and PCL, use figure 1 as a resource); 14.2.3 (demonstrate settings for printer and scanner). 2) Explain to students how chapter 14 labs will be done. Assign students to their tasks. Review with the students what they will be working on: labs, taking notes, etc. 3) See lab skill instructions on next page and this page for suggestions on how to organize and run the labs. The labs are very useful in helping students understand this chapter. 4) Your time should be spent working with students while they complete chapter 14 labs. 5) NOTE: If classroom resources are limited and you can not get these labs completed in the allotted time, consider setting up lab time outside of the regular class time. <p>Homework: Chapter: sections 14.2 take notes; Chapter labs</p> <p>Day 3 - 7: (5 hours) - Chapter 14: section 14.3 (M), 14.4 (B), 14.5 (B),</p> <ol style="list-style-type: none"> 1) A short lecture on: 14.3 (demonstrate share a printer and print over a network). 2) Assign students to their tasks. Review with the students what they will be working on: labs, taking notes, etc <p>Homework: Chapter: sections 14.2 – 14.5 take notes; Worksheet 14.5.1; Chapter 14 labs</p> <p>Day 8, 9: (2 hours) - Chapter 14: section 14.6 (M)</p> <ol style="list-style-type: none"> 1) Mark worksheets in class. 2) A short lecture on: 14.6 (discuss open and close ended question techniques, and troubleshooting operating systems.) 3) After the lecture hand out Labs 14.6.3 (Remote Technician Perform a role-play to connect a printer problem). Have students read over the section and do the lab. Mark lab before the end of the class 4) If time available review for chapter 14 exam. <p>Homework: End of chapter quiz, study for chapter 14 exam</p> <p>Day 10: (0.5 hour) – Chapter 14: Review and exam</p> <ol style="list-style-type: none"> 1) 10 minute review, 20 minutes for chapter 14 exam. 2) Start Chapter 15, see chapter 15 schedule

Chapter 14: Worksheets and Lab Skills Instruction

These labs use an Epson CX7800 printer/scanner. If you use a different make or model you will need to adjust the lab.

Difficulty level: Basic – should require no help from teacher
 Moderate – may require some help from teacher
 Difficult – will require help from teacher

Chapter 14: Advanced Printers and Scanners			
Worksheets			
14.0	Worksheet description and materials	Worksheet difficulty	
14.5.1	Search for Certified Printer Technician Jobs: Covers sections 14.5.1, research printer technician jobs. Use the internet.	Basic: Assign as homework.	
Lab skills			
14.0	Lab materials	Estimated time	Lab difficulty
14.2.4	Install an All-in-one Printer/Scanner: A computer with windows XP, a printer or scanner, software and internet access.	15 min.	Basic: Well done lab. The instruction in the first step may not work so you should look into this before starting the lab.
14.3.2	Share the All-in-one Printer/Scanner: Two computers connected by hub or switch, and a printer or scanner	10 min.	Basic: Well done lab.
14.4.2	Comparing Scanned Images: A computer with windows XP, a printer or scanner, software, and an image to scan.	15 min.	Basic: Well done lab.
14.6.3	Fix a Printer Problem: Two computers, or more, connected by hub or switch or router, and two printers or scanners	30 min.	Moderate: Students should be familiar with this type of lab. The difficult part will be solving the problem.

Chapter 15: Advanced Networks

ITE v4	(15 hours) (21.4% of 70 hours)
Advanced Networks	<p>Day 1: (0.5 hour) - Chapter 15: section 15.1 (B)</p> <ol style="list-style-type: none"> 1) Introduce chapter 15 then start up a class discussion on section 15.1: (network safety.) 2) Students should read over section 15.1 and take detailed notes. <p>Homework: Chapter: sections 15.1 take notes</p> <p>Day 2: (1 hour) - Chapter 15: section 15.2 (B), 15.3 (M),</p> <ol style="list-style-type: none"> 1) The sections are well done. Focus lecture on: 15.3.2 (review ISP connection types, figure 1 is a helpful diagram). 2) Explain to students how chapter 15 labs will be done. Assign students to their tasks. Review with the students what they will be working on: labs, taking notes, etc. 3) See lab skill instructions on next page and this page for suggestions on how to organize and run the labs. The labs are very useful in helping students understand this chapter. 4) Your time should be spent working with students while they complete chapter 15 labs. 5) NOTE: If classroom resources are limited and you can not get these labs completed in the allotted time, consider setting up lab time outside of the regular class time. <p>Homework: Chapter: read chapter labs 15.4.2a, 15.4.2b, 15.5.1, 15.5.2, 15.5.3, and 15.8.3 (Network Problem)</p> <p>Day 3 - 13: (11 hours) - Chapter 15: section 15.4 (B), 15.5 (M), 15.6 (D), 15.7 (B)</p> <ol style="list-style-type: none"> 1) For these sections focus your lecture on the following: 15.5 (demonstrate installing, configuring and testing a wireless connection – computer and router); 15.6 (explain that the students do not have to know how to setup a mail server, they need to know the bold face words and definition). 2) Assign students to their tasks. Review with the students what they will be working on: labs, taking notes, etc. Hand out Worksheets 15.2.2, 15.3.2. 3) Your time should be spent working with students while they complete chapter 15 labs. 4) Mark worksheets in class. <p>Homework: Chapter: sections 15.1 – 15.7 take notes; Worksheets 15.2.2, 15.3.2; Chapter 15 labs</p> <p>Day 14, 15: (2 hours) - Chapter 15: section 15.8 (M)</p> <ol style="list-style-type: none"> 1) Mark worksheets in class. 2) A short lecture on: 15.8 (discuss open and close ended question techniques, and troubleshooting network.) 3) After the lecture hand out Labs 15.8.3 (Remote Technician Network Problem). Have students read over the section and do the lab. Mark lab before the end of the class. 4) If time available review for chapter 15 exam. <p>Homework: Study for end of chapter quiz (Chapters 15 and 16 combined exam to be taken after completion of Chapter 16.)</p> <p>Day 16: (0.5 hour) – Chapter 15: Review</p> <ol style="list-style-type: none"> 1) 10 minute review. 2) Start Chapter 16, see chapter 16 schedule

Chapter 15: Worksheets and Lab Skills Instruction

A computer with Windows XP and Firefox installed. There should be a NIC installed in the computer as lab 15.5.2 requires 2 NICs.

Difficulty level: Basic – should require no help from teacher

Moderate – may require some help from teacher

Difficult – will require help from teacher

Chapter 15: Advanced Networks			
Worksheets			
15.0	Worksheet description and materials	Worksheet difficulty	
15.2.2	Protocols: Covers sections 15.2.2, list protocols and ports. Use curriculum.	Basic: Assign as homework.	
15.3.2	ISP Connection Types: Covers sections 15.3.2, identify ISP connections. Use curriculum.	Basic: Assign as homework.	
Lab skills			
15.0	Lab materials	Estimated time	Lab difficulty
15.4.2a	Configure Browser Settings: A computer with Windows XP, Firefox installed, and internet access.	10 min.	Basic: Well done lab. Could assign as homework.
15.4.2b	Share a Folder, Share a Printer, and Set Share Permissions: Two computers with Windows XP, connected via a hub, and a printer.	15 min.	Basic: Well done lab. Have the printer completely installed on one of the computers. Students will share this printer.
15.5.1	Install Wireless NIC: A computer with Windows XP, wireless NIC, wireless access point or Linksys router and screwdriver.	25 min.	Basic: Well done lab.
15.5.2	Configure Wireless Router: A computer with Windows XP, with a wireless and wired NIC installed, wireless access point or Linksys router and Ethernet cable.	10 min.	Basic: Well done lab. Add more to this lab. Have students explore the router setting and collect configuration information.
15.5.3	Test the Wireless NIC: A computer with Windows XP, with a wireless and wired NIC installed, wireless access point or Linksys router and internet access.	10 min.	Basic: Well done lab.
15.8.3	Fix Network Problem: A computer with Windows XP, with a wireless and wired NIC installed, wireless Linksys router and Ethernet cable.	30 min.	Moderate: Students should be familiar with this type of lab. The difficult part will be solving the problem.

Chapter 16: Advanced Security

ITE v4	(5.5 hours) (7.9% of 70 hours)
Advanced Security	<p>Day 1: (0.5 hour) - Chapter 16: section 16.1 (B)</p> <ol style="list-style-type: none"> 1) Introduce chapter 16 then start up a class discussion on section 16.1: (security policies and the different hardware and software security systems.) 2) Handout worksheet 16.1.1, have students read over section 16.1 and take detailed notes. <p>Homework: Chapter: sections 16.1 take notes, Worksheets 16.1.1</p> <p>Day 2, 3: (2 hours) - Chapter 16: section 16.2 (D), 16.3 (M), 16.4 (B)</p> <ol style="list-style-type: none"> 1) Mark worksheets in class. 2) This section is well done. Focus lecture on: 16.2.1 (explain the different encryption methods, figures 1 – 4 are great for this); 16.2.3 (go over the modes for filtering network data); 16.3.1 (review wireless security configuration). 3) Handout worksheet 16.2.3, have students read over section 16.2 – 16.4 and take detailed notes, and assign lab 16.3.2 for class work or homework. <p>Homework: Chapter: sections 16.2 – 16.4 take notes; Worksheets 16.2.3; Lab 16.3.2</p> <p>Day 4, 5: (2 hours) - Chapter 16: section 16.5 (M)</p> <ol style="list-style-type: none"> 1) Mark worksheets in class. 2) Walk through (demonstrate) Lab 16.5.3 (Security Problem) as a class. 3) A short lecture on: 16.5 (discuss open and close ended question techniques, and troubleshooting networks.) 4) After the lecture hand out Labs 16.5.3 (Remote Technician Security Problem). Have students read over the section and do the lab. Mark lab before the end of the class. 5) If time available review for chapter 16 exam. <p>Homework: End of chapter quiz, study for Chapter 15-16 exam</p> <p>Day 6: (1 hour) – Chapter 16: Review and exam</p> <ol style="list-style-type: none"> 1) 10 minute review, 20 minutes for chapter 15-16 exam. 2) Explain what is in the chapter 11 – 16 online exam, how exams will be done. Hand out any review materials.

Chapter 16: Worksheets and Lab Skills Instruction

A computer with Windows XP with internet access.

Difficulty level: Basic – should require no help from teacher
 Moderate – may require some help from teacher
 Difficult – will require help from teacher

Chapter 16: Advanced Security			
Worksheets			
16.0	Worksheet description and materials	Worksheet difficulty	
16.1.1	Security Policy Questions: Covers sections 16.1.1, your lab security policy.	Moderate: You will have to help answer some of the questions as the students may not know this information	
16.2.3	Research Firewalls: Covers sections 16.2.3, research firewalls. Internet access.	Basic: Assign as homework.	
Lab skills			
16.0	Lab materials	Estimated time	Lab difficulty
16.3.2	Configure a Windows XP Firewall: A computer with Windows XP, and internet access.	10 min.	Basic: Well done lab. Could assign as homework.
16.5.3	Fix a Security Problem: A computer with Windows XP, with a wireless and wired NIC installed, wireless Linksys router and Ethernet cable.	30 min.	Moderate: Students should be familiar with this type of lab. The difficult part will be solving the problem.

Chapter 11 - 16: Review and Exam Schedule

ITE v4	(10 hours) (14.3% of 70 hours)
Review & Exam Week	<p>Day 1 - 4: (4 hours) - Chapter 11 – 16 Review and Skills Based Assessment</p> <ol style="list-style-type: none"> Over the next 4 days the students can be either reviewing or taking the Skills Based Assessment. Rotate students through the skills bases assessment. Resources and time will affect what and how you test the students. See instruction below for an example skills based assessment. Review resources include but not limited to: student notes, worksheets, practice skills and redo chapter 11 – 16 quizzes to help them study. If you allow students to redo any of the chapter quizzes make sure you have recorded their grade from their first try before re-activating the quiz. Students can do each quiz 5 times. <p>Day 5: (1 hour) - Chapter 11 – 16 Online Exam</p> <ol style="list-style-type: none"> The final chapter 11 – 16 exam is online and located at the Cisco site. You will need to activate the exam. Students can take this exam twice if you wish, do the second attempt at the end of the next 5 days so students can review. See instruction below for an example of why you might want to do this. <p>Day 6 - 9: (4 hours) - Chapter 11 – 16 Review and Skills Based Assessment</p> <ol style="list-style-type: none"> Over the next 4 days the students can be either be reviewing or taking the Skills Based Assessment. Rotate students thought the skills based assessment. Resources and time will affect what and how you test the students. See instruction below for an example skill exam. <p>Day 10: (1 hour) - Chapter 11 – 16 Online Exam,</p> <ol style="list-style-type: none"> Second attempt: students can take this exam twice if you wish, if they did not pass with a percentage required by you. If you allow students to redo the final exam, make sure you have recorded their grade from their first try before re-activating the exam.

Chapter 11 - 16: Exams

ITE v4	An Examination Method (only a suggestion)	
On-Line Final Exam & Skill Based Exam	The skills based assessment is Pass or Fail. It has nine parts including: building a computer, installing an operating system, configuring the network card, installing a printer, sharing files and a printer, and preventive maintenance tasks.	
	Give the students 2 tries at the On-line Chapter 11 - 16 Exam if needed	<p>First try: The grade you get is used for your school mark</p> <p>Last try: If you did not get 73% or better on your first try you will need 80% on this try. These students come in before, after or at lunch break to take their second try.</p>

The chapter-by-chapter summary can be used as a reference to help you get organized. For each chapter the following information is summarized: **Chapter #** - chapter number; **Lec/Lab hours** – classroom hours allotted for

lectures and labs; **Homework** – estimated number of hours needed to complete assigned homework; **Required Labs** – lab number that you should setup for each chapter; **Virtual Labs** – listing of virtual labs; **Required Worksheets** – worksheets that you can need to assign to students; **Instructor Developed Resources** – materials and support materials, add to this as you develop these; **Difficult Section(s)** – a listing of difficult sections, as a minimum you should focus your lecture on these section.

Chapter-by-Chapter Summary

Chapter #	Lec/Lab Hours	Home Work	Required Labs	Virtual Labs	Required Worksheets	Instructor Developed Resources	Difficult Section(s)
11	10.5	4	11.4.1 11.4.3 11.4.5 11.6.3 11.6.3RT	NA	11.1.0 11.3.7	Lecture: “Chapter 11 Advanced Personal Computers	No difficult sections
12	14	3	12.2.2 12.2.3 12.2.4 12.2.5 12.4.1 12.5.3 12.5.3RT	NA	NA	Lecture: “Chapter 12 Advanced Operating Systems”	No difficult sections
13	6	4	NA	NA	13.2.0 13.3.1 13.3.2 13.3.3 13.3.4 13.5.3	Lecture: “Chapter 13 Advanced Laptops and Portable Devices”	No difficult sections
14	9	3	14.2.4 14.3.2 14.4.2 14.6.3 14.6.3RT	NA	14.5.1	Lecture: “Chapter 14 Advanced Printers and Scanners”	No difficult sections
15	15	4	15.4.2a 15.4.2b 15.5.1 15.5.2 15.5.3 15.8.3 15.8.3RT	NA	15.2.2 15.3.2	Lecture: “Chapter 15 Advanced Networks”	12.6

Chapter #	Lec/Lab Hours	Home Work	Required Labs	Virtual Labs	Required Worksheets	Instructor Developed Resources	Difficult Section(s)
16	5.5	3	16.3.2 16.5.3 16.5.3RT	NA	16.1.1 16.2.3	Lecture: “Chapter 16 Advanced Security”	16.2

Skill Exam	8	Computer, Tool Kit and Windows OS IMPORTANT: This Exam must be supervised.
Chapter 11 – 16 Exam	2	Internet connect to Cisco site. IMPORTANT: This Exam must be supervised.



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