

Course Syllabus/Outline Development Form

1. NAME OF COURSE: Home & Small Business Network

2. NUMBER OF CLOCK HOURS: 80 hrs

3. COURSE DESCRIPTION:

This course teaches students the skills needed to obtain entry level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments. Instructors are encouraged to provide field trips and outside-the-classroom learning experiences. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras. Prerequisites: A+ & Network+ certification or equivalent knowledge of computers and operating systems. First of two courses leading to certification as a CISCO Certified Entry network technician (CCENT).

4. COURSE OBJECTIVES:

1. Set up a personal computer system, interface cards & peripheral devices.
2. Plan & install a home or small business network.
3. Connect to the internet.
4. Verify & troubleshoot network & internet connectivity.
5. Recognize & mitigate security threats to the home network.
6. Configure & verify common internet applications.
7. Configure basic IP services through a GUI interface.

5. RATIONALE:

Over 80% of worldwide internet traffic is controlled by CISCO routers and hubs, and those certified by CISCO in the computer networking field are in high demand.

6. REQUIRED MATERIALS:

Students will be provided with official Cisco study materials.

7. EVALUATION:

Those who participate in class discussions, score 70% or higher on the final exam, and miss no more than three class meetings will be awarded 8 continuing education units.

General Classroom Policies and Exit Criteria

1) General

- o ***Collaboration on Lab activities, studying, and the Case Study is strongly encouraged!***
- o Please treat other students, the instructor, and guests with professionalism, courtesy, and respect.
- o Please listen when others are speaking.
- o Cell phones should be put on 'silent'. If you need to take a call, step outside the classroom.

2) Attendance

- o Please do your best to be on-time for class. If you are late, enter quietly.

- o Please notify the Instructor in advance if you know you will be absent, or if this is not possible, check with the Instructor afterward to understand what make-up work, if any, is needed.
- o This course is a 100% in-person class, 72 hours. **Per Cisco Network Academy standards, a student who misses more than 3 class meetings may be dropped from the course.**
- o Any exceptions or extenuating circumstances are addressed by the Instructor on an individual basis.

3) Curriculum Materials, Assessments, and Exams

- o The primary curriculum is delivered online via the Cisco Network Academy Connection site. Accounts will be established for students on the first day of class. Access to an Internet connected PC outside of class is required for completion of reading assignments and Chapter Assessments. A supplementary Cisco Press textbook will be available in early October.
- o All Assessments and the Final Exam are online, open-book, and multiple attempts are available for each. The recommended strategy is to take these with no notes and move through the questions as quickly as possible without going back, repeating the entire assessment until a minimum score of 80% is achieved. Cisco Certification Tests are no-notes-allowed and the time is **very** limited.

4) Class Format

- o Out of class work: a reasonable expectation is 8 to 12 hours per week outside of class.
- o Good classroom attendance habits are the key to success. Breaks are taken during Open Lab time. The building must be cleared by 10pm sharp. In-class time is divided as follows (this schedule will be adjusted daily as needed):
5:30pm to 6:00pm Lab time
6:00pm to 7:15pm Lecture period
7:15pm to 9:30pm Lab time

5) Grading Policy

- o All assessments and Exams are completed online and are not proctored. **A cumulative Weighted Percentage of 70%, plus a Final Exam score of 70, plus completion of the Skills Assessment, plus completion of the Course Survey are required to achieve a PASS.** Detailed grade information is maintained and a final grade of either PASS or INCOMPLETE is assigned (letter grades are included here for comparison only).
100-92% = A, 91-84% = B, 83-76% = C, above 70% = PASS, below 70% = INCOMPLETE.

Chapter 1	Chapter 2	Chapter 3	Chapter 4	Chapter 5	Chapter 6	Chapter 7	Chapter 8	Chapter 9	Final Exam	Course Feedback	Skills Assessment	Custom Scores (Capstone Project)	Weighted Percentage
6	6	6	6	6	6	6	6	6	16		15	15	%
									70	√	xx		70

8. COURSE OUTLINE:

CCNA Discovery 1 Networking for Home & Small Business Roadmap

	Monday	Wednesday	NOTES
Week 1			
Lecture	INTRO & ADMINISTRIVIA Chap 1 - Personal Computer Hardware	Chap 1 - Computer Hardware (contd) Chap 2 - Operating Systems	Baseline knowledge.

Labs	Storage Capacity, Screen Resolution, Printer Installation	O/S and Application Versions	
Homework		Chap 1 Assessment	
Other			
Week 2			
Lecture	Chap 3 - Connecting to the Network	Chap 3 - Connect to Network (contd)	BIG chapter, very important!
Labs	Peer-to-Peer Network, MAC Address, IP Address, Network Communication, Configuring Hosts, Sharing Resources		
Homework	Chap 2 Assessment Install PacketTracer 4.1	Chap 3 Assessment Packet Tracer Tutorials	
Other			
Week 3			
Lecture	Chap 4 -Connect to Internet Through ISP	Chap 4 - Internet Through ISP (contd)	Long labs...
Labs	Tracing Internet Connectivity, Building UTP Cables, Terminating UTP Cables at Patch Panels, Testing UTP Cables		
Homework	Chap 3 Assessment	Chap 4 Assessment	
Other			
Week 4			
Lecture	Chap 5 - Network Addressing	Chap 5 - Network Addressing (contd)	Critical skills. Complex concepts.
Labs	IP Address Classes, Subnet Masks, Private Addressing, DHCP, NAT		
Homework		Chap 5 Assessment	
Other			
Week 5			
Lecture	Chap 6 - Network Services	Chap 6 - Network Services (contd)	Critical foundational knowledge.
Labs	DNS, FTP, email, TCP & UDP, Port Numbers, OSI Chapel		
Homework		Chap 6 Assessment	
Other			
Week 6			
Lecture	Chap 7 - Wireless Technologies	Chap 7 - Wireless Technologies (contd)	Fun! Useful setup skills.
Labs	Access Points, Wireless Clients, Encryption, Wireless Security		
Homework		Chap 7 Assessment	
Other			
Week 7			
Lecture	Chap 8 - Basic Security	Chap 8 - Basic Security (contd)	Essential design &

Labs	Firewalls, Access Policy, DMZ Settings, Malware, DoS Attack, Vulnerability Scan	Start Chapule 9	configuration concepts.
Homework		Chap 8 Assessment	
Other			
Week 8			
Lecture	Chap 9 - Troubleshooting Your Network		SBA is performed in Cisco Lab.
Labs	Approaches, Tools, Common Issues	Chap 9 Activities & Labs	
Homework		Final Exam, Chap 9 Assessment	
Other		Skills Based Assessment	
Week 9			
Lecture			SBA is performed in Cisco Lab. Capstone Case Study: a full network design project that is handed in. Partner work encouraged!
Labs	Chap 10 - Capstone Project	Chap 10 - Capstone Project	
Homework	Final Exam, Capstone Project	Final Exam, Capstone Project	
Other	Skills Based Assessment	Skills Based Assessment	