HOUSTON COMMUNITY COLLEGE SOUTHWEST

Wide Area Management
Cisco 4 – ITCC 1046

Date and Time of class:

Class CRN:

Instructor's Name:

School Site:

Phone number:

HOUSTON COMMUNITY COLLEGE SOUTHWEST
COURSE SYLLABUS

Local Area Management – Cisco 4
Cisco Networking Academy – ITCC 1046

An introduction to wide area networking (WAN) services and management.

COURSE OBJECTIVE

The Houston Community College System-Southwest (HCCS-SW) Cisco Networking Academy is a unique partnership between Houston Community College Southwest and Cisco Systems Incorporated, the world's leading supplier of hardware and software for the Internet. The academy prepares students to pursue careers in computer networking through the use of a multimedia instructional format, lectures and discussions, and significant hands-on laboratory training. The academy also provides preparation for the student to take the Cisco Certified Networking Associate's Examination (CCNA), although this is secondary to the academy's main purpose of providing a comprehensive overview of networking from Cisco's perspective.

GOALS

- Students will learn WAN theory and design
- Students will perform task with WAN technology, PPP, Frame Relay, ISDN
- Students will learn network troubleshooting
- Students will learn National SCANS Skills
- Students will complete Threaded case studies

LEARNING OUTCOMES

Students monitor their progress through regular online assessment quizzes. At the end of the semester, the students must pass an online exam in order to continue in the next semester. Cisco administers these tests then assigns letter grades to the students based on their performance. Upon completion of the course, students should be able to:

- Describe, differentiate and select between the following WAN services: LAPB, Frame Relay, ISDN/LAPD, HDLC, PPP, and DDR.
- Recognize key Frame Relay terms and features.
- List commands to configure Frame Relay LMIs, maps, and subinterfaces.
- List commands to monitor Frame Relay operation in the router.
- Identify PPP operations to encapsulate WAN data on Cisco routers.
- State a relevant use and context for ISDN networking.
- Identify ISDN protocols, function groups, reference points, and channels.
- Describe Cisco's implementation of ISDN BRI.
- Configure and monitor wide area network (WAN) services;
- Encapsulate wide area network (WAN) data.

PREREQUISITES

Cisco Networking Training Program, Semester 3.

REQUIRED TEXTBOOKS

Cisco Networking Academy Program: Second Year Companion Guide
Cisco Networking Academy Program: Engineering Journal and Workbook, Volume 2
Cisco Networking Academy Program: Lab Companion, Volume 2

COURSE REQUIREMENTS AND EXPECTATIONS

The Cisco Program is an entire course of study and not a series of discrete courses. Students entering the program must enroll for all four semesters, which includes approximately 288 hours of instruction (lecture and lab) over a nine-month period. Each semester is nine weeks.

POLICIES AND PROCEDURES

The academy is mandated by both Cisco and HCCS to follow certain policies and procedures with respect to instruction, testing, grading, graduation, the use of copyrighted materials, and the utilization of equipment provided by HCCS. Failure by the academy to follow correct policies and procedures can result in the loss of standing by the academy and denial of access to the online curricula and other privileges provided by Cisco. Therefore, the academy makes every effort to follow the guidelines promulgated by Cisco and HCCS.

COPYRIGHTED MATERIALS

All on-line course materials including the curricula and examinations are the copyrighted property of Cisco Systems Inc. and may not be reproduced in any from without the express permission of Cisco. This includes, but is not limited to, uploading or downloading the curriculum to floppy discs, CD's, tapes, or sending it electronically to other locations or users. Failure to adhere to this rule may result in expulsion from the academy and possible legal action by Cisco Systems Inc.

ATTENDANCE

Attendance is critically important to the successful completion of the program. Students experiencing attendance problems are still required to successfully complete both the on-line examinations and the required labs. In most cases, it is not possible to arrange alternative times for attendance, labs, or make-up exams, due to full utilization of the academy classrooms and labs. Students must recognize that labs and examinations

are only guaranteed to be available at the assigned times. Make-ups must be arranged with the instructor and the program director, and are not guaranteed. In cases where the student has missed a significant number of classes and failed to successfully complete the on-line examinations, it may be necessary to register and pay for an additional semester of the course. Therefore, students are strongly encouraged to avoid absences at all costs.

STUDENT ASSESSMENT

Classroom testing materials are provided by Cisco to measure a student's progress and mastery of the academy material. Cisco mandates that students make passing scores on the semester final examinations before they will be allowed to proceed to the next semester. The instructors will make every effort to assist the students in the successful completion of the course, but it must be understood that it is the student's responsibility to properly prepare for both the class and the on-line examinations. All tests must be taken on premises at the academy.

CLASSROOM RULES AND PROCEDURES

- Students are not allowed to modify the local computers and are prohibited from uploading files or programs. Students are asked to return the computer to its original condition at the end of each class period.
- No food or drinks are allowed in the classrooms or lab. This rule will followed by the instructors as well as the students. Students wishing to eat or drink should use the break area at the front of the facility.
- Due to limited classroom space and security reasons, no guests will be allowed in the classroom. Friends and prospective students may visit the facilities by scheduling an appointment with the director's office.
- It is the responsibility of the student to bring the lab manual to class each evening.

OPPORTUNITIES FOR STUDENT-FACULTY INTERACTION:

Students are encouraged to ask questions and request clarification or guidance as needed during class. A question and answer period is always provided.

OPPORTUNITIES FOR CAREER EXPLORATION:

Topics relevant to future employment and career exploration opportunities will be presented to the students, including certification and degree prospects.

OPPORTUNITIES FOR SUPPLEMENTAL INSTRUCTION:

Students are informed of instructional aids and resources, including books, other publications, and web sites relevant to the course.

SPEAKER FORUM:

At the discretion of the instructor, speakers may be invited to address the class on pertinent topics.

CELL PHONES AND PAGERS:

Cell phones and pagers can be disruptive during class. Please turn these devices off or set to mute while in the classroom or student lab.

WITHDRAWAL AND REFUND POLICY

Because programs require a minimum number of students for the classes to be offered, it is essential that students understand that they are committing to a place in the program and their inclusion means that someone else may not have an opportunity to enroll. Therefore, NO REFUNDS WILL BE GIVEN AFTER THE FIRST DAY OF THE FIRST SEMESTER ONCE CLASS HAS COMMENCED.

DISABILITY SERVICES

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Faculty are authorized to provide only the accommodations requested by the Disability Support Services Office. The Southwest College Disability Services Office phone number is 713-718-7909.

Cisco 4 Content Sheet

- Differentiate between the following WAN services: LAPB, Frame Relay, ISDN/LAPD, HDLC, PPP, and DDR.
- Recognize key Frame Relay terms and features.
- List commands to configure Frame Relay LMIs, maps, and subinterfaces.
- List commands to monitor Frame Relay operation in the router.
- Identify PPP operations to encapsulate WAN data on Cisco routers.
- State a relevant use and context for ISDN networking.
- Identify ISDN protocols, function groups, reference points, and channels.
- Describe Cisco's implementation of ISDN BRI.

Student Assessment

Upon completion of course, students will complete an on-line Cisco Systems test.