



CISCO ROUTER CONFIGURATION

Date 8/2/2010

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COURSE NUMBER: IST 202

PREREQUISITE(S): IST 201 Cisco Internetworking Concepts with a grade of "C" or better.

CO-REQUISITE(S): None

COURSE DESCRIPTIONS This course is a study of LANs, WANs, OSI models, Ethernet, token ring, fiber distributed data interface TCP/IP addressing protocol, dynamic routing, and the network administrator's role and function.

TEXTBOOK(S): Routing Protocols and Concepts, CCNA Exploration Companion Guide, Cisco Press, 2007.
ISBN: 158713 2060 / ISBN 13: 9781587132063
SCC customized IST 202 lab manual

REFERENCE(S): Online curriculum, <http://cisco.netacad.net>

OTHER REQUIRED MATERIALS, TOOLS, AND EQUIPMENT: Notebook for article critiques, labs and notes

METHOD OF INSTRUCTION: Lecture
Lab exercises

GRADING SYSTEM: 90 - 100 = A
80 - 89 = B
70 - 79 = C
60 - 69 = D
Below - 60 = F

The standard mathematical procedure of rounding will be applied to arrive at a whole number percentage in final grade calculation.

GRADE CALCULATION METHOD:

Online Tests	=	30%
Labs/Articles assignments/Packet Tracer	=	30%
Written Final Exam	=	20%
Skills Based Final Exam	=	20%
	=	<u>100%</u>

ATTENDANCE POLICY:

The student is responsible for punctual and regular attendance in all classes, laboratories, clinical, practica, internships, field trips, and other required class activities. The College does not grant excused absences; therefore, students are urged to reserve their absences for emergencies. When illness or other emergencies occur, the student is responsible for notifying instructors and completing missed work if approved for late submission by instructors.

The student is tardy if not in class at the time the class is scheduled to begin and is admitted to class at the discretion of the instructor.

Instructors maintain attendance records. However, it is the student's responsibility to withdraw from a course. A student enrolling in and attending at least one course session remains enrolled until the student initiates a withdrawal.

Withdrawal Policy: During the first 75% of the course, a student may initiate withdrawal and receive a grade of W. A student cannot initiate a withdrawal during the last 25% of the course. Extenuating circumstances require documentation and approval by the appropriate department head and academic dean.

Absences for Religious Holidays: Students who are absent from class in order to observe religious holidays are responsible for the content of any activities missed and for the completion of assignments occurring during the period of absence. Students who anticipate their observance of religious holidays will cause them to be absent from class and do not wish such absences to penalize their status in class should adhere to the following guidelines:

1. Observance of religious holidays resulting in three or fewer consecutive absences: Discuss the situation with the instructor and provide written notice at least one week prior to the absence(s). Develop (in writing) and instructor-approved plan which outlines the make up of activities and assignments.
2. Observances of religious holidays resulting in four or more consecutive absences: Discuss the situation with the instructor and provide the instructor with written notice within the first 10 days of the academic term. Develop an instructor-approved plan with outlines the make up of activities and assignments.

**CLASSROOM
CONDUCT:**

ACADEMIC DISHONESTY: Students are expected to uphold the integrity of the College's standard of conduct, specifically in regards to academic honesty. All forms of academic dishonesty including, but not limited to, cheating on assignments/tests, plagiarism, collusion, and falsification of information will call for disciplinary action. Disciplinary action imposed may include one or more of the following: written reprimand, loss of credit for assignment/test, termination from course, and probation, suspension, or expulsion from the College. For further explanation of this and other conduct codes, please refer to the Student Handbook.

CELLULAR PHONES AND PAGERS/BEEPERS: Cellular phones, pagers and beepers are not permitted to be turned on or used within the classroom. Use of these devices during classroom time will be considered a violation of the student code as it relates to "disruptive behavior."

**CLASS/LAB
PROCEDURES:**

The Cisco curriculum is available at the web site <http://cisco.netacad.net> The text is used as an enhancement to the online curriculum. The online curriculum and review quizzes can be accessed with your user name and password. To receive full benefit from the online curriculum, be sure to visit recommended links, review audio portions and complete e-labs.

Notebooks should be maintained containing labs, Packet Tracer activities, and article assignment sheets. During the course, you will read and complete an analysis of articles as selected by the instructor concerning one or more of the following topics:

- Static routing
- Routing protocols
- RIP
- EIGRP
- OSPF
- VLSM
- CDP

Assignment sheets containing questions to be addressed in analyzing the articles will be posted on Blackboard.

Notebooks will be collected once at midterm and then again at the end of the term.

Lectures/labs will start at the beginning of class. The lecture/lab will be over the topics designated on the daily

assignment table. Online module tests will be completed outside of class. You may complete them at home or somewhere else on campus. Once you begin a test, you have only 1 hour to complete it. So – be sure to have completed your studying and have your notes organized before beginning the test.

The following resource centers are available to students of Spartanburg Community College. Please visit, call or consult the College’s website to determine the hours of operation.

Resource	Location (East Building)	Phone Number
Advising Center	E-1	592-4990
Open Computer Lab (OCL)	E-5	592-4968
Tutorial Learning Center (TLC)	E-2	592-4715
Testing Center	E-3	592-4966

ACCOMMODATIONS:

Students who need special accommodations in this class because of a documented disability should notify Student Disability Services. You may contact Student Disability Services by calling, (864) 592-4811, toll-free 1-800-922-3679; via email through the Spartanburg Community College web site at www.sccsc.edu/SDS/; or by visiting the office located in the Dan Lee Terhune Student Services Building, room 112 of the Spartanburg Community College campus. By contacting Student Disability Services early in the semester, students with disabilities give the College an opportunity to provide necessary support services and appropriate accommodations.

Inclement Weather Schedule:

- Check SCC Web Site: www.sccsc.edu
- Tune to Channel-7 local TV station
- Tune to an FM/AM local radio station

Program Department Chair

Marcia Schenck
592-4839
schenckm@sccsc.edu

**COURSE OUTCOMES
& OBJECTIVES:**

Upon satisfactory completion of this course, the student will be able to:

- I. Demonstrate basic operation of a router
 1. Establish a HyperTerminal session to console into router
 2. Log into router
 3. Use help feature in the command-line interface
 4. Understand basic operation of Cisco IOS
 5. Use SHOW commands

- II. Perform basic configuration of a router
 1. Name a router
 2. Set passwords
 3. Configure serial and Ethernet interfaces
 4. Configure message of the day banners
 5. Configure host tables
 6. Recover passwords

- III. Learn about neighboring and remote network devices
 1. Implement and monitor CDP (Cisco Discovery Protocol)
 2. Create a network map of a network by using CDP and telnet commands
 3. Verify, disconnect and suspend a telnet session

- IV. Manage Cisco IOS software
 1. Determine how a Cisco device located and loads Cisco IOS software
 2. Identify configuration register values
 3. Upgrade a router to a new version of Cisco IOS software

- V. Configure routing protocols
 1. Configure a routing protocol
 2. Configure static routes
 3. Configure default routes
 4. Differentiate between distance vector and link-state routing protocols
 5. Configure RIP version 1 and version 2 routing protocol
 6. Configure EIGRP routing protocol
 7. Configure OSPF routing protocol

- VI. Identify differences in routing protocols
 - 1. Describe how metrics are used by routing protocols and identify metric types used by dynamic routing protocols
 - 2. Identify elements in a routing table
 - 3. Describe features and operations of EIGRP
 - 4. Describe features and operations of OSPF

- VII. Troubleshoot a network by testing OSI layers
 - 1. Use ping, telnet and show commands to test network connectivity
 - 2. Use debug command to show router connectivity

- VIII. Setup up a network consisting of routers, switches and PCs and test connectivity using RIP, EIGRP and OSPF routing protocols and classless IP addressing

- IX. Work with individuals possessing different opinions and abilities to accomplish a task within a assigned time limit