Pellissippi State Community College
Master Syllabus

ROUTING/SWITCHING CONFIGURATION
CSIT 2750

Class Hours: 3.0
Credit Hours: 4.0
Laboratory Hours: 3.0
Revised: Spring 2011

Instructor:
Office:
Phone:
Email:

Catalog Course Description:
This course is designed to prepare students for the Cisco Certified Entry Networking Technician (CCENT) exam and to provide skills to plan, install, operate and troubleshoot small to medium-size networks.

Entry Level Standards:
College level reading and math skills; keyboarding skills of at least 20 wpm; familiarity with the architecture and operation of standard PCs.

Prerequisites: CSIT 1730 or consent of instructor.

Corequisites: None

Textbook(s) and Other Course Materials:
Todd Lammle; CCENT: Cisco Certified Entry Networking Technician Study Guide, SYBEX Inc., ISBN 978-0-470-24702-0.

I. Week/Unit/Topic Basis:

Week	Chapter	Topic(s)
1	1, 2	Review of networking fundamentals
2	3	IP subnetting
3	3	Variable Length Subnet Masks (VLSMs) and troubleshooting TCP/IP
4	4	Cisco IOS and SDM
5	4	Cisco IOS and SDM
6	5	Managing a Cisco internetwork
7	-	Review and **Test 1**
8	6	IP Routing
9	6	IP Routing
10	7	Layer 2 switching and Spanning Tree Protocol (STP)
11	7	Configuring Cisco switches
12	-	Virtual LANs (VLANs)
13	-	Review and **Test 2**
14	10	Wide Area Networks (WANs)
15	-	**Final Exam Period**

II. Course Goals*:

The course will

A. Enhance effective use of LAN and WAN hardware to design and document networks. (I, II, VI)
B. Guide students to understand router and switch configurations. (I, II, III, IV, VI)
C. Expand student understanding of subnetting and networking models. (II, III, VI)
D. Foster the ability to use software and hardware tools to troubleshoot and manage networks. (I, II, VI)
E. Guide students to understand internetworking operating system (IOS). (IV, VI)

*Roman numerals after course objectives reference goals of the *CSIT* program.

III. Expected Student Learning Outcomes*:

Students will be able to:

1. Take backups and restore switch and router configuration files. (A, B, D)
2. Explain purpose of internetworking devices, IP addressing, LAN media and topologies and structured cabling. (A, C)
3. Identify and explain purpose of OSI model and TCP/IP model layers. (B, C, D)
4. Explain subnetting and VLSM design principles to configure LAN and WAN networks. (A, C, D)
5. Use TCP/IP troubleshooting commands and diagnostic tools to identify network configuration problems. (C, D)
6. Configure RIP and CDP protocols and explain routing theory. (A, B, E)
7. Identify and configure ports and interfaces on Cisco routers and Cisco switches. (A, B, C, E)
8. Explain functions of router and switch components and working modes. (A, B, E)
9. Use and explain Cisco IOS commands, IFS commands and protocols to configure routers and switches. (A, E)
10. Explain layer 2 switching concepts and protocols to configure and manage switches. (B, D, E)
11. Configure and maintain VLANs. (A, C, B, E)
12. Explain common WAN protocols and configure PPP protocol. (A, B, C, D, E)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

A. Testing Procedures: 50% of grade
   At least two tests are recommended for the course. There will be no make-up tests unless prior arrangements have been made with the instructor. Failure to make a passing test average may result in a grade of F for the course.

B. Laboratory Expectations: 50% of grade
   At least 6 individual and/or team lab assignments will be given during the semester. In addition, students may be assigned a team project. This is a coordinated laboratory class, and assignments must be completed as scheduled. A late penalty will be imposed on any overdue assignment. Failure to make a passing average in lab assignments and team project may result in a grade of F for the course.

C. Field Work: None

D. Other Evaluation Methods: None

E. Grading Scale:

93 – 100	A
88 – 92	B+
83 – 87	B
78 – 82	C+
73 – 77	C
65 – 72	D
Below 65	F

V. Policies:

A. Attendance Policy:

Pellissippi State Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. *(Pellissippi State Online Catalog)*

Maintaining continuous attendance in your classes is very important. If you are considering dropping or withdrawing from a course, please check with the Financial Aid Office before doing so. Dropping or withdrawing from a class can adversely affect your financial aid and/or lottery eligibility.

B. Academic Dishonesty:

Plagiarism, cheating and other forms of academic dishonesty are prohibited. A student guilty of academic misconduct, either directly or indirectly through participation or assistance, is immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions that may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. *(Pellissippi State Online Catalog)*

C. Accommodation for Disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.

D. Extended College Closure:

Pellissippi State Community College is committed to the educational process and student learning. In the event of a prolonged college closure (of at least a week), the educational process will continue through the use of the college's on-line learning environment (Desire2Learn). The instructor will post instructions, specific assignments, due dates, etc. in Desire2Learn (D2L). It is the student's responsibility to login to D2L and check posted instructions and assignments.