

Fayetteville State University
College of Arts and Sciences
Department of Mathematics and Computer Science
CSC 372 – LAN Switching and Wireless
Semester: Fall 2011

I. LOCATOR INFORMATION:

Instructor: Dr. Wu	Office Location: LS 327
Course # and Name: CSC 372 LAN Switching and Wireless	Office Hours: W 9am – 5:00pm
Semester Credit Hours: 3	Office Phone: 672-1363
Day and Time Class Meets: TR 11am – 12:15pm	Prerequisites: CSC 270
Email Address: bwu@uncfsu.edu	

FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (username@uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail.

Rules and regulations governing the use of FSU email may be found at
<http://www.uncfsu.edu/PDFs/EmailPolicyFinal.pdf>

II. COURSE DESCRIPTION:

The course explains how to configure a switch for basic functionality and how to implement VLANs, VTP, and inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented. Students complete a basic procedural lab, followed by basic configuration, implementation, and troubleshooting labs in each chapter. Students develop the knowledge and skills necessary to implement a WLAN in a small-to-medium network.
Prerequisite: CSC 270

III. DISABLED STUDENT SERVICES:

In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.

IV. TEXTBOOK AND COURSE RESOURCES:

Text Book: Lewis, LAN Switching and Wireless, CCNA Exploration Companion Guide, 1/e, Cisco press, 2008, 528p. ISBN-10: 1587132079, ISBN-13: 9781587132070.

Lab Manual: Johnson, LAN Switching and Wireless, CCNA Exploration Labs and Study Guide, 1/e, Cisco press, 2008, 360p. ISBN-10: 1587132028, ISBN-13: 9781587132025.

Web Sites: Cisco Networking Academy (<http://cisco.netacad.net>) and Blackboard (<http://blackboard.uncfsu.edu>)

V. STUDENT LEARNING OUTCOMES:

The following objectives are the desired outcomes of this class and will be evaluated during this course. Upon completion of this course, students will be able to:

1. Explain the technology and media access control method for Ethernet networks
2. Describe enhanced switching technologies such as VLANs, VLAN Trunking Protocol (VTP), Rapid Spanning Tree Protocol (RSTP), Per VLAN Spanning Tree Protocol (PVSTP), and 802.1q
3. Configure, verify, and troubleshoot VLANs, Trunking on Cisco switches, inter-VLAN routing, VTP, and RSTP
4. Identify and describe the purpose of the components in a small wireless network, such as Service Set Identification (SSID), Basic Service Set (BSS), and Extensive Service Set (ESS)
5. Compare and contrast Wi-Fi Protected Access (WPA) security feature and capabilities of open, Wired Equivalent Privacy (WEP), and WPA-1/2 networks

VI. COURSE REQUIREMENTS AND EVALUATION CRITERIA:

a. Grading Scale:

Letter grade will be assigned based on the following scale.

A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: < 60

b. Attendance Requirements:

Students are required to adhere to the attendance requirements as per FSU attendance policy.

c. Graded Assignments & Value of Each Assignment:

The students' final grade will be based on the following percentages:

Class Attendance	10 %
Packet Tracer Projects	20 %
Physical Lab Projects	20 %
Chapter Tests	15 %
Final Skill-based Assessment	15 %
Final Examination	20 %

d. Policy on Missed or Late Assignments:

Assignment must be submitted on time to receive full credit. Twenty percent (20%) of the total points will be deducted from each school day the assignment is overdue.

e. Other:

Each student must independently complete all homework and network lab assignments unless otherwise specified. You may discuss assignments with each other in general terms, but all work turned in must be your own.

Academic Dishonesty: Plagiarism and cheating are serious offenses and may be penalized by failure on exam, failure in course, and/or expulsion from the University. For more information, refer to the University Catalog.

Student Behavior Expectations: The instructor will respect all students and will make every effort to maintain a classroom climate that promotes learning for all students. Students must accept their responsibility for maintaining a positive classroom environment by abiding by the following rules:

1. Students are expected to arrive to class on time, remain in class until dismissed by the instructor, and refrain from preparing to leave class until it is dismissed.
2. Student/teacher relationships, as well as relationships among peers, must be respectful at all times.
3. Students are not permitted to wear headphones or other paraphernalia that may be distracting to the classroom environment.
4. Students must refrain from any activity that will disrupt the class; this includes turning off cell phones and pagers.
5. Students are not permitted to use profanity or inappropriate language in the classroom.
6. Students will not pass notes or carry on private conversations while class is being conducted.

Consequences for Failing to Meet Behavioral Expectations: The first time a student violates one of these rules, the instructor will warn him or her privately, either after class or before the next class. (Faculty members reserve the right to warn students publicly if needed.) The second time a student violates the guidelines, the instructor may deduct as many as twenty points from the student's next exam grade. If a student violates the guidelines three times, the instructor will report the student to the Dean of Students for disciplinary action according to the FSU Code of Student Conduct.

VII. ACADEMIC SUPPORT RESOURCES – This course uses FSU Blackboard for online dissemination and Cisco networking academy website for course materials and end-of-chapter tests. Project submissions will be implemented through Blackboard, so students are required to check the Cisco networking academy website, Blackboard course website, and their email at least once a day.

Academy Web Site: Cisco Networking Academy (<http://cisco.netacad.net>)

Blackboard Web Site: FSU University Blackboard (<http://blackboard.uncfsu.edu>)

VIII. COURSE OUTLINE AND ASSIGNMENT SCHEDULE

Week	Calendar	Topics	Chapter	Event
1		LAN Design	Chapter 1	Test, Labs
2		Basic Switch Concepts and Configuration	Chapter 2	Test, Labs
3		Basic Switch Concepts and Configuration	Chapter 2	Test, Labs
4		Virtual LANs (VLANs)	Chapter 3	Test, Labs
5		VLANs	Chapter 3	Test, Labs
6		VLAN Trunking Protocol (VTP)	Chapter 4	Test, Labs
7		VTP	Chapter 4	Test, Labs
8		Spanning Tree Protocol (STP)	Chapter 5	Test, Labs
9		STP	Chapter 5	Test, Labs
10		Inter-VLAN Routing	Chapter 6	Test, Labs
11		Inter-VLAN Routing	Chapter 6	Test, Labs
12		Wireless LAN Concepts & Configuration	Chapter 7	Test, Labs
13		Wireless LAN Concepts & Configuration	Chapter 7	Test, Labs
14		Review		Test, Labs
15		Final Skill-based Assessment		Final exam
16		Final Exam		Final exam

*Note: This schedule is subject to change for the optimum benefit of the class as a whole. Therefore, it is important to stay alert and attend class regularly. Class announcement and the due date for homework and projects are posted on Blackboard system.

IX. TEACHING STRATEGIES

Lectures and Networking Labs.

X. BIBLIOGRAPHY

1. Scott Empson, CCNA Portable Command Guide, 2/e, Cisco Press, 2007, ISBN-13: 9781587201936.
2. Dye, McDonald & Rufi, Network Fundamentals, CCNA Exploration Companion Guide, 1/e, Cisco press, 2008, 560p. ISBN-13: 9781587132087.
3. Graziani & Johnson, Routing Protocols and Concepts, CCNA Exploration Companion Guide, 1/e, Cisco press, 2008, 640p. ISBN-13: 9781587132063.
4. William Stallings. Data and Computer Communications. 5/e, Pearson Prentice Hall, 2007, 878p. ISBN: 0132433109.