

**Fayetteville State University**  
**College of Arts and Sciences**  
**Department of Mathematics and Computer Science**  
**CSC 380 – Intro to WAN**  
**Semester: Spring 2012**

**I. LOCATOR INFORMATION:**

Instructor: Dr. Wu	Office Location: LS 327
Course # and Name: <b>CSC 380 Intro to WAN</b>	Office Hours: W 9:00am – 5:00pm
Semester Credit Hours: 3	Office Phone: 672-1363
Day and Time Class Meets: TR 12:30-1:45pm, SBE 229	Prerequisites: CSC 371 & CSC 372
Email Address: <a href="mailto:bwu@uncfsu.edu">bwu@uncfsu.edu</a>	

**FSU Policy on Electronic Mail:** Fayetteville State University provides to each student, free of charge, an electronic mail account ([username@broncos.uncfsu.edu](mailto:username@broncos.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:**

This course discusses the WAN technologies and network services required by converged applications in enterprise networks. The course uses the Cisco Network Architecture to introduce integrated network services and explains how to select the appropriate devices and technologies to meet network requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principals of traffic, access control, and addressing services. Students also learn how to detect, troubleshoot, and correct common enterprise network implementation issues. **Prerequisite:** CSC 371 and CSC 372

**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:** Vachon & Graziani, Accessing the WAN, CCNA Exploration Companion Guide, 1/e, Cisco press, 2008, 704p. ISBN-10: 1587132052, ISBN-13: 9781587132056.

**Lab Manual:** Rullan, Accessing the WAN, CCNA Exploration Labs and Study Guide, 1/e, Cisco press, 2008, 384p. ISBN-10: 158713201X, ISBN-13: 9781587132018.

**Web Sites:** 1) Cisco Networking Academy (<http://cisco.netacad.net>)

- 2) Online Laboratory (<http://ciscolab.uncfsu.edu>)
- 3) 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. Configure and verify Point-to-Point Protocol (PPP) connection between Cisco routers
2. Configure and verify Frame Relay on Cisco routers
3. Implement basic switch security measures such as port security, trunk access, and management VLANs
4. Configure, verify, and troubleshoot DHCP and DNS operations on a router
5. Configure and apply ACLs based on network filtering requirements
6. Configuration and Troubleshoot NAT for given network requirements using SDM/CLI
7. Describe the importance, benefit, role, impact, and components of VPN technology

## 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 and Online Laboratory,, 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>)

**Online Laboratory:** FSU Cisco Online Lab (<http://cicolab.uncfsu.edu>)

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

### VIII. COURSE OUTLINE AND ASSIGNMENT SCHEDULE

Week	Calendar	Topics	Chapter	Event
1		Intro to WAN	Chapter 1	Test, Labs
2		Point-to-Point Protocol (PPP)	Chapter 2	Test, Labs
3		PPP	Chapter 2	Test, Labs
4		Frame Relay	Chapter 3	Test, Labs
5		Frame Relay	Chapter 3	Test, Labs
6		Network Security	Chapter 4	Test, Labs
7		Network Security	Chapter 4	Test, Labs
8		Access Control List (ACLs)	Chapter 5	Test, Labs
9		ACLs	Chapter 5	Test, Labs
10		Teleworker Services (VPN)	Chapter 6	Test, Labs

11		IP Addressing Services (DHCP)	Chapter 7	Test, Labs
12		IP Addressing Services (NAT)	Chapter 7	Test, Labs
13		Network Troubleshooting	Chapter 8	Test, Labs
14		<b>CCNA Mock Exam</b>		
15		<b>Final Skill-Based Assessment</b>		Final Exam
16		<b>Final Exam</b>		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 Network Labs.