

CSI 416/516 Computer Communications Networks
Department of Computer Science
University at Albany
Fall 2008

Instructor: Dr. Stephen F. Bush
Phone: 387-6827
Room & Time: Thursday, 7:15pm - 10:00pm
Office: BA-130
Office Hours: After each class and by appointment
email: bushsf@research.ge.com

TA: TBD
TA email: TBD

Course Outline:

Week	Topics	Readings	Notes
1	Intro to Networking Layered Architectures	L1 B1 L2 B2.1-2.2	
2	Layering Sockets	L2 B2.3	HW 1 Assigned
3	Information Theory Compression & Correction	L3.9	HW 1 due HW 2 Assigned
4	Networks The Physical Layer	L7 L3, L12.1-12.3	
5	Multiplexing and Switching The Telephone Network	L7.3 L4	Proposals Due
6	Active Networks	B3	
7	Mid Term Exam		
8	Queuing Theory	L App A	HW2 Due
9	Network Simulation NS-2		HW3 Assigned
10	Peer to Peer ARQ and Flow Control	L5	
11	Multiple Access Ethernet	L6.1-6.2 L6.6-6.11	HW3 Due HW4 Assigned
12	Scheduling QoS	L6.3-6.4	
13	Routing Ad Hoc Networking	L7	HW4 Due
14	Sensor Networks		HW5 Assigned
15	Network Management Student Presentations	L App B B4-6	
16	Student Presentations Final Exam and Vacation!		HW5 Due

• **Required Texts:**

- B** Active Networks and Active Network Management: A Proactive Management Framework by Stephen F. Bush and Amit Kulkarni, Kluwer Academic/Plenum Publishers, New York, Boston, Dordrecht, London, Moscow, 2001, 196 pp. Hardbound, ISBN 0-306-46560-4.
- L** Communications Networks: Fundamental Concepts and Key Architectures, Leon-Garcia and Widjaja, McGraw Hill, 2003.

Additional information is on line at: <http://www.cs.albany.edu/~bushsf>.

Course Preparation: This is a programming intensive course; **you are expected to be proficient in programming in C** (for some assignments C++ may also be acceptable). You will be expected to design, implement, and debug your own software. You are also presumed to have a working knowledge of linear algebra, probability theory, and calculus.

1. Grading - The grades will be on an A, A-, B+, B, B-, C+, C, E scale for graduate students. Enrolled undergraduate students can get grades of D+, D and D-. The breakdown is:

Grade	A	A-	B+	B	B-	C+	C	D+	D	D-
Minimum Percentage	93	90	87	83	80	77	70	67	64	60

Component	Weight	Total Grade
Midterm/final	20% each	40%
2 Projects	10% each	60%
Final Project	20%	80%
Assignments (HW)	10%	90%
Scribe Notes	5%	95%
i>Clicker Responses	5%	100%

2. Clickers: In this course, we will use i>Clickers clickers in the lectures for quizzes. Along with scribe notes, they will be worth 10% of your course grade. It is your responsibility to attend lecture, bring your clicker, have fresh or spare batteries for your clicker, etc. To register your clicker, go to www.iclicker.com/registration. For the Student ID field, give it the first part of your UAlbany Webmail userid (for instance, if your Ualbany webmail was ab123456@albany.edu, you would type in ab123456). Please do not enter your actual UAlbany ID number.
3. Projects - The projects will be worth 10% each, **except for the Final Project, which will be equivalent to a mid-term/final**.
4. Scribes - \LaTeX versions of all class notes are due from class scribes from each class before the beginning of the following class. The notes count for a total of 10% of the final grade. The scribe portion of your grade will consider relevance, accuracy, and completeness of notes.
5. Contact outside of Class - You should make an appointment to meet with the teaching assistant or professor outside of office hours (preferably via e-mail). Please respect our need to work, and try to avoid unscheduled drop-ins outside of office hours (there are many of you, so the “quick questions” can cause problems).
6. Grading Gripes - All requests for grade changes should be made within 1 week of the original grading to the TA first (you may appeal to the professor if you don't get satisfaction). Exams needing re-grading should be handed back to the instructor before leaving the classroom. Beware of frivolous complaints which can result in a grade reduction.
7. Late submissions - Projects are due at the start of the class on the due date. Start your projects early; **project deadlines are strict**.
8. Make Up Exams - Make up exams will only be given if the instructor is given sufficient advance notice and with proper documentation.
9. Errata - We try to get the course materials correct, students who help to find and fix errors in the course materials may get extra credit.
10. Academic Honesty Policy - All work submitted must be your own, and you are expected to do homework and projects independently. If you need help with the material or an assignment, contact the TA or the instructor. I take academic integrity seriously and reserve the right to apply any and

all penalties described in the University Guidelines. Special note: Clickers are made for individuals to take quizzes in class. It is a serious instance of cheating to use another student's clicker in class. This includes using multiple clickers, etc. Any instance of cheating with clickers is serious.