

# CS4122 Data Communications & Computer Networks II, Section A

Spring 2009

TBD

CS4121

This course aims at synchronizing students with several advanced areas in data communications and computer networks, including Ethernet and CSMA/CD protocols, FDDI and timely token passing, ATM and leaky bucket cell admission control, wireless/mobile networks and mobility management principles, multimedia networking and video streaming, network security and data cryptography, etc. Students are exposed to the underlying theory, algorithms, and protocols in details, sometimes down to the bit level. Networking related problem analysis, TCP/IP and UDP/IP socket programming in Java, presentations (on some general topics of networking) are the three major components in this class.

On successful completion of this course, the student should be able to

Describe the fundamental principles and core mechanisms in advanced areas like Ethernet, FDDI, ATM, wireless networking, multimedia networking, network security, etc.

Apply such principles in analyzing real world protocols rigorously, even some of which may not be familiar.

Accomplish client-server projects using TCP/IP and UDP/IP sockets in Java. Beyond basic socket programming, they are also fluent in coding message framing (encoding) and parsing (decoding), multithreaded server, and thread pooling.

Communicate networking ideas using correct representation both written and oral forms.

Dr. Zhiguang Xu

2159, Nevins Hall

TBD

229-333-5783

*Computer Networking, A Top-Down Approach featuring the  
Internet, 2<sup>nd</sup> edition* (Required)

By James F. Kurose, and Keith W. Ross

Publisher: AddisonWesley

Grading scale:

| <i>Final Grade</i> | <i>Credit</i>         |
|--------------------|-----------------------|
| A                  | 90-100 (including 90) |
| B                  | 80-89 (including 80)  |
| C                  | 70-79 (including 70)  |
| D                  | 60-69 (including 60)  |
| F                  | 0-59                  |

rules

For the sake of course efficiency, please observe the following

Late assignment will NOT be accepted. You must turn in assignments at the beginning of the class on the due date.

Absolutely No Cheating on tests and/or final exam. ~~can~~ result in total dismissal from VSU.

You are expected for every scheduled class meeting (be on time and stay for the full class period).

Try every effort to attend the tests because there is NO make up test.

Students requiring classroom accommodations or modifications because of a documented disability should discuss this need with me at the beginning of the semester. For additional information, please contact the Special Service Program in Room 1115 ~~North~~ ~~Halls~~. The Special Services office may be reached by telephone at 220-524-98.

TBD