

CpE 491A Information Systems Engineering II

Spring 2003

Modays 3:30-6:00 p.m., 213 Burchard Building.

Instructor: Professor R. Chandramouli (mouli@stevens-tech.edu)
<http://www.ece.stevens-tech.edu/~mouli>

Parts of course material will be from the following books. You are NOT required to buy any of these books. Check the course website for recent news, class cancellations/re-scheduling, etc.

Reference Texts :

1. Multimedia Communication Systems Techniques, Standards, and Networks, K.R. Rao, Z.S. Bojkovic, and D.A. Milovanovic, Prentice Hall.
2. Data and Computer Communications, William Stallings, Prentice Hall.
3. Cryptography and network security:Principles and Practice, William Stallings, Prentice Hall.
4. Communication Networks, L. Garcia and Widjaja, McGraw Hill.
5. Understanding networked multimedia, F. Fluckiger, Prentice Hall.
6. Digital Watermarking, I. Cox, Miller, and Bloom, Morgan Kauffman.

Reference URL: <http://www.williamstallings.com/DCC6e.html>

Course Description:

This course is an introduction to digital information systems including wireless and computer networks and multimedia information systems. Topics such as network layers, routing, congestion control, image and video compression standards such as JPEG and MPEG, and security aspects will be covered.

Syllabus:

Projected course syllabus: Introduction to layered network architectures, data communications, wide area networks, local area networks, communication architectures and protocols, data compression and digital image/video watermarking.

Pre-requisite : Basic C/C++/MATLAB programming and working knowledge of probability. If you do not the pre-requisite, permission to register for this course can be obtained with the consent of the instructor.

Student Assessment:

Homework assignments (programming and theory): 25%, two exams : 50% and final project: 25%

Other Points:

1. Homework must be done individually. Class projects can be done in small groups.
2. Research and popular articles related to the course content will be distributed in the class. You are strongly encouraged to read these articles since these will be part of the exams and homework assignments.
3. Knowledge in C and/or MATLAB will be assumed. Knowledge of basic probability will also be assumed. Course is open to undergraduates interested in information systems!