

Syllabus: Computer Network ECE3076

Course Objective: To study the basic concepts of communication networks, protocols and their performance.

Prerequisites: Elementary calculus, probability, circuits **Time & Location:** see **Class Web page** -

www.csc.gatech.edu/copeland/jac/3076/ Class website: <http://www.csc.gatech.edu/copeland/jac/3076/>

Instructor: John Copeland

Office: Klaus 3362 Phone: 404 894-5177 Email: jcopeland@ece.gatech.edu:

<http://www.csc.gatech.edu/copeland/> Office hours: See Class Web page,

www.csc.gatech.edu/copeland/jac/3076/.

Teaching Assistants:

See Class Web page.

Text

J. F. Kurose, K. W. Ross, *Computer Networking, A Top-Down Approach Featuring the Internet*, Addison-Wesley.

References

Dimitri Bertsekas and Robert Gallager, *Data Networks*, 2nd edition or later

W. Stallings, *Data and Computer Communications*, Prentice Hall, Sixth Edition, 2000, or later.

Grading: Three quizzes and final exam with weights: 20, 20, 20,30% respectively. Homework 10%, given roughly bi-weekly, due at the beginning of the classes. Dates on Class Web page. **Expectations:** Read related course-materials, study homework/exams solutions, hand in homework on time. **Academic Integrity:** Follow the Georgia Tech Honor Code - <http://www.deanofstudents.gatech.edu/Honor/>.

OUTLINE

Introduction

-Computer Communication Networks

Application Layer

-Hypertext Transfer Protocol (HTTP) and others

Transport Layer

-Transport Control Protocol -Flow Control and Congestion Control

Network layer

-IP addresses and forwarding

-Routing

Data Link Layer

-Framing, Error Detection and Recovery

-Medium Access Protocol

Physical Layer

Digital Data Communication

Techniques

Introduction to Transmission Media (if time permits)