

# CS 521 TCP/IP Networking Syllabus

The syllabus below describes a recent offering of the course, but it may not be completely up to date. For current details about this course, please contact the course coordinator. Course coordinators are listed on the course listing for undergraduate courses and graduate courses.

## Text Books

### Required

Kurose and Ross , *Computer Networking: A Top-Down Approach* , 6th ed., 2012, Morgan Kaufmann

### Recommended

Michael J. Donahoo and Kenneth L. Calvert , *TCP/IP Sockets in Java* , 2nd ed., 2011

## Week-by-Week Schedule

Week	Topics Covered	Reading	Assignments
1	Computer networks, the Internet, core, edge, IETF		
2	Data networking protocols and performance		Assignment 1 given
3	Application layer: web, HTTP, FTP, SMTP, DNS		Assignment 1 due, Assignment 2 given
4	P2P, TCP connection setup and teardown		
5	Socket programming with TCP and UDP		Assignment 2 due, Assignment 3 given
6	TCP and Transport layer, reliable data transfer, GBN, SR		
7	TCP flow control and congestion control		Assignment 3 due, Assignment 4 given
8	Network layer: IP		
9	IP addressing and subnetting		Assignment 4 due, Assignment 5 given
10	IP routing algorithm -- DV and LS		Assignment 5 due, Assignment 6 given
11	Wireless and mobile networks		
12	Multimedia networking		Assignment 6 due
13	Multimedia and streaming		Assignment 7 given
14	Network management		Assignment 7 due