

CECS 472

Computer Network Programming

Background: C, Unix, Operating Systems
(CECS 326)

Text: Comer and Stevens,
Internetworking with TCP/IP, Volume III
Client-Server Programming and Applications
Linux/Posix Sockets Version

Design and implementation of network programs.
A variety of approaches.

Course Structure: 2 Midterms, 1 Final, and many (small)
projects

Operating system: Unix
Machines: cheetah, lynx, cougar, jaguar, panther, ...
Language: C

On-Line manual entries.

Supplementary handouts.

Course Overview

Assignments:

- Review of Unix programming
- UDP clients
- TCP clients
- UDP servers
- TCP Servers (many kinds)
- Broadcast clients and servers
- Multicast clients and servers
- Remote Procedure Calls
- Advanced techniques
- Common Object Request Broker Architecture
- Secure Socket Layer
- IP Version 6

Lectures:

- Unix review; intermixed with coverage of chapters 1-5
- Chapters 6-15 (client/server material).
- Broadcast/Multicast (extra material)
- Chapters 20-23 (Remote Procedure Calls)
- Chapter 30 (Advanced techniques)
- (Chapter 31 – deadlock avoidance)
- CORBA, SSL, IPv6 (extra material)