TCN-5445 Telecommunication Network Programming

Catalog Description
Advanced telecommunications network programming skills including Router and Bridge Software, socket programming and protocol handler. (3 credits)

Prerequisites
SCIS Graduate Standing

Type
Elective for MSTN, Core option for PhD

Course Objectives
This course teaches network programming from a system perspective and uses UNIX/Linux as an example. It provides students with essential network and system programming skill training. In addition to socket programming, students will also learn in depth the system fundamentals, including I/O, multi-threading, IPC, synchronization, and shared memory.

Topics
Introduction
TCP and UDP Socket Programming
I/O Multiplexing
Name and Address Conversions
Daemon Processes and the inetd Superserver
Nonblocking I/O
Routing Sockets
Broadcasting and Multicasting
Multi-threading
Interprocess communication
Synchronization: Mutexes and Semaphores
Shared Memory
Remote Procedure Calls

Textbook


Last Update
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