

CS 449: Final Review

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Topics I

- System Calls
 - Processes
 - Fork(), wait()
 - I/O
 - Open, read, write, close
- Threading
 - Kernel Threads/User Threads
 - Thread vs process state
- Pthreads
 - Creating, yielding, joining

Topics II

- Synchronization
 - Mutex, Condition Variable, Semaphore
 - Producer/Consumer
- Deadlock
- Networking
 - Sockets
 - client
 - Server
 - Terminology

Topics III

- Device Drivers
- C and Development miscellany
 - Errors with perror and errno
 - Buffering

WHERE TO GO FROM HERE

- **Architecture**
 - **1541 Introduction to Computer Architecture:** prerequisites: CS0445, CS0447; offered each term
 - **1567 Programming and System Design Using a Mobile Robot:** prerequisites: CS0441, CS0445; this is an honors course and admission is by special permission from the instructor only; offered once each year
- **Operating Systems**
 - **1550 Introduction to Operating Systems:** prerequisites: CS0447, CS0449; offered each term
 - **1651 Advanced Systems Software:** prerequisite: CS1550 or permission of instructor; offered once each year

- **Compilers/Programming Languages**

- **1621 Structure of Programming Languages:** prerequisites: CS0441, CS0445; offered fall term
- **1622 Introduction to Compiler Design:** prerequisites: CS0441, CS0447; offered spring term

- **Parallel Computing**

- **1645 Introduction To High Performance Computing Systems:** prerequisite: CS0447 and CS1501; offered every other year
- **1538 Introduction to Simulation:** prerequisites: CS0447, one statistics course; seldom offered

- **Networking**

- **1652 Data Communications and Computer Networks:** prerequisite: CS1550; offered once per year