CS 449: Final Review

Jonathan Misurda
jmisurda@cs.pitt.edu

Topics I

• System Calls
  – Processes
    • Fork(), wait()
  – I/O
    • Open, read, write, close
  – Signals
• Threading
  – Kernel Threads/User Threads
  – Thread vs process state

Topics II

• Pthreads
  – Creating, yielding, joining
• Synchronization
  – Mutex
• 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: prerequisite: CS0441, CS0445; offered fall term
  – 1622 Introduction to Compiler Design: prerequisite: 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: prerequisite: CS0447, one statistics course; seldom offered

• Networking
  – 1652 Data Communications and Computer Networks: prerequisite: CS1550; offered once per year