Distributed Operating Systems

Introduction and Course Outline

- **Instructor:**

  Reza Hassanpour

  Office: L214

  Phone: 2331338

  Email: reza@cankaya.edu.tr

- **Text books**
  - Modern Operating Systems, A. Tanenbaum, Prentice Hall ISBN: 0-13—31358-0
  - Distributed Systems, principles and Paradigm, A. Tanenbaum, Prentice Hall, ISBN: 0-13-121786-0
- **Course webpage**: http://ceng501.cankaya.edu.tr

Syllabus

- **Introduction to the operating systems**
  - Operating system as a resource manager
  - Concurrency and multi-tasking
- **Process management**
  - Processes and threads
  - Inter-process communication
  - Scheduling
  - *Assignment 1*

Syllabus

- **Memory management**
  - Virtual memory
  - Segmentation
  - Paging
  - *Assignment 2*
- **Input/Output**
  - Principles of I/O hardware and software
  - Disks
  - Clocks

Syllabus

- **File Systems**
  - Windows file system
  - Unix file system
  - *Assignment 3*
- **Deadlocks**
- **Multiple Processor Systems**
  - Introduction to distributed operating systems

Syllabus

- **Communication**
  - Remote Procedure Call (RPC)
  - Message Oriented
  - *Assignment 4*
- **Naming**
  - Name resolution
  - Locating entities

Syllabus

- **Synchronization**
  - Clock synchronization
  - Logical clocks
  - Election algorithms
- **Distributed File Systems**
  - Network File System (NFS)
  - CODA file system
  - *Assignment 5*

- **Evaluation**
  - Assignments: 25 % (5 x 5)
  - Term project: 35 %
  - Final exam: 40 %