

Syllabus CSE8343
Fall-2005
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Goals

- Building good research skills in the area of operating systems.
- Building presentation skills.
- Meeting deadlines.
- Focusing on basic programming skills.
- Achieving goals with minimal supervision.
- Class will be research oriented class where the students will have a chance to spend around %40 of the class time discussing their research topics with the instructor and other students.

Topics To Be Covered

- How to apply the concepts learned in previous courses in the implementation of modern operating systems such as UNIX.
 - o Distributed Network Management.
 - o Distributed System Security.
 - o Distributed System Inter-process communication.
 - o Distributed System Memory and buffer management.
 - o Distributed System File system architecture.
 - o Distributed System Process management.
 - o Introduction to queuing theory.
- Operating System extensions for mobility (e.g. Mobile IP).
 - o The concept of Home Agent.
 - o The concept of foreign agent.
 - o The concept of mobile nodes.
 - o Registration mechanism for Ipv4/Ipv6.

Papers Presentation

- Distributed Architectures.
- Real time operating systems (e.g. VxWorks).
- Distributed File Systems.
- Synchronization tools for Distributed operating system.
- Process Allocation in the distributed system environment.
- Operating System Security.
- System performance.

Survey Papers

- **Modern operating systems.**
covers the:
 - Process architecture and management.
 - Memory management
 - File System architecture and management
 - Inter-process communication

For any one of the modern operating systems such as SOLARIS, Windows NT, 2000, UNIX, or VxWorks etc.

- **Operating System and Network security**
Covers the security mechanism such as IPsec, IKE.
- **Multi-processor environment:** How operating systems such as Windows NT, Unix, Solaris support multiprocessors. We should cover process management and distribution, inter-processor communication, fault recovery etc.
- **Real Time Operating System:** what are the unique features for Real Time operating systems (e.g. VxWorks). What is the different between real time and non-real time operating systems.

Grades

70%-79%	C
80%-89%	B
90 and UP	A

1- 20% for survey paper.

2- 40% for two topic research presentations (each is 20%).

3- 40% for final exam.

References

"Operating Systems", 4th edition, by William Stallings
Pub: Prentice Hall, ISBN: 0-13-03199-6, 2001.

Disability Accommodations: If you need academic accommodations for a disability, you must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities (214-768-4563) to verify the disability and establish eligibility for accommodations. Then you should schedule an appointment with the professor to make appropriate arrangements.

Religious Observance: Religiously observant students wishing to be

Absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

Excused Absences for University Extracurricular Activities: Students participating in an officially sanctioned, scheduled University extracurricular activity will be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue

All students registered with CSE8343 should be include in the student lists given to the instructor not later than the first lecture of the course. It is the responsibility of the registered students to let the instructor of their enrolments by email etc. Any student, who is not included in the students list of the class by the first class period, might not be include in the working policy and plan discussed at this class; a separate arrangement should be discussed between the instructor and the student.