COURSE SYLLABUS

Course Title: Operating Systems
Course No: **CS 253**
Level: Undergraduate
Semester: Fall 2005
Meeting: Sun and Tue from 3:30 to 5:00 pm
Course Prereq: CS 153 Computer programming (1).
Textbook: Applied Operating Systems Concepts, A. Silberschatz, P. Galvin, and G. Gagne, John Wiley, NY, latest edition.
Instructor :   Husain Gholoom
Office Hrs: Sun 1:00 – 2:00, Tue 12:00-1:00
Office/Phone #:   127
Email: sendmeyouremail@yahoo.com

Course Catalog Description:

>   The course is an introduction to basic operating system principles. Process management, memory management (real and virtual), peripheral device management, file systems, and distributed systems are introduced and examined from a conceptual viewpoint. Selected aspects of operating systems are explored in greater depth via software simulation projects. A research paper is also required.

Course Objectives:

>   An operating system is a bridge between the user (and what the user wishes to accomplish) and the hardware (and what it needs to do its assigned tasks). This course attempts to remove all the mystery surrounding an operating system, as an intermediary between the user and the hardware, so that the student will have a very clear picture of all the functions of an operating system.

A.   To introduce students to fundamental concepts and principles of operating systems. We emphasize the functions of operating systems to the computer system, the system operator (user), and variations in the design and implementations of operating systems. Further, we discuss the interplay between the OS and the underlying hardware. Java is used as a technology (more so than a language) to illustrate or demonstrate several OS functions.

B.   We will focus on the following concepts/principles:

1) Foundational concepts – What an OS is, the functions or what it does, the design and construction of an OS, common and fundamental concepts of all OS's, OS evolution, and hardware concepts that are important to OS design.
2) Process management – What a process (or unit of work) is, process scheduling, separation of user and system processes and their management, concurrency issues, process synchronization, and deadlock management.
3) Memory management – including virtual memory, file systems and I/O management

Course Policies:
Each student is expected to be in attendance every class period. The textbook is required and each student must have a copy during class time. Assignment due dates must be adhered to.

GRADING:

Homework	10 %
Paper	10 %
Quizzes	15 %
Midterm exam	15 %
Final Examination	50 %
Total	100 %

A= 100- 90   B= 89-80   C= 79-70   D= 69-60   F= below 60

LATE WORK: NO LATE WORK WILL BE ACCEPTED!!!

MAKE-UPS: There will be no make-up of tests unless previously arranged with the instructor.

REMARKS:
- No grade will be given for attendance; however, it will be recorded.
- Late students will not be allowed to attend the class session.
- PAAET attendance regulations are valid.
- Attendance is a MUST.
- Time is so precious. So… Please … No body is late!
- Homework will be received via e-mail (cutoff time will be the midnight of the due date). The received email will be acknowledged, and if you do not receive an acknowledgement email, it means that I DID NOT RECEIVED your homework. Or you may bring your homework softcopy in class in due date.

THE INSTRUCTOR RESERVES THE RIGHT TO CHANGE ANY PORTION OF THIS SYLLABUS AT ANY TIME.

COURSE OUTLINE

- Introductory & Sys structures
- Computer System Structures
- Operating system structure
- Processes
- CPU scheduling
- Process synchronization
- Deadlocks
- Memory Management
- Virtual Memory Concepts
- File System Interface