



CSET 222 - PC Operating Systems
First Semester 2008/2009 (081)

Catalog Description (2 4 4): This course focuses on the theoretical and practical aspects of operating systems concepts. It involves the interaction of software with hardware, study the different algorithms to optimize the hardware performance through software in operating systems. Current operating Systems architectures will be discussed with on hands experience in the lab work.

Goals: The goal of this course is to enable the students to work over the different operating systems, know about their capabilities and implement them wherever required.

Prerequisites	CSET 101
Textbook (TB)	Understanding Operating Systems Third Edition by Ida M. Flynn
Lab. Manuals (LM)	HBCC, CSET 222 Lab. Manual
Handouts (HO)	HBCC, CSET 222 Handouts
Coordinator	Dr. Lawan Ahmad Mohammad
Instructor(s)	Mr. Kashif Munir

Topics: (Weekly Schedule Attached)

Sr. No.	Material	Classes
1.	Introduction to Operating Systems	2
2.	Memory Management	6
3.	Processor Management	4
4.	Process Management	4
5.	Device Management	2
6.	File Management	4
7.	Unix System Overview	4
8.	Windows 2000 Overview	2

Assessment Policy	Weighting (100%)	Letter Grading Scale*
Practical	05 %	00 - < 60 % F 60 - < 65 % D
Homework	05 %	
Class & Lab. Quizzes	10 %	65 - < 70 % D+
Lab (I & II) Exams	20 %	70 - < 75 % C
Major Exam I	15 %	75 - < 80 % C+
Major Exam II	15 %	80 - < 85 % B
Final examination	30 %	85 - < 90 % B+
Total	100 %	90 - < 95 % A 95 - 100 % A+

NOTE: Clustering and adjustment of threshold values may be applied depending on final result's statistics of discrete groups.

HBCC Rules and Regulations:

- Attendance:** students are expected to attend all meeting of their courses. In the case of any absence, students are responsible for course content during their absence.
- Absenteeism:** a record is consistently compiled and updated. If the student has been absent too many times without a valid excuse, he will be excluded from the college.
- Smoke free college:** smoking is prohibited in all college facilities.
- Behavior:** students who engage in behavior that disrupts the learning environment for others may be subjected to disciplinary action under the KFUPM code.
- Exam cheating:** it is not permitted to speak during the exam. Failure to abide by this rule will result in their exam marks being cancelled.

Prepared By: MR. KASHIF MUNIR

Date:

Approved by: DR. HAMZA MAGHRABI

Date:



Weekly Schedule

WEEK	CONTENTS	HANDOUT & TEXT REFERENCE	PRACTICAL & SUPPORT ACTIVITIES	ASSESSMENT
1 11/9/04	Introduction to operating systems <ul style="list-style-type: none"> Operating System Software Machine hardware Types of operating systems Brief history of operating systems 	Chapter 1	NO LAB	
2 18/9/04	Memory Management <ul style="list-style-type: none"> Single User Contiguous Scheme Fixed Partition Dynamic Partition Best-Fit Versus First-Fit Allocation 	Chapter 2	Making Boot Disk	Assignment 1 (GIVEN)
3 25/9/04	Memory Management (Cont'd) <ul style="list-style-type: none"> De-allocation Case-1 Case-2 Case-3 Re-locatable Dynamic Partitions 	Chapter 2	Installing MS DOS	
4 2/10/04	Memory Management (Cont'd) <ul style="list-style-type: none"> Page Replacement policies Segmented Memory Allocation Virtual Memory 	Chapter 3	Hard Disk Partitioning	Assignment 1 (DUE) Class Quiz 1 Lab. Quiz 1
5 9/10/04	Processor Management <ul style="list-style-type: none"> Job Scheduler and Process Scheduler Multiprogramming Process States PCBs 	Chapter 4	Installing Windows 98	Assignment 2 (GIVEN)
6 16/10/04	Processor Management (Cont'd) <ul style="list-style-type: none"> Scheduling Algorithms Interrupts Context Switching 	Chapter 4	Exploring Windows 98 Features	Assignment 2 (DUE) Class Quiz 2 Lab. Quiz 2
7 23/10/04	Process Management <ul style="list-style-type: none"> Deadlock Seven cases of deadlock Conditions of deadlock 	Chapter 5	MID Laboratory Examination	
8 30/10/04	Process Management (Cont'd) <ul style="list-style-type: none"> Modeling deadlocks Strategies for handling deadlocks Starvation 	Chapter 5	Installing Windows 2000	Assignment 3 (GIVEN)
9 20/11/04	Device Management <ul style="list-style-type: none"> System Devices Sequential Access Storage Media Direct Access Storage devices Components of I/O subsystems Device Handler Seek Strategies 	Chapter 7	Exploring Windows 2000 Features	
10 27/11/04	File Management <ul style="list-style-type: none"> The file manager Responsibilities and definitions Interacting with file manager 	Chapter 8	Installing Linux	Assignment 3 (DUE) Class Quiz 3 Lab. Quiz 3



WEEK	CONTENTS	HANDOUT & TEXT REFERENCE	PRACTICAL & SUPPORT ACTIVITIES	ASSESSMENT
11 4/12/04	File Management (Cont'd) <ul style="list-style-type: none"> File naming conventions File organization Access control verification module Data compression 	Chapter 8	Exploring Linux Features	Assignment 4 (GIVEN)
12 11/12/04	Unix Operating System <ul style="list-style-type: none"> Unix system V Architecture Memory management 	Chapter 15	Understanding Linux Commands	
13 18/12/04	Unix Operating System (Cont'd) <ul style="list-style-type: none"> Linux intro Device drivers Processor management 	Chapter 15	Practice Previous Exercises	Assignment 4 (DUE) Class Quiz 4 Lab. Quiz 4
14 25/12/04	Windows 2000 Architecture <ul style="list-style-type: none"> Design Goals Memory Management Virtual Memory management Device management File management Security 	Chapter 16	Final Laboratory Examination	
15 1-3/1/05	Revision of Identified Topics			
15, 16 4 - 13 /1/04	Final Examination			

EXAMINATION SUMMARY

Examination	Major I	Mid-Term Lab.	Major II	Final Lab.	Final Exam.
Week No.	5	7	10	14	16
Date					

Laboratory Software: Windows NT, Windows 2000, Windows XP, Linux, MS DOS