King Fahd University of Petroleum & Minerals
College of Computer Sciences and Engineering
Information and Computer Science Department

ICS 431: Operating Systems (Lab) (3-3-4)
Syllabus – First Semester 2012-2013 (121)

Website: Blackboard (WebCT)

Class Time, Venue and Instructor Information:

Lab Schedule				
Section	**Timing**	**Location**	**Mr. Faisal Alvi (Lab coordinator)** Office: 23-058 Phone: 03-860-1869 E-mail: alvif@kfupm.edu.sa	Office Hours SMW 11:00am – 12:00pm
51	S 14:10 – 16:50	22-333-1		
52	U 14:10 – 16:50	22-333-1		

Lab Objectives:
The objective of the operating systems labs is to practically implement major operating system issues discussed in the lectures. All the process, memory, file and directory management issues will be demonstrated under LINUX operating system. Also UNIX commands will be briefly discussed.

Lab Learning Outcomes:
1. Describe OS support for processes and threads.
2. Recognize CPU Scheduling, synchronization, and deadlock.
3. Use C and UNIX commands, and develop various system programs under Linux to make use of OS concepts related to process synchronization, shared memory, mailboxes, file systems, etc.

Lab Assessment:

Activity	Weight
Lab Performance (0.5*12 Sessions = 6%)	**6%**
Three Quizzes (3% + 4% + 4%)	**11%**
Lab Project (1 * 8%)	**8%**
TOTAL	**25%**

Lab Outline (Tentative):

Week	Topic
1	Syllabus and Account Creation
2	Introduction to Linux
3	More Linux Commands and Introduction to C
4	More C
5	Process Creation and Execution – **Lab Quiz 01**
6	Thread Creation and Execution
7	Signals + **Project Assigned**
8	Pipes – **Lab Quiz 02**
9	Shared Memory
10	Message Passing
11	Thread Synchronization using Mutex and Semaphores
12	**Project Demo + Lab Quiz 03**

Important Notes:

1. Lab-work will be graded according to shown level of comprehension to lab material through

    a) active discussions,

    b) attempted solutions of given lab exercises, and

    c) efforts made to overcome faced problems (if any).

2. Lab-works should be saved for future references and reuse.

3. Attendance will be administered according to university rules. Prompt on time attendance is required. No lab make ups are allowed.

4. All lab-works, assignments and project submissions are expected on their pre-announced deadlines. No late submissions will be accepted.

5. Plagiarism, copying and other anti-intellectual behavior will not be tolerated and will be dealt with according to university regulations which may result in hard consequences.