Computer Science Department

Course Syllabus

CS322 - Operating Systems

Catalog Description: Operating systems are an essential part of any computer system. Similarly, a course on operating systems is an essential part of any computer-science education. This course aims to provide a clear description of the theoretical concepts that underlie operating systems. It also aims to familiarize students with the practical side of the OS by programming and simulating different aspects Threading, scheduling, Synchronization, memory management, etc.).

Credit Hours: **4 Credit hours:** **4** Lectures per week **0** Labs. per week **0** Recitation per week

Prerequisites: CS242 & CS220 for CS and CS242 for IS

Course Learning Outcomes:

1. Demonstrate an understanding of the basic concepts of operating systems components; process and threads; synchronization, deadlock , memory management and Virtual memory
2. Demonstrate an understanding of the techniques of implementation of operating system components described above.
3. Compare performance of processor scheduling algorithms
4. Produce Algorithmic solutions to process synchronization problems
5. Apply the rational for memory management and virtual memory concepts in operating systems.

Major Topics:

- Overview
- Processes
- Threads
- CPU Scheduling
- Process Synchronization
- Deadlocks
- Memory Management
- Virtual Memory

Text Books: Operating System Concepts, Silberschatz, Galvin, and Gagne, 9th edition, Wiley, 2013.

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Grading:

- The grading scale for this course is:
  - . 95 - 100 A+ Passing
  - . 90 - 94 A Passing
  - . 85 - 89 B+ Passing
  - . 80 - 84 B Passing
  - . 75 - 79 C+ Passing
  - . 70 - 74 C Passing
  - . 65 - 69 D+ Passing
  - . 60 - 64 D Passing
  - . 0 - 59 F Failing

- Final grades will be determined based on the following components:
  - . 60% Semester Work
  - . 40% Final Exam

- Students may not do any additional work for extra credit nor resubmit any graded activity to raise a final grade.

- Late submissions will not be accepted for any graded activity for any reason.

- Studentshave one week to request the re-grading of any semester work.

Attendance Policy:

Students should attend 80% of the overall course hours taught in the semester as per the University regulations.

If a student fails to achieve this portion, he/she shall not be allowed to appear in the final exam and shall be awarded “DN” grade and repeat the course.

Cheating and Plagiarism Policy:

The instructor will use several manual and automated means to detect cheating and/or plagiarism in any work submitted by students for this course.

When a student is suspected of cheating or plagiarism, the instructor raises the issue to the disciplinary committee.

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Communications:

Registered students will be given access to a section of the Blackboard Learning System for this course. Bb will used as the primary mechanism to disseminate course information, including announcements, lecture slides, assignments, and grades.

Communication with the instructor on issues relating to the individual student should be conducted using CIS email, via telephone, or in person.