Prince Sultan University
College of Computer and Info Sciences / Department of Computer Science

Term 261
First Semester 2026 - 2027
COURSE SYLLABUS

Mission Statement of the Bachelor of Computer Science Program(s): Provide high quality, computer science education to prepare top graduates through an environment that promotes innovative thinking, ethical behavior, lifelong learning, research, and service to the community.

1. Course number and name: CS330 Introduction to Operating Systems
2. Credits and contact hours: 3 (3, 1, 0)
3. Instructor's or course coordinator's name: Prof. Dr. Basit Qureshi
   a. Scheduled Office Hours:
      Sun-Mon-Tue-Wed 11am- 12pm
   b. Office Location: 105-2B20
   c. Email: qureshi@psu.edu.sa
   d. Website: www.ieeepsu.org/basit

4. Text book, title, author, and year
   a. Primary Text: Operating System Concepts: With Java, 10th Edition, by Avi Silberschatz, Peter Baer Galvin, Greg Gagne John Wiley & Sons, ISBN: 978-1-119-32091-3.
   b. Other References: Class notes, Internet resources
   c. Course Website [*Optional*]: N/A.
   d. Learning Management System: Moodle available at https://lms.psu.edu.sa

5. Specific course information
   a. Brief description of the content of the course (catalog description): This course explores the evolution, services, and structures of operating systems. It covers the basic concepts of operating system design and implementation and management of system resources such as Central Processing Unit (CPU), Input/output (I/O) devices, memory, and software. Examples given from modern operating systems such as Unix and Windows-driven operating systems are scrutinized.
   b. Prerequisites or co-requisites: CS175, CS210
   c. Indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program: Required

6. Specific goals for the course
   a. Specific outcomes of instruction. The student will be able to:
      CLO1: Describe the objectives, major components, and functions of a modern operating system. (**Chap1 & 2**)
      CLO2: Demonstrate an understanding of concepts related to processes, threads, scheduling, and synchronization. (**Chap3,4,5,6**)
      CLO3: Apply memory management and virtual memory techniques to solve basic memory allocation problems in operating systems. (**Chap8,9**)

CLO4: Apply concepts of mass storage structure, file system interfaces and implementation to manage and organize files and directories effectively (**Chap10,11,12**)
CLO5: Demonstrate understanding of operating system concepts by developing practical skills through individual experience using Unix and contributing effectively to team-based problem-solving activities.

b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course. The course addresses ABET CS-SOs 1, 2, and 6, SE-SOs 1, 2, and 5, IS-SOs 1,5 and 6.

Course Learning Outcomes (CLOs)	Student Outcomes (SOs)		
	Computer Science	Information Systems	Software Engineering
1	1	1	1
2	1	1	1
3	6	2	6
4	6	2	6
5	5	5	5

7. Brief list of topics to be covered

Week No.	Topics	CLOs	Assessments
1-2	Chapter 1 - Introduction to Operating Systems	CLO1	
3-4	Chapter 2 - Operating System Services	CLO1	Assignment 1
5	Chapter 3 - Process Management	CLO2	**Quiz 1**
6	Chapter 4 - Threads	CLO2	
7	Chapter 5 – CPU Scheduling	CLO2	Assignment 2
8	Chapter 6 - Synchronization	CLO2	
9	Chapter 8 – Memory Management	CLO3	**Major Exam 21 Sept 2026**
10	Chapter 9 – Virtual Memory	CLO3	Project given
11	Chapter 10 - Mass Storage Structure	CLO4	
12	Chapter 11 - File-System Interface	CLO4	**Quiz 2**
13-14	Chapter 12 - File System Implementation	CLO4	
15	Course Project Presentation	CLO5	

8. Weight of Assessments

Final Exam – 40%
Major Exam – 20% - 21 Sept 2026
Quizzes/Assignments (20%, 2 quizzes, 2 assignments)
Attendance and Participation – 10%.
Projects (10%)

9. Additional Information

Plagiarism and Academic Dishonesty: "Plagiarism can be defined as unintentionally or deliberately using another person's writing or ideas as though they are one's own. Plagiarism includes, but is not limited to, copying another individual's work and taking credit for it, paraphrasing information from a source without proper documentation, and mixing one's own words with those of another author without attribution. In addition, buying a paper or project, or downloading a paper from the Internet, and submitting them as your own are also plagiarism. The penalty for academic dishonesty will bring course expulsion and failure, or even suspension" (Academic Integrity and Syllabus Acknowledgement Form).

Ethical and Responsible Use of Generative AI: are encouraged to use Gen-AI tools to enhance learning, teaching, and innovation, provided that such use:

- Is explicitly disclosed and acknowledged;
- Is subject to critical human review and validation;
- Fully complies with PSU's standards for academic integrity, ethical conduct, and legal requirements.

Unauthorized or unethical use of Gen-AI tools may constitute academic misconduct and will be subject to appropriate disciplinary actions in accordance to PSU's regulations

Attendance Policies: The University attendance policy will be strictly followed. Students are expected to attend all class sessions and be in class on-time. Attendance is taken during the first few minutes of the class. Missing a class session is a student's responsibility. Missed classes will not be repeated. A total of 16 absences will lead to denial grade DN. It is the student's responsibility to periodically check course website for course content, projects assignments, updates and notifications.

	No Deduction	1-mark Deduction	2-mark Deduction	3-mark Deduction	4-mark Deduction	5-mark Deduction	DN
Four Times Weekly	Total of or less than 3 absences	Total of 4 absences	Total of 7 absences	Total of 10 absences	Total of 13 absences	Total of 15 absences	Total of 16 absences

Exam Policies: Major exams are unified among all sections (if applicable) and their dates are announced from the onset of the semester. Arrangements with the Registration Office and the department are made before the beginning of the semester so that all sections will take the same exam and during the same time. It is not possible to reschedule any major exam. No student is allowed to take any assessment with another section unless there is a strong argument and in limited cases, to be approved by the course coordinator at least two days BEFORE the quiz date of the original student section. If any student missed an assessment, the makeup will be at the end of the semester and all the materials are included (comprehensive assessment). Makeup exam will only be approved in limited cases as stipulated in the university bylaws. Generally, the final exam includes all material covered during the semester (comprehensive).

Assignment/Project Policies: Students are expected to actively participate in class discussion and activities. Students are expected to solve the assignment and submit the solution during the concerned tutorial session. Late assignments are not accepted. It is the student's responsibility to check/test/verify/debug the code before submission. It is the student's responsibility to verify that all files have been uploaded to the LMS. After an assignment/project has been graded, re-submission with an intention to improve assignments scores will not be allowed. After the assignment/project has been graded, the instructor will post test-cases used for grading on the website. The Instructor has the right to share project execution reports that may have been auto-generated on the course website.