Operating Systems, CS-4710: Spring 2025

Instructor: **Prof. Subhasis Majumder**

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Lecture Dates: 31 Jan, 7 Feb, 14 Feb, 28 Feb, 28 Mar (if not held then 25th April), 4 April, 11 April
Lecture Time: Friday, 4:40 PM to 6:10 PM and 6:20 PM to 7:50 PM
Classroom: AC01-105
Instructor's Office Hours: 3:30 PM to 4:30 PM on the class dates in AC04-723
Teaching Assistant: Suraj Sharma (suraj.sharma_ugt2023@gmail.com) **OH**: Mondays 6:30 to 7:30 PM (Venue: Will update)

Course Syllabus:

Processes and their scheduling, Threads, Inter-process communication through message passing, pipes, sockets, and shared memory, Critical sections, race conditions, locking, and semaphores
Deadlocks and starvation detection and avoidance, A brief introduction to the memory hierarchy and fundamentals of memory management, Overview of file systems

Textbook:

Operating System Concepts by Silberchatz, Galvin, and Gagne (9th Edition or later)

Reference books:

Operating Systems: Three Easy Pieces, Andrea Arpaci-Dusseau and Remzi Arpaci-Dusseau

Grading Components:

Problems/Programming Assignments: 20% (2 to 4 assignments)
Class Test: 20%
Midterm Exam: 30%
Final Exam: 30%

1. Class test on 21 February 2024
2. Midterm on 21 March 2024 (Tentatively)

Grading Policy:

The grading policy for this course will be based on an absolute scale, meaning your performance will not depend on how your peers perform in the class. Anyone who has learned the course material well and performs well in the exams can achieve good grades. The boundaries for the grades will be decided towards the end of the semester.

Attendance Policy:

Attending classes will be essential to performing well in the examinations, as the concepts discussed in class will be necessary for solving the problems. Attendance will contribute a maximum of 5% bonus that will be added to the overall marks you get out of 100, and the bonus will be calculated based on the

number of classes attended. Students who attend all 14 classes will receive the full 5% bonus, while those who attend 13, 12, 11, or 10 classes will receive 4.5%, 4%, 3.5%, or 3%, respectively. Attending fewer than 10 classes will result in no attendance bonus.

Policy on Make-Up Exams:
In exceptional cases, a student may be allowed to miss up to one of the two exams (class test or midterm) only on genuine/documented medical grounds. There is no make-up for the final exam. The nature of alternative methods for the missed exam will be decided in due course. A request for a make-up must be submitted within 24 hours before or after the missed exam. If the student is unable to send the request personally within this time, a well-wisher may send an email to the teaching staff on their behalf. Requests will be evaluated by the teaching staff on a case by case basis, and approval is not guaranteed.

Policy on Late Submissions:
Late submissions of assignments are not advisable. If you know in advance that you will be unable to submit your assignment on time, you must make special arrangements beforehand. Each hour of late submission will result in a 1% penalty (1% per hour), and submissions after 100 hours will naturally not be considered.

Policy on Academic Integrity:
Academic integrity and honesty are core values of academic life. Any form of academic dishonesty, including copying from others or allowing others to copy your work, is strictly prohibited. Serious violations, such as plagiarism, submitting work that is not the student's own, copying during exams, or using electronic devices to access unauthorized information during an exam, will be met with zero tolerance. Any such instance will be reported to the Academic Integrity Committee and will result in an 'F' grade for the course.

Contacting the Teaching Staff:
The official mode of communication is email. All course communications such as requests for extensions or make-up exams, etc must be sent via email to all members of the teaching staff. Email addresses are provided at the beginning of the document.

Additional Support:
For additional support, students are encouraged to reach out to the Office of Learning Support (ols@ashoka.edu.in) and the Ashoka Center for Well-being (well.being@ashoka.edu.in)