

CSCE 3613, Operating Systems (3 credits), Required

Catalog Description: An introduction to operating systems including topics in system structures, process management, storage management, files, distributed systems, and case studies.

Prerequisites: CSCE 2014 Programming Foundations II and CSCE 2214 Computer Organization, each with a grade of C or better.

Textbook / required material: Silberschatz, Galvin, and Gagne, *Operating System Concepts*, Wiley, 9th edition.

Goals: The goal of the class is to understand operating systems structure and operations.

Topics Covered:

- Operating systems overview
- Processes, threads, and CPU scheduling
- Process synchronization and deadlocks
- Memory management
- Storage management

Grading

Course grades will be determined by these weights:

Homework:	25%
Quizzes:	25%
Exam 1:	25%
Final Exam:	25%

The final class grade will be assigned according to the 10-point scale shown below. The grades may or may not be curved.

A	90 – 100%
B	80 – 89.9%
C	70 – 79.9%
D	60 – 69.9%
F	< 60%

Students must pass BOTH the homework portion of the class AND the assessment portion (Quizzes, Exam 1, and Final Exam) with a grade of D or better in order to pass this course. Hence, an overall average greater than 60% may still result in a failure in some cases.

Homework

All assignments will be given with a strict deadline, and students are required to submit their assignments on or before the deadline. Homework will be collected at the start of the class on the due date, and late submissions will not be accepted. In case of extenuating circumstances, students are advised to contact the professor as soon as practical. You are encouraged to discuss the course and the assignments with each other; however, your exams and homework should be your own work.

Attendance

Attendance will be taken. Attendance will be used as a deciding factor when the final average is between grades. For example, if you have an average of 89.5 and you have attended a high percentage of the classes it may be rounded up to an "A". If you have an average of 89.5 and you have attended a small percentage of the classes it will probably still be a "B".

Academic Dishonesty Policy

As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail. Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy' at honesty.uark.edu/policy. Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.

Class / laboratory schedule: Meets either 3 times a week for 50 minutes or 2 times a week for 1 hour 15 minutes for 15 weeks

Relationship of course to Computer Engineering Student Outcomes:

- CE1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- CE2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- CE6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

Relationship of course to Computer Science Student Outcomes:

- CS1. An ability to analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- CS2. An ability to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- CS6. An ability to apply computer science theory and software development fundamentals to produce computing-based solutions.

Relationship of course to Computer Science Topics:

- T2. Principles and practices for secure computing
- T8. Networking and communication
- T9. Operating systems and parallel and distributed computing

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