ARMSTRONG STATE UNIVERSITY **AUGUST 2018**
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY **FALL SEMESTER 2018-19**

COMPUTER SCIENCE 3341
INTRODUCTION TO OPERATING SYSTEMS
(SYLLABUS)

COURSE INFORMATION

Meeting: Class	TR 2:00-3:15 p.m. SC 1503-A
Instructor:	Dr. Ray Hashemi
Office:	SC 1503A
Office Phone:	(912) 344-2906
email:	Ray.Hashemi@armstrong.edu
Office Hours:	TR 3:15 p.m.–5:15 p.m. and MW: 9:00 a.m. 9:30 a.m. Other times by appointment only
Text:	A. Silberschatz, P. Galvin, and G. Gagne Operating System Concepts The text will be supplemented with material from a variety of other sources.

PREREQUISITES

CSCI 2490 & CSCI 3202 -- Students who have not satisfied the prerequisite MUST drop the course.

CATALOG DESCRIPTION

Concepts, structure, and mechanisms of operating systems. Topics include processes, concurrency, memory management, CPU scheduling, I/O management, disk scheduling, file management, basic aspects of protection and security, and distributed systems.

COURSE OBJECTIVES

As part of this course, students

- Will learn the common components of an operating system
- Will learn different operating system architectures
- Will learn processes and synchronization of processes
- Will be able to trace algorithms involved in CPU management, Memory management, and disk management
- Will be able to fully understand deadlocks and deadlock prevention algorithms
- Will learn File management systems and I/O management systems,
- Will be able to learn basic concepts of distributed operating systems

COURSE OUTCOMES:

Students will be able to

1. Describe common components of an operating system
2. Discuss the differences among operating system structures their advantages and disadvantages.
3. Trace cpu scheduling, disk scheduling, and deadlock prevention algorithms.
4. Provide synchronization for a complex problem, write programs to implement different types of synchronization, and present the outcomes.
5. Describe the components of a file management system and I/O management system
6. Explain basic concepts of distributed operating systems.
7. Explain memory management algorithms in depth and express their advantages and disadvantages.

CLASS

Class attendance is expected and students are responsible for all material covered in class. If you cannot attend a lecture, you are responsible for substance of the missed session including various announcements. Missing more than ~~two~~ one session without valid legal/official/medical documentations will result in lowering the final course grade by one letter grade per missed class (A grade of "A" for the course *can* become "B", "C", "D", or "F"—depending on the number of missed sessions). Auditing of this course is not allowed.

There will be two quizzes, a mid-term exam, and a final exam all comprehensive. The quizzes and exams will be closed book and closed notes but calculators will be allowed. The quizzes and exams will cover all course material (lectures, handouts, textbook, assignments, etc.) up until right before the quizzes/exams. No makeup quiz/exam will be allowed unless valid official/medical/legal documents are presented in advance or immediately after. The dates for all quizzes/exams will be announced in the class.

Missed assignments, quizzes, or exams will receive a grade of zero. Class disruption of any sort (cell phones, sleeping, talking, playing music on a computer, booting up Windows, surfing the Web, pounding on the keyboard, etc.) will not be tolerated. You will be asked to leave the class for such activities. Please leave quietly and quickly when dismissed.

GRADING

The course grade is based on two quizzes (15%), Midterm exam (25%), final exam (35%), and three assignments (25%). The course grade will be calculated using the following formula:

$$\text{Score} = (q_1/Q_1 + q_2/Q_2)/2 * 15 + (a_1 + a_2 + a_3)/(A_1 + A_2 + A_3)*25 +$$

m/M*25 +f/F*35

where:

q_i:	Student's score for the i-th quiz,
Q_i:	The maximum possible score for the i-th quiz,
a_i:	Student's score for the i-th assignment,
A_i:	The maximum possible score for the i-th assignment,
m:	Student's score for the mid-term exam,
M:	The maximum possible score for the mid-term exam,
f:	Student's score for the final exam,
F:	The maximum possible score for the final exam,

Final grades is based on the following scale: Score of [100 - 90]: A, Score of (90 - 80]: B, Score of (80 – 70]: C, Score of (70- 60]: D, and Score of < 60: F. The instructor reserves the right to adjust the grading percentages and scale if necessary.

ASSIGNMENTS

All assignments will be handed out and explained in class. In general, students will have two weeks to complete any programming assignment. No assignment is accepted after five minutes from the beginning of the class on due date. Late or missed assignments will receive a grade of zero. Partial credit will be given to unfinished assignments turned in on time.

MINI-TESTS

A small test (mini-test) is given frequently and date for the mini-test will be announced in class. The mini-test covers only the materials for the period starting from the most recent mini-test, quiz, or midterm exam. Correct answer receives positive score and incorrect answer receives negative scores. Test time is only 10 minutes. If you miss the mini test, for any reason, the assumption is that you have failed the mini-test. The sum of your scores for mini tests will be added to your next quiz/exam and then the sum is set to zero.

IMPORTANT DATES

Quiz # 1	Thursday, Sept. 6
Midterm Exam	Tuesday Oct. 2
Last Day to withdraw without academic penalty; See the Policy for Limiting Individual Course Withdrawals for additional information (http://em.georgiasouthern.edu/registrar/students/withdrawal/)	Wednesday Oct. 8
Quiz # 2	Date will be announced in class
Last session of the class	Thursday, Nov. 29
Final Exam	Tuesday, December 4 (3:00 – 5:00 p.m.)

DISABILITIES OR SPECIAL NEEDS

If you have a physical, psychological, and/or learning disability that might affect your performance in this class, please contact the Office of Disability Services which is located in

Memorial College Center Room 207A, phone 912 344-2744. The Disability Services Office will determine appropriate accommodations based on testing and medical documentation. Please notify me if you might need special accommodations within two weeks of the start of the semester or two weeks of being diagnosed. Please do so privately after class or in my office. Inform me, at least two days prior to each quiz/exam/assignment for which you need special accommodations; otherwise, your request will not be accepted and your need will not be met.

ACADEMIC HONESTY

Students must abide by the Armstrong Atlantic Honor Code and Student Code of Contact http://www.sa.armstrong.edu/Activities/hccoc.html. Students are expected to perform their work individually unless otherwise specified by the instructor. Students may discuss assignments in general terms with other students and may receive assistance from the instructor or classmates. However, the assignment must be done by each individual or each specified group. Otherwise, the work will be considered as plagiarism and would result in a score of zero. In addition, all instances of academic misconduct will be reported to the Dean of Students for further disciplinary actions. A second instance of academic misconduct will result in an automatic F in the course and possible disciplinary action.

TITLE IX

Armstrong is dedicated to providing a safe and equitable learning environment for all students. Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Title IX Office in Victor Hall Room 245 or by email diversity@armstrong.edu. This is important for the safety of the whole Armstrong community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. The University Counseling Center provides 24/7 confidential support, and the http://www.armstrong.edu/counseling_center describes reporting options and other resources. www.facultyagainstrape.net