CS440 Operating Systems
Course Syllabus, Spring 2017

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Classroom: Blocker 12
Meeting time: MW 2:30pm - 3:45pm
Office hours: MW 11:30pm - 1:00pm, 3:45pm – 5:00pm, and by appointment

Catalog description: The principles of operating systems are introduced with an emphasis on intrasystem communication. The concepts and techniques necessary for understanding and designing these systems are examined. Topics include I/O and interrupt structure, concurrent processes, process scheduling, and memory management and protection. Prerequisite: CS 212 or consent. CS 310 is recommended. Offered on demand.

Textbook: Operating Systems, 3th Edition, by Gary Nutt, Addison - Wesley, 2003. ISBN 0-201-77344-9.

Course goals:
1. To learn basic OS principles including device management, process and resource management, memory management, etc.
2. To understand the abstract concepts in OS
3. To be familiar with the UNIX environment

Teaching:
1. Classroom lecturing on OS theory and principles.
2. Lab on programming being integrated with classroom teaching.
3. A few of lectures and/or tests being conducted electronically (through Web tools)

Evaluation:
1. There will be about 10 assignments. The assignment should be submitted before the due date. Otherwise, a zero credit will be recorded.
2. There will be two tests and a final comprehensive exam. There may be mini-tests and quizzes if needed. NO MAKE-UP tests will be given. Please do NOT try to take it early or late also, especially the final exam.

Grading strategies:
1. Assignments, quizzes, and participations have a weight of 30%.
2. Tests have a weight of 35%.
3. The final exam has a weight of 35%.

The final score will be calculated as a percentage of points earned versus total points possible, with the final letter grade being assigned according to the scale as follows:

A (93 or above)   A- (90 – 92)
B+ (87 – 89)   B(83 – 86)   B- (80 – 82)
C+ (77 – 79)   C (73 – 76)   C- (70 – 72)
D+ (67 – 69)   D (63 – 66)   D- (60 – 62)
F (59 or less)

Attendance is *required*. A maximum of three absences (without valid reasons) will be excused, and excessive absence will reduce your grade one letter for each absence.

Virginia Wesleyan College is committed to giving all students the opportunity of academic success. If you are a student who is requesting accommodations based on the academic impact of a disability, speak to me about your accommodations letter and your specific needs. If you do not have an accommodation letter for this course, you will need to visit or call for an appointment with Disability Support Specialist Crit Muniz at (757) 233-8898 or by email at nmuniz@vwc.edu to coordinate reasonable accommodations. He is located in the Learning Center, Clarke Hall.

Course Outline

Week	Date	Contents
1	01/30, 02/01	Introduction and Linux basics
2	02/06, 02/08	OS Development
3	02/13, 02/15	Computer architectures
4	02/20, 02/22	OS organization, *Test IA*
5	02/27, 03/01	Device management
6	03/06, 03/08	I/O management
7	03/13, 03/15	Review, *Test IB*
	(03/20 - 03/24	Spring Break)
8	03/27, 03/29	Project
9	03/03, 04/05	Processes and resources. OS Scheduler
10	04/10, 04/12	Critical sections and semaphores
11	- 04/19	Deadlock
12	04/24, 04/26	Banker's algorithm, *Test II*
13	05/01, 05/03	Memory management
14	05/08, 05/10	File management and security

Test IA: Wednesday, February 22
Test IB: Wednesday, March 15
Test II: Wednesday, April 26
Exam: TBA