CSE 303 OPERATING SYSTEM DESIGN Fall Semester 2005

Instructors	 Professor Donald J. Hillman ~ Section 10 ~ 9:10 - 10:00 MWF ~ PL 360 Office PL 218 ~ Ext 83063 ~ Email djh3@lehigh.edu Office Hours 3:00 - 5:00 MW (or by appointment) Professor Daniel Lopresti ~ Section 11 ~ 10:45 - 12:00 TuTh ~ PL 258 Office PL 404B ~ Ext 85782 ~ Email dal9@lehigh.edu Office Hours 4:00 - 6:00 Tu (or by appointment) 			
Teaching Assistant	Scott Frees Office PL 112A ∼ Email sef3@lehigh.edu Office Hours 2:35 – 4:00 Th (or by appointment)			
Text	Modern Operating Systems, 2 nd Ed., Andrew S. Tanenbaum, Prentice-Hall, 2001, ISBN 0-13-031358-0			
Blackboard	Lecture slides, assignments, etc. will be available @ http://ci.lehigh.edu			
Grading	• 10 homework assignment = 8 one-week assignments @ 25 points 2 two-week assignments @ 50 points	300 points	(30%)	
	• 2 quizzes (a) 150 points =	300 points	(30%)	
	• Final exam =	300 points	(30%)	
	• Class participation =	100 points	(10%)	
Notes	• Homework assignments will generally be Mondays and due by 5:00 pm on Fridays. electronically using Blackboard Dropbox. instructor or the TA. If you cannot do this	If possible, su If not, hand i	abmit your assignments n neat hardcopy to your	

instructor or the TA. If you cannot do this in person, drop your homework off in the CSE department office (PL 350), keeping in mind it may be locked before 5:00 pm.

- Late penalty is -5 points per day or fraction thereof (not including weekends). The maximum penalty is -20 points (one-week HW's) or -45 points (two-week HW's).
- Extra credit will be available throughout the semester.

Date	Topics	Readings	Activities
Week 1	Introduction; OS History	1.1-1.3	M: HW #1 out
8/29 - 9/2	Hardware; OS Concepts	1.4-1.5	
	System Calls; OS Structure	1.6-1.7	F: HW #1 due
Supplemental reading: 10.1-10.2			
Week 2	Processes	2.1	M: HW #2 out
9/5 – 9/9	Threads: Models, Usage	2.2.1-2.2.2	
	Threads: Implementation	2.2.3-2.2.8	F: HW #2 due
Supplemental reading: 10.3 (pp. 690-704)			
Week 3	Interprocess Communication Intro	2.3.1-2.3.5	M: HW #3 out
9/12 - 9/16	IPC: Mutexes, Message Passing	2.3.6-2.3.9	W: Unix Help Session
	IPC Problems	2.4	F: HW #3 due
Week 4	Scheduling Intro	2.5.1-2.5.2	M: HW #4 out
9/19 - 9/23	Scheduling: Interactive, Real-Time	2.5.3-2.5.6	
	Deadlocks: Intro, Detection, Recovery	3.1-3.4	F: HW #4 due
Supplemental reading: 10.3 (pp. 704-710)			
Week 5	Deadlocks: Avoidance, Prevention	3.5-3.7	
9/26 - 9/30	<i>Review Prior to Quiz #1</i>		Tu: Quiz #1 (4:00 pm)
	Basic Memory Management; Swapping	4.1-4.2	/

10/17 - 10/21Segmentation4.8I/O Hardware & Software $5.1-5.2.2$ F: HW #7 dueWeek 9Interrupt-Driven I/O $5.2.3-5.3.4$ M: HW #8 out $10/24 - 10/28$ Disk Hardware $5.4.1-5.4.2$ Disk Arm Scheduling; Clocks $5.4.3-5.5.3$ F: HW #8 dueSupplemental reading: 10.5 Tu: Quiz #2 (4:00 pmWeek 10Character-Oriented Terminals; GUI's $5.6-5.7$ $10/31 - 11/4$ Review prior to Quiz #2 $6.1-6.2$ Week 11Return & discussion of Quiz #2M: HW #9 out $11/7 - 11/11$ File System Implementation $6.3.1-6.3.5$ File System Performance & Reliability $6.3.6-6.3.8$ Supplemental reading: 10.6 Week 12Examples of File SystemsMulticomputers 8.2 Multicomputers 8.2 Week 13Distributed Systems $11/21 - 11/25$ W-F: ThanksgivingWeek 14BeowulfMew 14BeowulfMi: HW #10 out $11/28 - 12/2$ Security Basics 9.3	Date	Topics	Readings	Activities	
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Week 15 Attacks from Inside the System 9.4	Week 15	Attacks from Inside the System	9.4		
12/5 - 12/9 Attacks from Outside the System 9.5	12/5 - 12/9	Attacks from Outside the System	9.5		
Course Review and Wrap Up F: HW #10 due		Course Review and Wrap Up		F: HW #10 due	

University Policy on Disabilities

"If you have a disability for which you are or may be requesting accommodations, please contact both your professor and the Office of Academic Services, Room 212, University Center or call (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted."