Spring 2007

Syllabus CSC 8410 – Operating Systems

Catalog description: Principles and techniques required for creating and understanding operating systems, including the areas of: system services, concurrent programming, process and resource control; deadlock detection, recovery, and prevention; memory management; file systems; protection and security.

In addition to learning about different system structures and different operating systems, you will learn:

- How to read a research paper in an objective manner.
- How to critically analyze the research described in a paper.
- How to articulate your understanding of and insights into a presentation.

Starting with the fourth week of the semester, we will be reading and discussing two papers during each class period. Groups of at most two students will present the main ideas of the paper(s) and lead the class discussion.

Course web page: http://www.csc.villanova.edu/~mdamian/csc8410/

INSTRUCTOR	Mirela Damian, MSC 167A Email: mirela.damian@villanova.edu Phone: (610)519-7414
OFFICE HOURS	M 2:00 pm – 3:30 pm W 11:00 am – 1:00 pm If you can't make it to any of these hours, please make an appointment, or if I'm in the office, just walk in. I am usually available prior to the beginning of class.
COURSE MEETS	M 6:15 pm - 8:45 pm in Mendel G90
TEXTBOOK	Deitel, Deitel and Choffnes , "Operating Systems" 3rd edition, Prentice Hall, ISBN: 0-13-182827-4
PREREQUISITES	CSC 8400 – Computer Organization
OTHER MATERIALS	Assignments, announcements and other course-related material will be posted on the class web page http://www.csc.villanova.edu/~mdamian/csc8410/ Please make sure you check the class web page regularly.
CLASS ATTENDANCE	Regular attendance is expected of all students. Each student is responsible for all material, announcements, and assignments

	covered during any class missed.
PRESENTATIONS	Two paper presentations per class, each 15-20 mins. Presentations may be individual or in groups of two students.
TESTS	2 tests, 45 mins each. Each test will include material covered up through and including the latest lecture / presentation. Tests will be closed books, closed notes. However, you are allowed to bring one sheet of paper (letter size) with any information you think will help you during the exam. *Please note that notes may not be shared during the exam.*
ASSIGNMENTS	Reading questions submitted by peers, 2-3 short assignments and two major projects, which will involve C programming on Unix machines.
LATE WORK	No credit will be given for late work.
GRADE	40 % tests 45 % assignments 15 % presentation
GRADE DISTRIBUTION	The score to letter grade mapping will be determined by the instructor based on factors such as difficulty of assignments and types of errors students are making.
STUDENT COLLABORATION	I encourage you to collaborate on assignments and learn from your fellow students. However, there is a fine line between collaboration and cheating. Collaboration means discussing problems and solution approaches with other students and independently writing your own answers. Cheating means copying solutions from someone else or giving someone else your solutions. Instances of plagiarism, cheating or undue collaboration will be handled according to the University policy http://www.academics.villanova.edu/AcademicIntegrity.html
SPECIAL ARRANGEMENTS	If anyone has a disability or other problem that warrants the need for special accommodation to complete course work, please contact me after class or during my office hours.

TENTATIVE COURSE SCHEDULE

All dates are approximate and subject to change as the semester progresses. It is the responsibility of the student to learn and adjust to changes. Please **read chapter material to be covered prior to each session.**

Date	Topic	References
Wk 1 - Jan. 22	Tour of Operating Systems.	Ch. 1, 2, 3, 8
Wk 2 – Jan. 29	In-Depth Look at Processes.	Web Links
Wk 3 - Feb. 5	No class (I'll be away at a workshop). Work on your project/pres.	
Wk 4 - Feb. 12	Thread Management. Synchronization. Monitors.	Ch. 4, 5, 6
Wk 5 - Feb. 19	Processes and Threads wrapup.	Ch. 1 – 8
Wk 6 – Feb. 26	Web Services.	Ch. 16, Lab
Mar. 5 – 11	**SPRING BREAK – ENJOY !**	
Wk 7 - Mar. 12	Real and Virtual Memory.	Ch. 9, 10, 11
Wk 8 - Mar. 19	Catching up. **TEST 1**	CH. 9 – 11
Wk 9 - Mar. 26	I/O, Files and Databases.	Ch. 12, 13
Wk 10 - Apr. 2	Unix Scripts.	Lab Specs
Apr. 5 – 9	**EASTER RECESS – ENJOY !**	
Wk 11 - Apr. 16	Embedded, Real-Time, Distributed Computing.	Ch. 17, 18
Wk 12 - Apr. 23	Protection and Security.	Ch. 19
Wk 13 – Apr. 30	Protection and Security wrapup.	Ch. 19