

Class Number	CSC 415.01 Spring 2013 MWF 12:10-1:00, TH 331 (last update: 1-12-13)
Class Title	Operating System Principles
Instructor	Professor Marguerite Murphy Office Hours: MWF 11:30-12:00 (by appt), MWF 2:10-3:00 Office: TH 968 email: mmurphy@sfsu.edu Office telephone: 415-338-2261 URL: http://dbsystems.sfsu.edu/~mmurphy
Prerequisites	MATH 324, PHYS 230, CSC 310 or CSC 256, and CSC 313 or CSC 340, with grades of C or better. A good working knowledge of the C/C++ language and both Windows and UNIX programming environments are prerequisite.
Text (required)	1. Silbershatz, Galvin, Gagne, "Operating System Concepts Essentials", John Wiley & Sons, 2011 (paperback)
Text (optional)	1. Harbison & Steele, "C: A Reference Manual", Fifth Edition, Prentice Hall, 2002. 2. Robbins & Robbins, "Unix Systems Programming", Prentice Hall, 2003
Course Web Site	http://dbsystems.sfsu.edu/~csc415 (password required)
Reader	Lecture slides that are not available on-line will be posted to the course web site. Note that the textbook lecture slides are available on-line, but I cannot post them due to copyright restrictions!
Course Description	Bulletin Copy: Operating system concepts: concurrent processes, basic synchronization techniques, deadlock, memory management, file systems, security, networks, distributed processing. Extra fee required. This will be an introductory level course covering basic principles of operating system design and implementation. Advanced C programming techniques will be covered, including use of Unix system calls as well as standard techniques for implementing synchronized concurrent code using both processes and threads.
Topics All readings are in Silbershatz, the required textbook	<ol style="list-style-type: none"> 1. Introduction and Preliminaries (Ch. 1 & 2) 2. Processes & Threads (Ch. 3 & 4) 3. Synchronization & Deadlock (Ch. 6) 4. CPU Scheduling (Ch. 5) 5. Main memory & virtual memory (Ch. 7 & 8) 6. File Systems (Ch. 9, 10, 12, as time permits)
Assignments	During the semester there will be several (8-10) assignments exploring material covered in the lectures and texts. These assignments will include both written work and substantial programming assignments. There will be a short in-class quiz after each major topic has been covered in lecture and a comprehensive final examination at the end of the semester. The final exam will only be given at the time and date printed in the Schedule (Wednesday May 22, 10:45-1:15) in the regularly scheduled classroom.
Grading	Assignments: 35%, Quizzes: 25%, Final Exam: 40%

