

Dept Number	CS 335	Course Title	Operating Systems							
Semester Hours	3	Course Coordinator SP15	Wen-Chi Hou							
Catalog Description	An extended treatment of the components of operating systems including process management, concurrency, memory management, device management, file management, and security.									
Textbooks										
SP17										
<i>Operating System Concepts</i> , Abraham Silberschatz, 9 th Edition, 2013, Wiley Publications, ISBN: 9781118063330.										
References										
Course Learning Outcomes										
<ul style="list-style-type: none"> To learn the different components of a modern operating system. To design or simulate various modules of an operating system. 										
Assessment of the Contribution to Student Outcomes										
SP17										
Outcome →	1	2	3	4	5	6	7	8	9	10
Assessed →	X	X	X	X	X	X				
Prerequisites by Topic										
CS 202 and CS 221 with a grade of C or better or consent of the instructor.										

Major Topics Covered in the Course, Continued

1. Introduction: mainframe, desktop, multiprocessor, distributed, clustered and real-time systems
{3 classes}
2. Process management: job and process scheduling, race conditions, deadlock, mutual exclusion, concurrency problems including critical regions and their different solutions, parallel machine environment {9 classes}
3. Memory management: dynamic partitioning, paging, demand paging, segmentation, thrashing
{9 classes}
4. Device management: device characteristics, scheduling, traffic control, device handling
{8 classes}
5. File management: file structures, directories, protection {8 classes}
6. Security: authentication, intrusion detection, etc. {3 classes}