COP-5614 Operating Systems

Catalog Description
This course discusses Operating Systems design principles, algorithms and implementation techniques, which include process and memory management, file systems, disk and I/O systems, communications and security. It can serve as the foundation for more advanced computer systems courses. (3 credits)

Prerequisites
SCIS Graduate Standing

Type
Required for MSCS and Ph.D. students
Elective for MSIT and MSTN

Course Objectives
This graduate level OS course serves as an introduction to modern systems understanding. Essential topics of operating and distributed systems are covered in breadth to lay the foundation for advanced courses, such as advanced operating systems and distributed systems.

Topics
OS structures
Processes and threads
CPU scheduling
Synchronization and deadlock
Memory management
Virtual memory
File systems interface and implementation
Mass-storage structure
I/O systems
Protection and Security

Textbook
Abraham Silberschatz, Peter B. Galvin, Greg Gagne. *Operating System Concepts, 8th Edition,* (John Wiley and Sons, 2009).

Last Update
Jinpeng Wei 9/12/2012