

COSC 4330/6310 (SEC 203) Operating Systems - Fall 2012

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Office: PGH 534, Office hours: MW 4:00pm-5:00pm and by appointment

Synopsis:

An operating system (OS) is a program which provides a convenient and efficient environment for the user(s) of a computer, computer-based, or non-computer system. It is the interface between the user and the hardware. This course introduces process/task/thread management, scheduling, deadlock-handling, memory management, file systems, networking, security issues, and embedded/real-time operating systems (RTOS). Lab assignments will introduce Unix/Linux as well as Wind River VxWorks RTOS.

Prerequisites:

The prerequisites are the core courses and a course in computer architecture. You are expected to be a good C or C++ programmer, to have a general understanding of assembly/machine languages, addressing, and interrupts, and to be familiar with the various hardware components of a computer system including processors, memory, and I/O devices.

Reading materials:

Required lecture notes: Operating Systems by Dr. Albert Cheng, available from the campus copy center and campus bookstore. Recommended book: Operating Systems Concepts by A. Silberschatz, P. Galvin, and G. Gagne; 8th edition or later, Wiley. Optional references: a book on C or C++ programming and on BSD-style Unix or Linux systems.

Course requirements and grading:

Three in-class closed-book exams (early October, early November, and last day of class, December 5). There is no final exam. There will be 3 to 4 programming assignments (using C or C++, BSD-style Unix/Linux OS, and Wind River VxWorks RTOS). The exams will count for 50% of your grade, each equally weighted.; outside assignments will determine the remaining 50%. You must have a passing grade on both the exams as well as on the outside assignments in order to obtain a passing grade in the course. Assignments will be weighted according to their difficulty.

Attendance:

If you miss class, you are still responsible for knowing everything that took place. Your absence does not change the due date of an assignment. If you miss an exam, you will receive a zero unless you have a verifiable medical excuse.

Academic dishonesty:

Any student found guilty of academic dishonesty will receive an F in this course plus additional disciplinary penalty. Academic dishonesty includes, but is not limited to, the following:

1. Giving or receiving information during an exam.
2. Code-level collaboration (copying and sharing of all forms) among students on programs or homework assignments.
3. Unauthorized or malicious use of computing facilities.
4. Deception or misrepresentation in you dealings with your instructor or teaching assistant.

When in doubt, it is the student's responsibility to find out if a certain action constitutes academic dishonesty.