Florida International University
School of Computing and Information Sciences

COP 4610 — Operating Systems Principles
Course Syllabus

Instructor

Ming Zhao, PhD
Lectures: Tue/Thu 11:00am - 12:15pm in ECS 132
Labs: Tue 3:30PM - 4:45PM in ECS 141
Office: ECS 363/ECS 265
Email: ming@cs.fiu.edu
Office hours: Tue/Thu 3:30 - 4:45pm or by appointment

TA: Wenji Li (Email: wli027@cs.fiu.edu, Office: ECS 363)

Textbooks

Operating System Concepts, Ninth Edition, Abraham Silberschatz, Peter Baer Galvin, and Greg Gagne, Wiley, ISBN 9781118129388.
* Required for students to understand the lectures and prepare for the quizzes and exams.

Understanding the Linux Kernel, Third Edition, Daniel P. Bovet, Marco Cesati, O'Reilly, ISBN 978-0596005658.
* Required for students to work on the lab exercises.

Prerequisites

- Computer organization and data structures
- C programming (*substantial kernel-level C coding is required in the lab exercises*)
- Linux and its command line interface (shell, gcc, etc.) (*Android will be used extensively for all the labs*)

Description

COP 4610 covers the basics of operating systems. The lectures will cover the important OS topics including OS structure, processes, threads, scheduling, synchronization, deadlocks, main memory, virtual memory, file systems, mass storage, and I/O systems.

The course also includes three lab exercises which involve implementing process management, memory management, and storage management in Linux/Android (*at kernel level*) the most widely used open-source OS, on *mobile devices*, the most prominent emerging computing platforms. All the labs should be done by students in groups of *three* students. Mobile devices

will be provided to students to conduct the labs but students must sign an agreement to guarantee the safety of the devices.

Both class attendance and lab attendance are required.

Course materials will be available on Moodle (http://moodle.cs.fiu.edu).

Grading

Labs: 45% (Lab 1: 15%; Lab 2: 15%; Lab3: 15%)
Midterm exam: 20%
Final exam: 25%
Attendance: 10%

Policies

Late submission of lab and exam will not be graded. There will be *absolutely no* exception unless it is due to *verifiable* cases of illness and emergencies.

All assignments must be done *independently*. Academic dishonesty will be treated *very seriously* according to the Student Academic Misconduct Procedures (http://www2.fiu.edu/ ~oabp/misconductweb/unitinstructions.htm).

University Policies: Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.