INFS601 Operating Systems
Theory and Practice
Introduction

Adjunct Professor J. Masiyowski
Information and Software Engineering
Spring 2006
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Course [Catalog] Description

SWE630 Operating Systems Theory and Practice (3:3:0)

Prerequisites: INFS 501, INFS515, and INFS590 or equivalent

Abstract

Fundamental concepts including process synchronization and scheduling, inter-process communication, memory management, virtual memory, deadlocks, security and access-control, file and disk management, performance analysis, and distributed systems. The impact of computer architecture on operating systems is examined. Case studies and comparative analysis of operating systems are presented. No substitution can be made for this class.

http://www.gmu.edu/catalog/courses/index.html
Course Objectives

After completing this course, a student will

- Understand the concepts and principles of operating systems
- Understand the basic internal structure and mechanisms of modern operating systems
- Understand the similarities and differences between major operating systems; Microsoft Windows™, Linux, Solaris, and MAC-OS
Course Topic Outline

- Computer System Overview
- Operating System Overview
- Processes
  - Description and Control
  - Threads
  - Concurrency
- Memory Management
- Scheduling
- Input/Output

SUBJECT TO REVISION AS COURSE PROGRESSES
Course Policies

- This is a very challenging course
  - If you want to just sit back and take notes, this is not a good course for you
    - learn by actively doing (homework & class participation)

- Studying in groups is encouraged, but all submitted work must be your own
  - Programming assignments will be checked for similarities
Questions and Concerns

- Q: Must a student in INFS601 write code?
  A: Yes, there is really no other way to learn about an OS

- Q: I don’t know how to program in JAVA, how will I manage?
  A: There is an on-line tutorial available, however you need to know the basics (that is why we insist in INFS590 as a prerequisite)

- Q: Can a student take 601 concurrently with 501, 515 and or 590?
  A: No, you can’t. Prerequisites are there for a reason

- Q: Are the slides enough to prepare for exams?
  A: Absolutely not. They are just a guide. You need to read the book and do the exercises.
End of Introduction

Next Topic

- Chapter 1

Never stop thinking!