

Introduction to Operating Systems

Prof. Li-Pin Chang

Basic Information

- Lecturer
 - Li-Pin Chang 張立平
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- Time
 - W34F7
- Place
 - EC122
 - Class remains online until lockdown is lifted

Hard Drive in Action!



Course Scope

- Three pillars of operating systems
 - Process management
 - Memory management
 - Storage management
- Emerging issues
 - Power management
 - Non-volatile memory
 - etc



Course Scope

- Will I write a (serious) OS in my life?
 - 99.9999% No
- Then why should I learn OS?
 - To add new functionality to an OS
 - To port an OS to new hardware
 - To write efficient programs, or at least, to avoid writing poorly performing programs

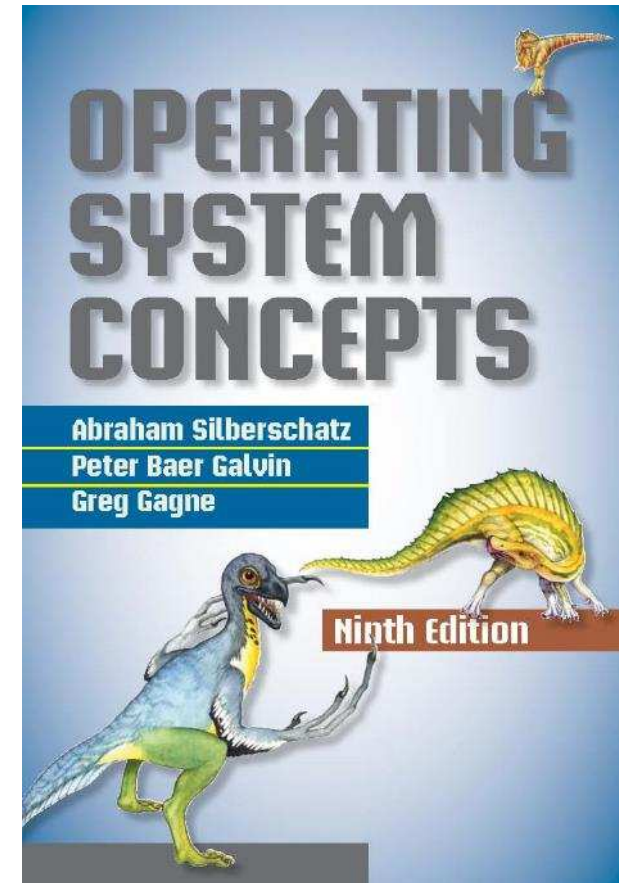


Course Scope

- In other words, you should be aware of
 - skills for performance optimization
 - causes of performance degradation
- I also add some flavor of “UNIX systems programming” in this course
 - Useful in your future career

Text Book

- A. Silberschatz, P. B. Galvin, G.Gagne, “OPERATING SYSTEM CONCEPTS”
- Any edition works. There is not much difference in the core topics (ch1~ch13) among editions



Programming Assignments

程式作業	
P1:	A simple shell
P2:	multiprocess matrix multiplication
P3:	merge sort (thread pool)
P4:	malloc() BF/FF
P5:	cache simulation: FIFO LRU
P6:	A TAR file system

Grading Policy

- Two exams
 - Midterm: 25%
 - Final: 35%
- Programming assignments
 - 6 assignments, 36%
- Lecturer's flexibility:
 - Quizzes and Attendance, 4%

作業評分

- 遲交
 - － 每遲交一週打八折，最低至六折
- 抄襲
 - － 0 分
 - － 情節嚴重者，報校級學生獎懲委員會

常見抄襲狀況

- 網路上咕狗
 - 網路找得到的也會拿下去比對
- 有一位學長(姊)教我們寫
 - 討論完後請自己從頭寫
- 我們幾位朋友一起寫
 - 討論完後請自己從頭寫
- 我參考以前學長(姊)的程式
 - 以前學長的版本也會拿下去比對

共識

- 作業多，占分重，嚴抓抄襲
 - 從別人的程式檔案改出你的作業，不管你改了什麼、改了多少，這都不是教授能接受的做法
 - 討論完，自己從頭開始寫。
- 著重思考論述
 - 請拋棄標準答案的思維
- 課程中段開始難度明顯增加
 - 偶見期中考後失速的同學

加簽

- 加簽單電子檔填好寄給老師
- 老師依收到的順序，在加簽單上註明序號
- 能否加簽上，以系辦公室為準
- 越級打怪者注意
 - 資料結構 & C 語言
 - 演算法
 - 計算機組織
 - 建議須有以上基礎

課程資訊

- E3
 - 重要課程公告
 - 交作業
- Google Sheet
 - 課程時間表
 - 講義、程式作業題目
- FB 群組
 - 上課與作業的問題