

Introduction to Operating Systems and Systems Architecture

COMP 322

California State University, Northridge
Department of Computer Science

Fall Semester, 2014

Catalog Name and Number:	COMP322.01 and 15258
Prerequisites and Corequisites:	COMP222 and COMP322L
Class time and location:	TR 12:30–1:15PM in JD3520
Corequisite Names and Numbers:	Comp322L.01 (15396) & Comp322L.02 (15127)
Lab times and location:	TR 2:00–3:15PM & TR 3:30–4:45PM in JD2215
Final time and location:	Thursday Dec 11 12:45–2:45PM in JD3520
Email List:	fa14.comp322.01-c@csun.edu
Class Web Site:	http://www.csun.edu/faculty/steve.fitzgerald/COMP.322/
Class Document Store	https://drive.google.com/a/my.csun.edu/

1 Course Evaluation:

The lecture (COMP 322) and corequisite laboratory (COMP 322L) are linked to reinforce your understanding of the material. Correspondingly, your grade for both COMP 322 and COMP 322L will be identical. Students who only take one of the two corequisite classes may do so under special arrangements and are still responsible for material present in both classes.

Your final grades is based upon the following:

Type	Weight
Participation:	10%
Homeworks & Exercises	15%
Programming Projects	35%
Mid Terms: (2)	20%
Cumulative Final:	20%

Plus/Minus grading will be used. Incompletes will be given only under exceptional circumstances and prior arrangements must be made.

2 Course Description:

From the Catalog: Examination of the principal types of systems including batch, multi-programming, and time-sharing. Discusses networked system. Considers the salient problems associated with implementing systems including interrupt of event driven systems, multi-tasking, storage and data base management, and input-output. Emphasizes some of the simple algorithms used to solve common problems encountered such as deadlocks, queue service, and multiple access to data. Projects are implemented to reinforce the lectures. One three-hour lab per week.

In this course, we will learn about the salient components that comprise modern day operating systems. We will explore this material by combining class discussions with hands on exploration via programming assignments.

3 Text:

Silberschatz, Galvin, Gagne. *Operating System Concepts*, Ninth Edition, 2012. ISBN # 978-1-118-06333-0
Note that this text is available at Safari Online via the Oviatt Library.

4 Course Outline:

The following topics will be covered in class.

- PART I Overview
 - Introduction and Overview: Chapters 1 and 2
- PART II Process Management
 - Processes and Threads of Control: Chapter 3 & 4
 - Process Coordination: Chapter 5
 - CPU Allocation and Scheduling: Chapter 6
 - Deadlocks: Chapter 7
- PART III Memory Management
 - Main Memory: Chapter 8
 - Virtual Memory: Chapter 9
- PART IV Storage Management
 - Mass-Storage Structure: Chapter 10
 - File-System Interface: Chapter 11
 - File-System Implementation: Chapter 12
- PART IV Advanced Topics (Time Permitting)

5 Assignments

Assignments will be assigned in one of the following three ways:

- Orally assigned during class hours.
- Written assignments handed out during either class or laboratory hours.
- Electronically posted on the WWW on the class web site.

It is your responsibility to complete all assignments, and all assignments are **due** when they are due. Homeworks may be submitted late with a 10 point penalty, and can be submitted no more than one week late. Programming projects, however, **must** be submitted on time. You may, however, resubmit your project multiple times to improve your grade *iff* you submit the initial version on time.

6 Course Policies

Course Policies are posted on the Class Web site.

Note: Changes may be (will be) needed to this syllabus and to the course plan. All such changes will be announced in class and posted on the class web site. Students are responsible for this information.