

2016/2017 First Semester

# **CE2005/CZ2005 Operating Systems**

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# Course Components

- Lectures: 12 weeks, 2 hours/week
  - +1 week for revision
- Tutorials: 11 tutorials
  - +1 buffer week
- Labs: 4 lab sessions, 2 hours/session
- Assessment: Exam (70%) + Coursework (30%)
- Coursework Assessment
  - Lab report(s)
  - Oral assessment

# Schedule

Week		Lecture Topic	Tutorial	Lab	
1	08/08 - 12/08	Overview of Operating Systems (OS)			
2	15/08 -19/08	Processes & Thread	1 (OS Overview)		
3	22/08 - 26/08	Process Scheduling	2 (Processes & Threads)		
4	29/08- 02/09	Process Synchronization	3 (Process Scheduling)	1	Nachos Thread
5	05/09 - 09/09	Process Synchronization	4 (Process Synchronization 1)	1	
6	12/09 - 16/09	Deadlocks	5 (Process Synchronization 2)	2	Process Synchronization
7	19/09 - 23/09	Real-time OS	Buffer Week	2	
	26/09 - 30/09	Recess Week			
8	03/10 - 07/10	Memory Organization	6 (Dealocks)	3	Oral Assessment
9	10/10 - 14/10	Virtual Memory	7 (Memory Organization)	3	
10	17/10 - 21/10	Virtual Memory / File Systems	8 (Virtual Memory 1)	4	Virtual Memory
11	24/10 - 28/10	File Systems	9 (Virtual Memory 2)	4	
12	31/10- 04/11	Input/Output (I/O) Management & Disk Scheduling	10 (File Systems)		
13	07/11 - 11/11	Revision	11 (I/O & Disk Scheduling)		

Textbook: Operating System Concepts, by Silberschatz, Galvin and Gagne, 9th Edition, Wiley 2013

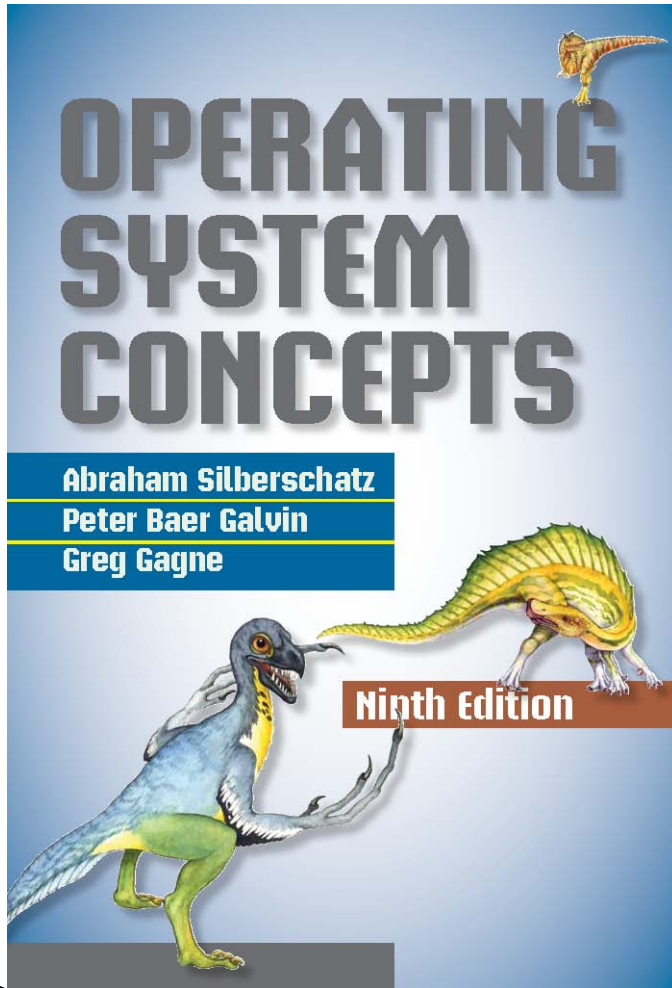
E-Learning Week: TBD

Public Holidays: 9 Aug 2016 (Monday) and 12 Sept 2016 (Monday)

- Tutorial starts from Week 2
- Lab starts from Week 4

# Lectures

- Textbook – The *Dinosaur* Book



Textbook: Operating System  
Concepts,  
by Silberschatz, Galvin and Gagne  
9th Edition, Wiley 2013

Textbook vs. Slides

# Tutorials

- Starts from Week 2
- Attendance is important
- All tutorial questions are available in NTULearn
- Necessary to attempt questions before tutorial
- Some questions are from the previous exams.
- Feedback channel is always open

# Labs

- Starts from Week 4
  - Using **Software Lab 1** (N4-01a-02), remote access available
- 3 lab experiments, 1 per lab session
  - **Nachos** thread, process synchronization, virtual memory
  - Briefing Videos will be made available for each lab experiment
- Lab Session 3 is for oral assessment
- Lab Report needs to be submitted for **experiment 3 only**
  - Requirements for lab report can be found in lab manuals
  - Lab report is due one week after the last lab session
- Lab manuals and other supplement documents are available in NTULearn
- **For each experiment, watch the briefing video and read the manual first.**

## Learning Outcomes

- Identify the functions and services provided by an operating system.
- Understand the basic concepts and mechanisms of operating system design and implementations.
- Explain the interactions between different components of an operating system.