

Syllabus

Advanced Operating System

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	Position	Assistant Professor			Major	Computer Engineering
	Group	Software and Computer Engineering				

1. Course Description

Operating systems are the key system software that poses at the center of many research topics. To better understand OSes, this course reviews the basic concepts covered in undergraduate operating systems class, and then moves forward advanced concepts and recent trends in OS research.

2. Teaching Methods

- This course will include lectures, homework assignments, and student presentations.
- Due to the COVID-19, all classes will be held online.
- The basic concepts of OSes will be delivered in the form of lectures. Some of these lectures will be flipped.
- Students are expected to read papers and to submit their critiques in a weekly basis.
- Students will be given to make a presentation during the semester. Also, students are supposed to meet the instructor before their presentation to get comments and help for the presentation.

3. Evaluation

- Written Exams: 20%
- Paper presentations (1-2 times): 20%
- Critique submission (8-10 times): 40%
- Attendance and participation: 20%

4. TextBooks

- 1) LINUX kernel internals, M. Beck등 저, Addison-Wesley
- 2) 기타 인터넷에서 취득 가능한 자료
- 3) LINUX 소스 코드
- 4) uc/os 관련 자료(인터넷에서 획득 가능)

5. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Intro to OS	Lecture	
2	Processes and threads	Lecture	
3	Processes and threads	Lecture	
4	Scheduling and synchronization	Lecture and discussion	
5	Scheduling and synchronization	Lecture and discussion	
6	Communication	Lecture and discussion	
7	Communication	Lecture and discussion	
8	Midterm exam	Written Exam	
9	Memory Systems	Lecture and discussion	
10	Memory Systems	Lecture and discussion	
11	Memory Systems	Lecture and discussion	
12	Storage Systems	Lecture and discussion	
13	Storage Systems	Lecture and discussion	
14	Virtualization and Clouds	Lecture and discussion	
15	Virtualization and Clouds	Lecture and discussion	
16	Final exam	Written Exam	

6. Others