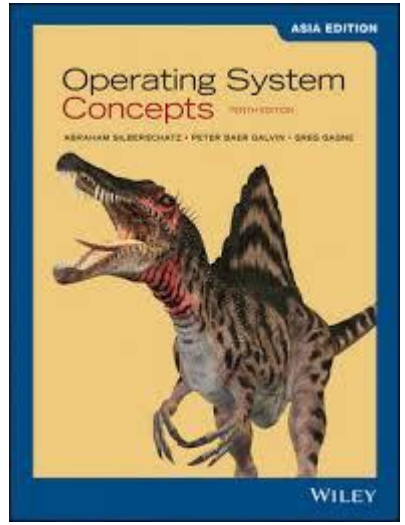
Uploaded at cyber campus

Course Syllabus

School of Computing, Gachon Univ.

Joon Yoo

Spring 2022



General Information

- Instructor
  - Prof. Joon Yoo (유 준)
  - Contact: AI Bldg. #423, joon.yoo@gachon.ac.kr
    - All contacts via E-mail
  - Office hours: Wed 15:00-17:00 (by appointment via Webex)

- TA (Teaching Assistant; 수업조교)
  - TBD (To-Be-Determined)

수업관련 질문: 수업조교 → 담당교수

Contacting...

- All contacts via E-mail: with **[운영체제]** header in mail title

Any problems?

[운영체제] 20171234 홍길동 면담 요청 드립니다.

To

From Joon Yoo <joon.yoo@gachon.ac.kr> Cc Bcc

[운영체제] 20171234 홍길동 면담 요청 드립니다.

김철수 교수님께,

안녕하세요, 20171234 운영체제 수강생 홍길동입니다. 제가 오피스아워인 화요일 오후 3시 또는 금요일 오후 4시에 면담하고 싶습니다. 편하신 시간 말씀 주시면 시간 맞춰서 찾아뵙겠습니다.

감사합니다.

홍길동 올림.

Course Webpage

- Gachon cyber campus (http://cyber.gachon.ac.kr/)
  - ***Most*** notices, class slides, homework will be at the cyber campus

- Webex (for online)
  - https://gachon.webex.com/meet/joon.yoo
  - Online: Be safe and enter at least 5 minutes before class starts

수강현황 (증원)

소프트웨어전공								총증원인원
								38
학수번호	교과목명	담당 교수명	강의실	강의실 수용인원	현재 수강인원	증원신청 인원	강의요일	(변경)최대수강인원
14463001	운영체제	유준	415	60	50	15	월5,6, 수6	70
학수번호	교과목명	담당 교수명	강의실	강의실 수용인원	현재 수강인원	증원신청 인원	강의요일	
14463003	운영체제	조정찬	412	60	50	23	화1,2, 목2	70
인공지능전공								
학수번호	교과목명	담당 교수명	강의실	강의실 수용인원	현재 수강인원	증원신청 인원	강의요일	
14463002	운영체제	유준	415	60	45		월3,4, 수5	55
학수번호	교과목명	담당 교수명	강의실	강의실 수용인원	현재 수강인원	증원신청 인원	강의요일	
14463005	운영체제	조정찬	412	60	50	8	화3,4, 목3	55

2022-1학기 수업운영 기준 안내

□ **수업운영 기준 원칙**
- 교육부 방침에 따라 **대면수업을 원칙으로 수업운영 예정**

- 현재 오미크론 확진자 급증에 따라 **개강 직후 2주간(3월 15일까지) 전체 강좌 비대면** (이론강좌, 실험/실습/실기 강좌 등)

※ 추후 코로나확진 현황 변화와 교육부 방침에 따라 수업운영 조정 예정.

Blended Learning

- Blended Learning (Recorded Lectures=녹강)
  - SW Excellence Program: At least 3+ weeks per semester
  - Holidays: default recorded lectures
    - Mar 9 (대통령선거), May 9 (개교기념일), June 1 (지방선거), June 6 (현충일)

- Summary: This semester will likely be an on-line course (비대면)
  - Mondays: Lecture day (recorded + a few real-time)
  - Wednesdays: Activity day (real-time Quiz + Discussion)
  - Classroom (AI Bldg. 415) will be open during class hours
  - But can change by University/department policy
  - More details later...

Operating Systems

- This course is an **ENGLISH**-based lecture!
  - Exceptions: **Lecture, Q/A, discussions** can be in either English/Korean
  - Everything else in English: Slides, textbook, exams, quizzes, ...

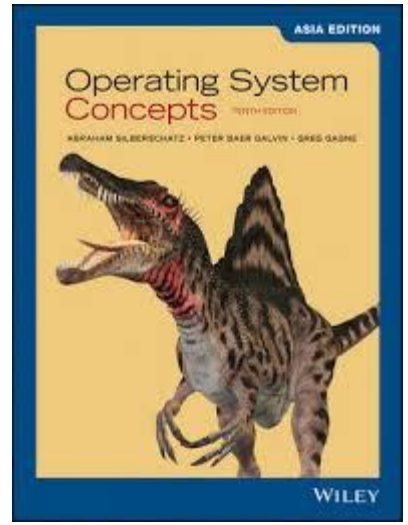
- **Prerequisite courses** (선수과목)
  - Linux programming assignments: **C language** (1st year), Software Design Pattern (1st year)

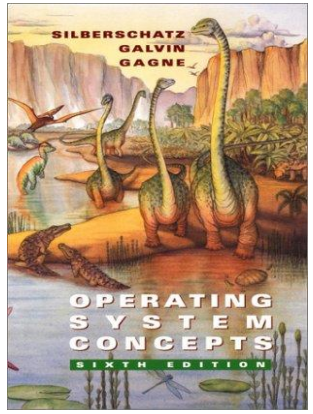
- FAQ
  - I don't know C. Can I learn C and do the HW?

  - Answer: You will **NOT** be able to complete the programming assignments (10%)

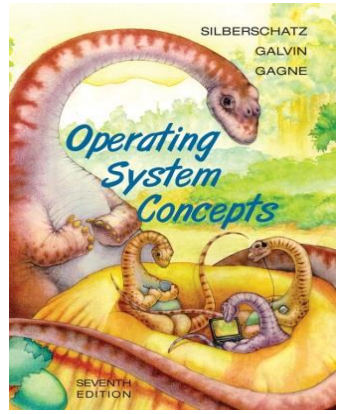
Textbook (주교재)

- Course Textbook:
  - Abraham Silberschatz, Peter B. Galvin, Greg Gagne "**Operating System Concepts**" – **10th Edition**," Wiley, 2019 (**Asia Edition**)
    - 8th or 9th edition is OK (chapter/page, problems may be different)
  - Classic (since 1983) best seller (aka, Dinosaur book)
  - Relatively up-to-date

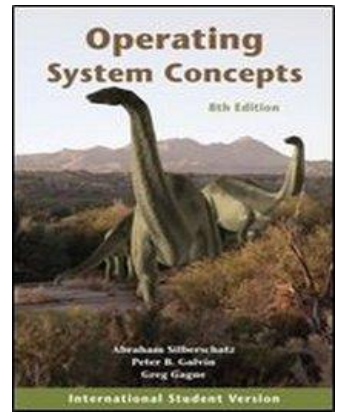




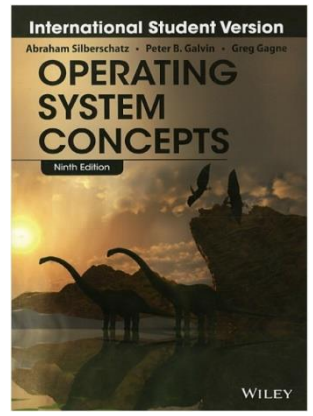
6th ed.



7th ed.



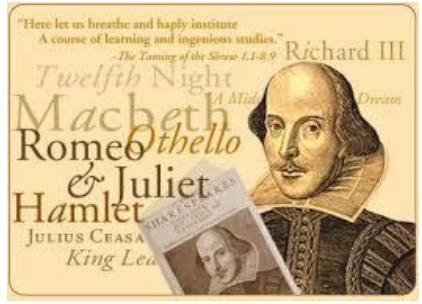
8th ed.

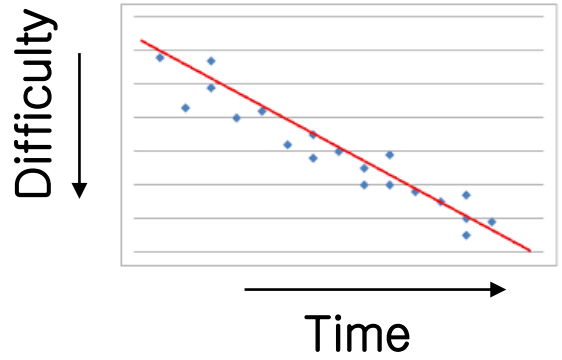


9th ed.

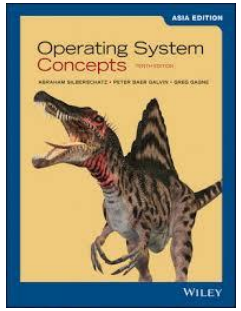
Textbook FAQ

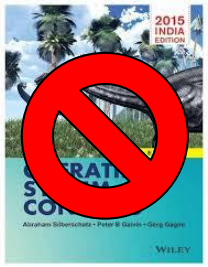
- Can I use the Korean version?
  - Yes, but not recommended – why not?
  - Technical English
  - Every course in our department is in English –
    the later you start using English, the harder it gets
  - English vs. Korean textbooks





- BTW, why do we need the textbook?
  - Because, you will have reading assignments as homework
  - And more explanation later…

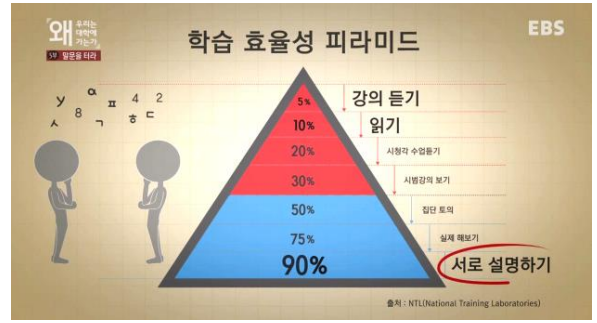




Focus (주요초점) of this course

1. Active Participation

- One-way lecture is highly *ineffective*
- Try to PARTICIPATE more in class!



2. Follow-up

- “Easy come easy go”- studying only for 2 exams will not last for long...
- Why do we divide a course into 4-month long semesters?

3. Proactive working

- Passively taking lectures, (maybe copying) homework gives you no benefit
- You should proactively work on your own!

Focus 1: Active Participation

- **ASK QUESTIONS** during class

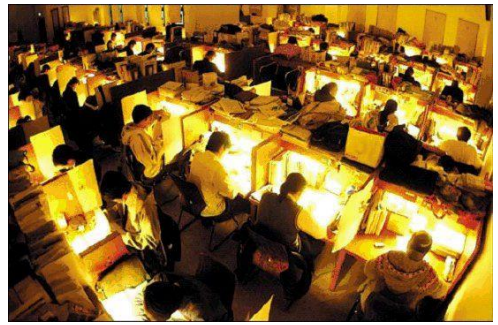
  - It is boring to just sit and listen for 1~2 hours. Be active!
  - Asking questions means you are interested. Share them!
  - Do not be afraid to ask *stupid* questions. You are students.

- **In-class Discussions**
  - You will have in-class group discussions (30+ mins a week)
  - You discuss OS topics or solve problems together
  - You present your discussions/problems to others

- **Incentives:** For asking good questions, giving good answers

Focus 2: Follow-up

- **Reading/Thinking** is very important!
  - I teach you the basic concepts. But, you can never fully learn by **just listening** to the lecture
  - Slides/lecture only give you 50% of class content the rest is in the textbook!
  - Slide/discussion review & reading (복습)



Harvard library 4am

- **Weekly Quiz** (approx. 5-10 minutes)
  - Taken at the beginning of class (every Wednesday)
  - Pre-lecture assignment (50%) + last class lectures/textbook/discussions (50%)

Focus 3: Proactive working

- Passively taking lectures, putting very little effort on homework – You will not learn very much

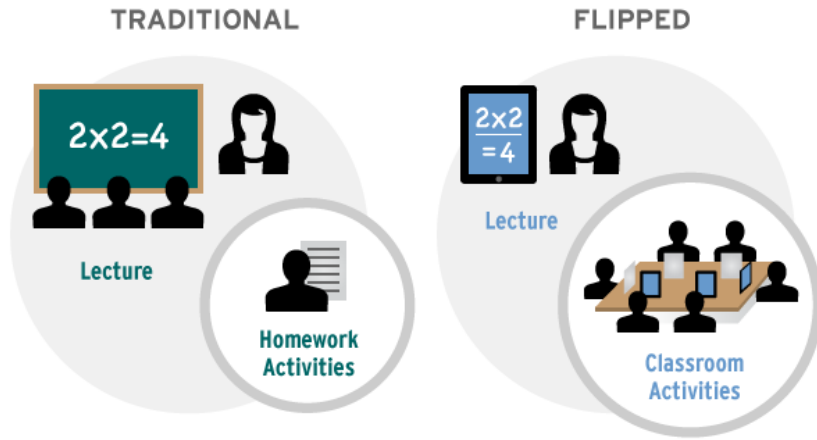
- Pre-lecture assignments (~~submit; 제출~~)
  - Reading Assignments
  - Video Lecture Assignments
  - Pre-lecture assignment contents will appear in next quiz

- Linux Programming Assignments using C (Active learning)
  - Learn yourself: virtual machine, Linux installation, vi(m) editor, gcc, ...

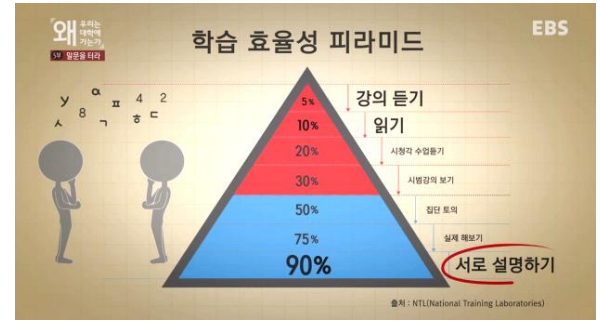
Why do all this?

- Motivation
  - Why do you spend time/money to come to school/classes? Why not just take Internet on-line courses?
    - E.g., Coursera, MOOC (Massive Open Online Course), K-MOOC, ...

- **Flipped Learning**
  - Online Lecture + Classroom activities (Quizzes, Q/A, discussions, ...)



- Our Approach: **Semi-flipped Learning**
  - Before/after class: Review + pre-lecture assignments
  - In class: Short quiz, lecture + Q/A, discussions



Weekly Class Operation

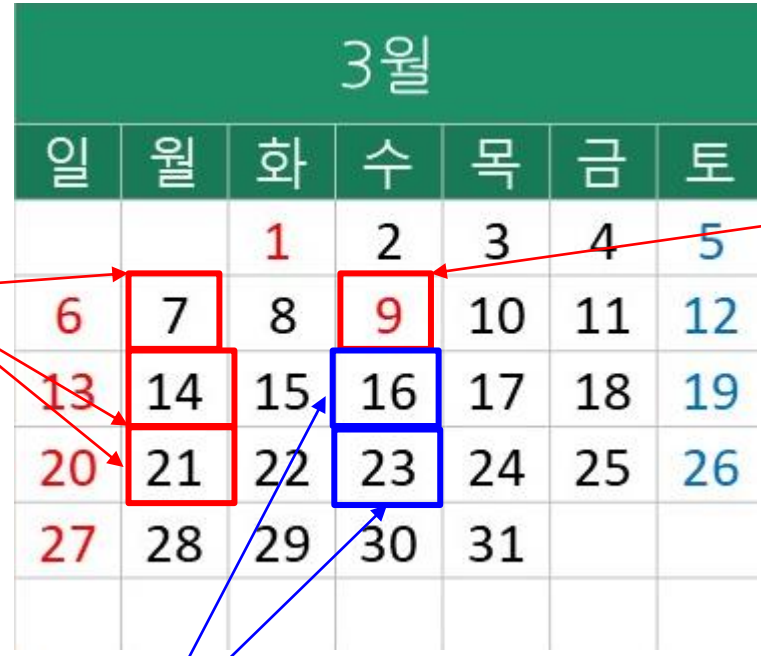
- Every Mondays: Lecture Day (Starting 3/7)
  - Mainly Recorded Lecture (녹강)
    - Recorded lecture will be posted on Cyber campus
  - Option: Real-time Lecture (A few times)

- Every Wednesdays: Activity Day (Starting 3/16):
  - 4-5 min Quiz (Starting 3/16)
  - 20-30 min Discussion + 10-15 min Presentation
  - Pre-lecture assignment will be noticed

March Class Plans

Lecture Day
- Recorded (녹강)

선거일
- Recorded (녹강)
- Pre-lecture assignment



3월						
일	월	화	수	목	금	토
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Activity Day (비대면)
- Quiz
- Discussion
- Presentation
- Pre-lecture assignment

Grading 

- Grading Policies
  - Attendance: 10%
  - Midterm examination: 30%
  - Final examination: 30%
  - Quizzes: 10%
  - Programming assignment (Linux C programming): 10%
  - Discussions/Presentations: 5%
  - Class attitude (In-class Q/A): 5%
    - **Incentives** for asking **in-class** questions/answering

Course Rules

- School Regulations – non negotiable
  - “not attending” more than 4 class weeks will receive an “F” for the course
  - cheating in quizzes/exams will receive an “F” for the course

- Rule for 병결: “진료확인서
  - 수업시간 전 **조교**에게 수업 3일 이내 e-mail 제출시 (예외 없음)
- Past due programming assignment will be severely degraded.
  - 50% or more degradation

At the End of the Semester

- I hope you have a good understanding of the Computer System Software
  - How **processes/threads** (=running program) works
  - How computer **memory** is managed
  - How **files/disks** are operated
  - How **I/O** devices work

- Finally, I hope you fall in love with Operating Systems (OS) like this guy:
  - What???