

# Syllabus

## Advanced Computer Network

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	Position	Professor			Major	Computer Engineering
	Group	Software and Computer Engineering				

### 1. Course Description

This course will cover the advanced topics related to the Internet. Several selected research papers will be studied along with the text book. The students are required to be somewhat familiar with the basic concepts of computer networks and to have taken at least a computer network course in undergraduate school. The lecture will be given in Korean especially in this semester.

### 2. Teaching Methods

원격 수업으로 동영상 강의로 진행될 예정입니다. 매주 수요일과 금요일 오전에 강의 동영상이 아주Bb에 upload될 예정이고 다음날까지 출석확인퀴즈를 풀어서 제출해야 합니다. 기한 내에 제출하지 않으면 결석 처리 됩니다.

### 3. Evaluation

?Mid-term Exam.: 40%  
?Final Exam.: 50%  
?Home work: 10% (summary reports of the reading assignments ? half of the original paper, in English)

### 4. TextBooks

William Stalling, High Speed Networks and Internets:Performance and QoS, 2nd Edition, Prentice Hall, 2004.

## 5. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Introduction, Network Protocol Architecture	Lecture	
2	Protocol Architecture, IPv6	Lecture	
3	IPv6	Lecture	
4	Naming systems – DNS, I3, HIP, LISP, ILNP	Lecture	
5	Routing protocols – wired network	Lecture	
6	Routing protocols – wireless network	Lecture	
7	Multicasting – membership management, routing, multicast tunneling	Lecture	
8	Midterm examination		
9	Mobility management – Mobile IPv6, FMIPv6, HMIPv6	Lecture	
10	Mobility management – PMIP, DMM	Lecture	
11	How to make TCP faster, TCP over high-bandwidth delay product network	Lecture	
12	TCP for wireless network, TCP for data center network	Lecture	
13	TCP Cubic, Multipath TCP, TCP and machine learning	Lecture	
14	Stream Control Transmission Protocol, Datagram Congestion Control Protocol, QUIC	Lecture	
15	Future Network – NDN, Network2030	Lecture	
16	Final Exam		

## 6. Others

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