Syllabus

Advanced Computer Network

Prof.	Name	Kyungran Kang	Sub.	Student	Department	Computer Engineering
	Position	Professor			Major	Computer Engineering
	Group	Software and Computer Engineering				

1. Course Description

This course will cover the topics related to high speed computer network. Several selected research papers will be studided 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 English.

2. Teaching Methods

This course is lecture class and the students are not expected to make any presentation. However, the students should submit two reports summarizing the selected papers.

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	TCP over high-bandwidth delay product network	Lecture	
12	TCP for wireless network, TCP for data center network	Lecture	
13	TCP Cubic, Multipath TCP	Lecture	
14	Stream Control Transmission Protocol, Datagram Congestion Control Protocol	Lecture	
15	Disruption/Delay Tolerant Network	Lecture	
16	Final Exam		

6. Others