

204421 Computer Networks

2nd Semester 2011 (Dec 11 – Mar 12)

Instructor Information

Instructor: Asso.Prof. Anan Phonphoem, Ph.D. (อศ.ดร.อนันต์ ผลเพิ่ม)
Office: Building 15, Room #407 and #710 (Iwing Lab)
Office Hours: Monday 11:00 – 12:30 (Walk-In) or by appointment (See Schedule)
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Research Lab: Intelligent Wireless Network Group (IHING) <http://iwing.cpe.ku.ac.th>

Course Information

Lecture: Thu 9:00 – 12:00, Building 15, Room E203
Class URL: <http://www.cpe.ku.ac.th/~anan/>
Prerequisite: -
Course Description: Internet Protocol version 4 and 6; ICMP and IGMP; Multicast; Classless Interdomain Routing; Routing Algorithm (RIP, OSPF, IS-IS, and BGP); IP services (DiffServ, RSVP); Transport Protocol (TCP and UDP); Multiprotocol Label Switching (MPLS); Application Protocols; Network Management and Security
Course Objective: Students become familiar with Computer Network concepts and terminologies for current and coming technologies. Students should understand the network characteristics and implementation.
Text Book: “**TCP/IP Protocol Suit**,” Behrouz A.Fourouzan, Mc Graw-Hill, 3rd Edition, ISBN 0-07-111583-8
Supplement: “**Computer Networks, A System Approach**”, Larry Peterson and Bruce S. Davie, Morgan Kaufmann, 4th Edition, 2007, ISBN 0-12-374013-4
“**The Internet and Its Protocols**”, Adrian Farrel, Morgan Kaufmann, 2004, ISBN 1-55860-913-X

Grades

Midterm exam: 40 %
Final exam: 40 %
HW assignment and/or Project: 20 %
Attendance: **If** ((Attendance Score \geq 0.90) **and** (You are the 1st rank for the particular grade))
Then (one stop adjustment automatically) /* e.g. “C+” becomes “B” */

Attendance Score

Description	Score (0 – 1)
0 – 15 min	1
15.01 – 100 min	$(100 - \text{MinLate})/100$
> 100 min	0
If missing class	
• with “letter of leave of absence in advanced”	0.5
• without “letter of leave of absence in advanced”	0

Grading Policy

- Your Grade is based on the overall class performance. However, the cumulative score below 50% is considered as fail (F).
- An “F” grade will be given to any form of cheating (for all parties).
- Make-up exam will only be provided for restrict circumstances such as severe illness.
- You are not allowed to take a midterm exam if you miss more than 2 lectures and also not allowed to take final exam if you miss more than 4 lectures.

Assignment Policy

- All hard-copy assignments must be handed in at the beginning of the class (> 15 min. is considered late). For soft-copy will be timed by the local time stamp.
- No Late assignment will be graded.
- No credit for plagiarism and considered as cheating.
- No credit for copying homework or assignment (for all copies) and considered as cheating.

Tentative Course Schedule

Week	Description
1	Course orientation; Data Communication Review (Protocols; Addressing; Layering Concept)
2	Internet Protocol (IPv4); Addressing
3	Multicast; Addressing; IGMP
4	IPv6; Addressing; IPv4 and IPv6 Comparison
5	Routing Concept ; CIDR; Distributed Routing
6	Routing Information Protocol (RIP) Open Shortest Path First (OSPF); RIP and OSPF Configuration Demonstration
7	IS-IS; BGP; Multicast Routing
Midterm Exam	
8	IP Service Management; DiffServ; RSVP
9	Transport Protocol; UDP and TCP; Traffic Engineer
10	Multiprotocol Label Switching (MPLS) Fundamentals; Signaling Protocols; Label Distributed Protocol
11	Engineering and Prioritizing Traffic in MPLS
12	Application Protocol; DNS; Telnet; FTP ; HTTP
13	Network Management ; Security ; Ipsec
14	Virtual Private Network ; Mobile IP ; VoIP
Final Exam	