

# 01204421 Computer Networks

2<sup>nd</sup> Semester 2019 (Dec – Apr 2019)

## Instructor Information

Instructor: Asso.Prof. Anan Phonphoem, Ph.D. (รศ.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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URL: <http://www.cpe.ku.ac.th/~anan/>  
Research Lab: Intelligent Wireless Network Group (IWING) <http://iwing.cpe.ku.ac.th>

## Course Information

Lecture: Wed 09:00 – 12:00, Building 15, Room E507  
Class URL: <http://www.cpe.ku.ac.th/~anan/>  
Prerequisite: -  
Course Description: Internet Protocol version 4 and 6; ICMP and IGMP; Multicast; Classless Inter-domain Routing; Routing Algorithm (RIP, OSPF, IS-IS, and BGP); 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, 3<sup>rd</sup> Edition, ISBN 0-07-111583-8  
Supplement: “**Computer Networks, A System Approach**”, Larry Peterson and Bruce S. Davie, Morgan Kaufmann, 4<sup>th</sup> 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: 10 % (this is a tentative percentage, subject to change)  
Project: 10 % (this is a tentative percentage, subject to change)  
Attendance: **If** ((Attendance Score  $\geq$  **0.90**) **and** (You are the **1<sup>st</sup> rank** for the particular grade))  
**Then** (one stop adjustment automatically) /\* e.g. “C+” becomes “B” \*/

## Attendance Score

Description	Score (0 – 1)
0 – 20 min	1
20.01 – 90 min (Late)	0.5
> 90 min (Absent)	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) I; Addressing
3	Internet Protocol (IPv4) II; Supporting Protocol (ARP, ICMP)
4	Internet Protocol (IPv4) III
5	NAT, DHCP
6	Multicast; Addressing; IGMP
7	IPv6; Addressing; IPv4 and IPv6 Comparison
	<b>Midterm Exam</b>
8	CIDR, VLSM
9	Routing Protocol I; Routing concept, RIP and OSPF
10	Routing Protocol II; IS-IS; BGP; Multicast Routing
11	Transport Protocol; UDP and TCP
12	Software-Defined Networking (SDN)
13	Multiprotocol Label Switching (MPLS); Application Protocol I; Concept
14	Application Protocol I ; DNS, Telnet, FTP
15	Application Protocol II ; SMTP ; Network Security
	<b>Final Exam</b>