

01204421 Computer Networks

2nd Semester 2018 (Jan – May 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, 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: 37 % (~ 6-7 lectures)
Final exam: 43 % (~ 7-8 lectures)
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 **1st 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) |
| | WUNCA 38th (Jan 22 – 25, 2019) |
| | Kaset Fair (Jan 25 – Feb 2, 2019) |
| 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 |
| | Midterm Exam: Sunday 17 March 2019 (4 – 7 PM) |
| 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 |
| | Final Exam: Monday 13 May 2019 (1 – 4 PM) |