

CS 145 – COMPUTER NETWORKS

Course Syllabus

Department of Computer Science
College of Engineering
UP Diliman
2nd Semester, SY 2013-2014

1 Course Information

Course Description Network Models and Layers; terminal and file transfer protocols; message handling protocols; concurrency; network interconnection; distributed computation; overview of networking and communication software.

Credit 3 units

Prerequisite CS 140

Room and Schedule

CLR3	Wednesday	9:30am – 11:30am 1pm – 3pm
	Thursday	9:30am – 11:30am
TL3	Friday	8:30am – 11:30am 1pm – 4pm
	Tuesday	8:30am – 11:30am

Instructor Edgar Felizmenio

Email edgarfelizmenio@gmail.com

Consultation M 10am-12pm, 1pm-4pm; TTh 1pm-4pm;
UP AECH rm. 316

2 Course Goals

- Explain the concepts that are related to computer networking.
- Understand the protocols that are currently implemented in computer networks.
- Enumerate the layers of a computer network and explain the roles and capabilities of each layer.

Week	Topic	References
1	<ul style="list-style-type: none">• What Is the Internet?• The Network Edge	Kurose, Chapter 1: Computer Networks and the Internet
2	<ul style="list-style-type: none">• The Network Core• Delay, Loss, and Throughput in Packet-Switched Networks	
3	<ul style="list-style-type: none">• Protocol Layers and Service Models• Networks Under Attack• History of Computer Networking and the Internet	
1st Exam		

December 14: 9am – 12nn, 1pm – 4pm December 16: 9am – 12nn		
4	<ul style="list-style-type: none">Principles of Network ApplicationsThe Web and HTTP	Kurose, Chapter 2: Application Layer
5	<ul style="list-style-type: none">File Transfer: FTPElectronic Mail in the InternetDNS – The Internet's Directory Service	
6	<ul style="list-style-type: none">Peer-to-Peer ApplicationsSocket Programming with TCPSocket Programming with UDP	
2nd Exam January 25: 9am – 12nn, 1pm – 4pm January 27: 9am – 12nn		
7	<ul style="list-style-type: none">Introduction and Transport-Layer ServicesMultiplexing and DemultiplexingConnectionless Transport: UDPPrinciples of Reliable Data Transfer	Kurose, Chapter 3: Transport Layer
8	<ul style="list-style-type: none">Connection-Oriented Transport: TCP	
9	<ul style="list-style-type: none">Principles of Congestion ControlTCP Congestion Control	
3rd Exam February 15: 9am – 12nn, 1pm – 4pm February 17: 9am – 12nn		
10	<ul style="list-style-type: none">IntroductionVirtual Circuit and Datagram NetworksWhat's Inside a Router?	Kurose, Chapter 4: The Network Layer
11	<ul style="list-style-type: none">The Internet Protocol (IP): Forwarding and Addressing in the Internet	
12	<ul style="list-style-type: none">Routing AlgorithmsRouting in the InternetBroadcast and Multicast Routing	
4th Exam March 8: 9am – 12nn, 1pm – 4pm March 10: 9am – 12nn		
13	<ul style="list-style-type: none">Link Layer: Introduction and ServicesError-Detection and -Correction TechniquesMultiple Access Protocols	Kurose, Chapter 5: The Link Layer and Local Area Networks
14	<ul style="list-style-type: none">Link-Layer AddressingEthernet	
15	<ul style="list-style-type: none">Link-Later SwitchesPPP: The Point-to-Point ProtocolLink Virtualization: A Network as a Link LayerA Day in the Life of a Web Page Request	
5th Exam TBA		

3 Evaluation

60% - 5 Exams
30% - Problem Sets (including machine problems)
10% - Exercises

100% - Total

4 Grading System

A student will be graded according to the following scale:

GENERAL AVERAGE	FINAL GRADE
92 – 100	1
88 – below 92	1.25
85 – below 88	1.5
82 – below 85	1.75
78 – below 82	2
74 – below 78	2.25
70 – below 74	2.5
65 – below 70	2.75
60 – below 65	3
Below 60	5

No grade of 4.0 or INC shall be given.

5 Class Policies and Reminders

Exams. A student who misses an exam with no valid reason shall be given a grade of 0. A student must present a medical certificate if s/he missed an exam because of medical reasons. If the student presents an excuse acceptable to the instructor at least a day prior to the exam, a conflict exam may be given.

Requirements. Use only black or blue pen in written requirements. Complaints regarding exam results, coursework, and other requirements shall be entertained only until a week after its release. No complaints regarding exam results with any form of erasable ink used as medium of writing shall be entertained.

Late Submission of Requirements. Late requirements will have a 10 point deduction per day late (excluding weekends and holidays). Late requirements that are submitted after the finals week (March 25 – March 31) will receive a grade of 0.

Cheating is punishable with either a grade of 5.0 or a date with the Student Disciplinary Tribunal.

Dropping. A student may officially **drop** the course on or before 20 February 2014.

Attendance. Your attendance is expected. A student who is absent for more than six (6) times and has failed to drop the course officially will be given a grade of 5.0.

During Class. No smoking. No eating/drinking in laboratories. Mobile phones must be turned off or set to silent mode. No sleeping.

Consultation. Before consultation, email me to set for a schedule. If the consultation is done via email, do not

expect reply right away.

6 Reference

Kurose and Ross, Computer Networking: a top-down approach, 5th Ed, Pearson/Addison Wesley, 2010
Tanenbaum and Wetherall, Computer networks, 5th Ed, Pearson, 2014

7 Important Dates to Remember

Month	Day	
November	21	Deadline for students to file application for graduation at their college for those graduating as of the 2nd sem, AY 2013-2014
December	18	Lantern Parade
	19	Christmas Vacation
January	6	Resumption of classes
	22	Mid-Semester
February	17	Last day for graduating students to clear their deficiencies
	20	Deadline for dropping subjects
	25	EDSA Revolution Anniversary
March	7	Deadline for filing Leave of Absence (LOA)
	22	End of classes
	24	Integration Period
	25	Finals Week
April	8	Deadline for submitting grades