

2309 CS370 Course Outline

Subject Code : CS370
Subject Title : COMPUTER NETWORKS I
Course Type : Compulsory
Level : 3
Credits : 3
Teaching Activity : Lecture 45 hours

Prior Knowledge* : CS121: DATA STRUCTURES
- Stack and Queue.
- Search algorithm, such as Bellman-Ford and Dijkstras.

Class Schedule :

Class	Week	Time	Classroom	Date
D1	Thu	15:30-18:20	C308	04/09/2023 - 17/12/2023
D2	Thu	9:00-11:50	C309	04/09/2023 - 17/12/2023

Instructor : Cheang Chak Fong
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Office : A211
Office Hour : Monday (15:30-17:30)
Tuesday (13:00-15:30)
Wednesday (14:30-17:30)
Thursday (13:00-15:30)

COURSE DESCRIPTION

This subject aims to provide an introduction of computer networks to the students. The students are expected to be able to understand the principles of communications in data networks, be familiar with the routing algorithms and protocols, and be able to make basic router configurations and network troubleshooting.

TEXT BOOK

Required Text Book:

No recommended textbook, but the learning materials will be provided to students during the classes.

Reference Book:

1. Book title : Computer Networks, Global Edition, 6/e
Author/Editor : Andrew S. Tanenbaum, David J. Wetherall
Edition : 6
ISBN : 9781292374062 (hardcopy) / 9781292374017 (softcopy)

- Publisher : Pearson, Prentice Hall
Date : 2021
2. Book title : Switching, Routing, and Wireless Essentials Companion Guide (CCNAv7) 1/e
Author/Editor : N/A
Edition : 1
ISBN : 9780136729358
Publisher : Cisco Press
Date : 2021

INTENDED LEARNING OUTCOMES

Upon successful completion of this subject, students will be able to:

1. Understand the principles of communications in data networks, including the reference models, the protocols and the technologies used in the data networks.
2. Explain the routing algorithms and protocols, including the categories of the routing algorithms and the specific routing protocols in each category.
3. An ability to analyze the network problem and troubleshooting the network problem.

Weekly Schedule

Week	Topic	Hours	Teaching Method
1	Lecture 1.Network Architecture	3	lecture
2	Lecture 1.Network Architecture (cont.)	3	lecture
3	Lecture 2.Layer 1~2 Technology	3	lecture
4	Lecture 2.Layer 1~2 Technology (cont.)	3	lecture
5	Lecture 3.Layer 3 Technology	3	lecture
6	Lecture 3.Layer 3 Technology (cont.)	3	lecture
7	Lecture 4.Layer 4 Technology	3	lecture
8	Lecture 4.Layer 4 Technology (cont.)	3	lecture
9	Lecture 5.Layer 5~7 Technology	3	lecture
10	Lecture 5.Layer 5~7 Technology (cont.)	3	lecture
11	Midterm Exam	3	lecture
12	Lecture 6.Routing Algorithms and Protocols	3	lecture
13	Lecture 7.Distance Vector Routing Protocol	3	lecture
14	Lecture 8.Link State Routing Protocol	3	lecture

15	Course review	3	lecture
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ASSESSMENT APPROACH

<u>Assessment method</u>	% weight
1.Attendance (Class participation)	10%
2. Assignment	0%
3. Midterm exam	30%
4. Final exam	60%
Total	100 %

Guideline for Letter Grade:

Marks	Grade
93-100	A+
88-92	A
83-87	A-
78-82	B+
72-77	B
68-71	B-
63-67	C+
59-62	C
56-58	C-
53-55	D+
50-52	D
49-	F

Notes:

Students will be assessed on several assessment items (i.e. attendance, assignment experiment exam, midterm exam, and final exam.).

The attendance evaluates the student's participation of discussion in the classes.

The midterm exam and the final exam evaluate the student's understanding of the concepts of computer networks in theory.

The experiment exam evaluates the student's ability to apply the knowledge to solve

practical problem of computer networks.

ADDITIONAL READINGS

Journals:

Trade and other Publications:

Website: