

2309 CS371 Course Outline

Subject Code : CS371
Subject Title : COMPUTER NETWORKS LABORATORY I
Course Type : Compulsory
Level : 3
Credits : 3
Teaching Activity : Experiment 45 hours

Prior Knowledge* : CS370: COMPUTER NETWORKS I
- Routing and Switching algorithms.

Class Schedule :	Class	Week	Time	Classroom	Date
	D1	TUE	9:00-11:50	C408	04/09/2023 - 17/12/2023
	D2	TUE	15:30-18:20	B401	04/09/2023 - 17/12/2023

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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 the experiment practice of computer network technologies for the course “COMPUTER NETWORKS I”. 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 : 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 make basic configurations on the routers according to the given requirement.
4. An ability to analyze the network problem and troubleshooting the network problem.
5. An ability to cooperate with other students as a team leader or a team member to complete a simple network implementation task.

Weekly Schedule

Week	Topic	Hours	Teaching Method
1	Lab 1.Network Device	3	Experiment
2	Lab 1.Network Device (cont.)	3	Experiment
3	Lab 2.Network Cabling	3	Experiment
4	Lab 2.Network Cabling (cont.)	3	Experiment
5	Lab 3.Network OS	3	Experiment
6	Lab 3.Network OS (cont.)	3	Experiment
7	Lab 4.Ethernet Switching	3	Experiment
8	Lab 4.Ethernet Switching (cont.)	3	Experiment
9	Lab 5.IP Static Routing	3	Experiment
10	Lab 5.IP Static Routing (cont.)	3	Experiment
11	Lab 5.IP Dynamic Routing	3	Experiment
12	Lab 5.IP Dynamic Routing (cont.)	3	Experiment
13	Lab 5.IP Dynamic Routing (cont.)	3	Experiment
14	Lab Review	3	Experiment
15	Lab Exam	3	Experiment

ASSESSMENT APPROACH

<u>Assessment method</u>	% weight
1.Attendance (Class participation)	10%
2.Assignment	20%
3.Midterm exam	0%
4.Final exam	70%
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: