Course Description Form

1. Course Name:

Computer Networks

2. Course Code:

3. Semester / Year:

First Semester / Fourth Year

4. Description Preparation Date:

1/9/2025

5. Available Attendance Forms:

Compulsory

6. Number of Credit Hours (Total) / Number of Units (Total)

30 Hours (Theory) + 30 Hours (Practical) / 3 Units

7. Course administrator's name (mention all, if more than one name)

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Lab Instructors:
Dr. Jamal M. Kadhim, Dr. Bahera Al-Aosi, Assit. Prof. Zharaa Abdulhussain, Assit. Lect. Ruaa Abdullah Jaber

8. Course Objectives

Course Objectives	• Understanding Computer networks. • Understanding 7-model layers. • Understanding protocols of each layer and packet journey from source to destination. • Understanding host addressing through IPv4.0 and IPv6.0.

9. Teaching and Learning Strategies

Strategy	Lectures, problem classes

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2+2		Introduction to computer Networking.	Formal Lectures	Class Activity
2	=		Application Layer.	=	Class Activity
3	=		Application Layer.	=	Class Activity
4	=		Transport Layer.	=	Class Activity
5	=		Transport Layer.	=	Class Activity

6	=		Client-server and wireshark program	=	Class Activity
7	=		First Mid-Exam	=	
8	=		Network Layer	=	Class Activity
9	=		Network Layer	=	Class Activity
10	=		Data Link Layer	=	Class Activity
11	=		Data Link Layer	=	Class Activity
12	=		Second mid-exam	=	Class Activity
13	=		Physical layer	=	Class Activity
14	=		Networking Tools	=	Class Activity

11.Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer networking : a top-down approach / James F. Kurose, Keith W. Ross.—6th ed.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

13. Practical Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction to Networking Configuration and Tools	Describe, Discuss, and practice	Lab Activity, Homework, Quiz, Lab Report
2	2		Packet Capture and Protocol Analysis with Wireshark	=	=
3	2		Socket Programming Basics — Building a Simple Client–Server	=	=
4	2		Exploring the HTTP Protocol		
5	2		HTTP Caching, Cookies and DNS	=	=
6	2		Transport Layer – TCP vs UDP and Port Communication	=	=
7	2		Exam	=	exam

8	2		Transport Layer – TCP Reliability and Flow Control	=	=
9	2		The Network Layer – IP, ICMP & Traceroute	=	=
10	2		Subnetting, IP Addressing	=	=
11	2		Subnetting, IP Addressing Packet Tracer	=	=
12	2		Router Simulation with		
13	2		Datalink related Tools	=	=
14	2		Fiber Optic, Cables types and Network Hardware	=	=
15	2		Final Exam		Exam