

Branch Name:	Computer Engineering / Information Technology / Information and Communication Technology
Program Code:	ET103/ ET105 / ET107
Course Title:	Computer Network Practical
Course Code:	2ET1030404P
Pre-requisite Course:	Basic Knowledge of Internet

Course Objective:

1. Understand the fundamental concepts of computer network.
2. Students gain knowledge of the how to connect two or more networking devices and how transfer the data.
3. Understand the division of network layers and functionalities of OSI and TCP/IP model.
4. With help of TCP/IP model, students expose the functionality at each layer using various protocols.
5. Students also gain knowledge of network hardware.
6. Analyse and understand the topological and routing strategies for an IP based networking infrastructure.

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								
					Theory (Marks)				Practical (Marks)				Total (Marks)
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	-	-	2	2	-	-	-	-	10	25	10	25	50

List of Experiments:

Note: The experiment list provided beneath is for reference only. The course teacher may change/formulate it as per his/her methodology and requirement.

Sr.No	Practical Exercise	Contact Hours
1.	To study transmission media.	2
2.	To study networking devices.	2
3.	Demonstrate configure of networking OS, NIC, Cable etc.	2
4.	To study and test the networking commands.	2
5.	Demonstrate connection of two networking machine (Peer to Peer communication)	2
6.	Demonstrate connection of more than two networking machine.	2
7.	To study client-server architecture.	2
8.	Demonstrate the configuration of the FTP.	2
9.	To study WWW structure and Web Browser	2
10.	Demonstrate configuration of the Web server.	2
11.	To discover and use any one networking tool for network traffic.	2

Reference Books:

1. Computer network, Andrew S. Tanenbaum, Pearson.
2. Introduction to data communication and networking, Behrouz Forouzan, TMH
3. Data and computer communication, William Stallings, Pearson
4. Computer Networking- A Top-Down approach, Kurose and Ross, Pearson
5. Computer Networks- A Top-Down approach, Behrouz Forouzan, McGraw Hill

List of Open Source Software/learning website:

<http://williamstallings.com/DataComm/>

<http://www.cs.vu.nl/~ast/>

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	To understand the basic terminology used in computer network for data transmission.	2 Understanding
CLO2	To understand and fundamental knowledge on the OSI and TCP/IP model	2 Understanding
CLO3	To identify the networking devices and transmission media.	2 Understanding, 3 Critical thinking
CLO4	To have a detail about layering approach and functionality with protocols for efficient communication.	3 Applying, 2 Understanding
CLO5	To explore, analyze and specify the topological and routing strategies for an IP based networking infrastructure.	3, Applying 4, Analyze
CLO6	Run and understand all networking commands.	3 Applying, 2 Understanding

Mapping of CLOs with POs & PSOs

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes(PSOs)			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CLO1	M								L							
CLO2	M								M							
CLO3	L		L			L						M				
CLO4						L										
CLO5	L					L		L				M				
CLO6	M		L						M							

H: High, M: Medium, L: Low