



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - CYBER SECURITY

Lesson Plan & Work-done Diary for AY:2026-27, ODD Semester

Course with Code: Computer Networks (BCS502)					Faculty: Ms. Sandhya G		Semester & Section: 5 th
Module	Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Date of Conduction (DD/MM)	Topics Covered	Remarks if any deviation
MODULE-1			Bridge course	Power Point Presentation (PPT) With projection			
			Bridge course				
	1		Introduction: Data Communications, Switching:				
	2		Networks, Network Types, Networks Models:				
	3		Networks, Network Types, Networks Models:				
	4		Protocol Layering,				
	5		TCP/IP Protocol suite, The OSI model, Introduction to Physical Layer:				
	6		Transmission media,				
	7		Guided Media, Unguided Media: Wireless				
	8		Packet Switching and its types.				
	9		Revision of First Module				



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MODULE-2	10		Data Link Layer: Error Detection and Correction: Introduction	Power Point Presentation (PPT) With projection			
	11		Block Coding, Cyclic Codes.				
	12		Data link control: DLC Services: Framing, Flow Control, Error Control,				
	13		Connectionless and Connection Oriented, Data link layer protocols				
	14		High Level Data Link Control. Media Access Control: Random Access				
	15		Controlled Access. Check Sum and Point to Point Protocol				



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MODULE-3	16		Network Layer: Network layer Services, Packet Switching	Power Point Presentation (PPT) With projection			
	17		IPv4 Address, IPv4 Datagram				
	18		IPv6 Datagram, Introduction to Routing Algorithms				
	19		Unicast Routing Protocols: DVR				
	20		LSR, PVR, Unicast Routing protocols				
	21		RIP, OSPF				
	22		BGP				
	23		Multicasting Routing-MOSPF				



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MODULE-4	24		Introduction to Transport Layer: Introduction,	Power Point Presentation (PPT) With projection			
	25		Transport-Layer Protocols: Introduction, User Datagram Protocol				
	26		Transmission Control Protocol: services				
	27		features, segments				
	28		TCP connections				
	29		flow control				
	30		Error control				
	31		Congestion control.				



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MODULE-5	32		Introduction to Application Layer	Power Point Presentation (PPT) With projection			
	33		Client-Server Programming				
	34		Standard Client Server Protocols				
	35		World Wide Web and HTTP				
	36		FTP				
	37		Electronic Mail				
	38		Domain Name System (DNS),				
	39		TELNET, Secure Shell (SSH)				
	40		Revision of Fifth Module				



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	Activity	Planned	Actual	Remarks
1	Theory Classes	40		
2	Assignments/Quizzes/ Self study	3/5		
3	Tutorials/ Extra classes	0		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)	40		
Planning			Execution	
Faculty Signature: Ms. Sandhya G			Faculty Signature: Ms. Sandhya G	
HOD Signature:			HOD Signature:	





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EXPERIMENTS								
1.		Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth, and find the number of packets dropped.	Execution					
2.		Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Execution					
3.		Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Execution					
4.		Develop a program for error detecting code using CRC-CCITT (16- bits).	Execution					
5.		Develop a program to implement a sliding window protocol in the data link layer.	Execution					
6.		LAB IA - 1	Conduction					

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EXPERIMENTS								
7.		Develop a program to find the shortest path between vertices using the Bellman-Ford and path vector routing algorithm.	Execution					
8.		Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Execution					
9.		Develop a program on a datagram socket for client/server to display the messages on client side, typed at the server side.	Execution					
10.		Develop a program for a simple RSA algorithm to encrypt and decrypt the data.	Execution					
11.		Develop a program for congestion control using a leaky bucket algorithm.	Execution					
12.		LAB IA - 2	Conduction					



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	Activity	Planned	Actual	Remarks
1	Practical Classes	10		
2	Assignments/ Quizzes/ Self-study	-		
3	Tutorials/ Extra classes	-		
4	Internal Assessments	2		
5	ICT based Teaching (% of usage in Curriculum)	100%		
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	