

Computer Networks-Lab					
Credit Hours:	1	Course Code:	INFT-2213	Prerequisites:	None
Course Learning Outcomes (CLOs):					
At the end of the course, the students will be able to:				Domain	BT Level*
1. <i>Understand</i> the fundamental principles of communication and networking.				C	1
2. <i>Explain</i> the services and functions provided by each layer in the internet protocol stack.				C	2
3. <i>Identify</i> various internetworking devices and protocols, and their functions in a network.				C	3
4. <i>Install</i> network for small scale organizations.				C	3
5. <i>Evaluating</i> student's knowledge and skills in computer networks				C	4
* BT= Bloom's Taxonomy, C=Cognitive Domain, P=Psychomotor Domain, A=Affective Domain					
#	SDG	Relevant CLOs			
1	SDG 4: Quality Education	CLO 2: Explain the services and functions provided by each layer in the internet protocol stack.			
2	SDG 17: Partnerships for the Goals	CLO 4: Install network for small scale organizations			
3	SDG 9: Industry, Innovation and Infrastructure	CLO 3: Identify various internetworking devices and protocols, and their functions in a network. CLO 4: Install network for small scale organizations.			
Lab Contents:					
Simulator Installation and Basic Configuration (Cisco Packet Tracer), Graphical Network Simulator Installation and Use (GNS), Layer 2 Devices Configuration, Layer 3 Devices Configuration, IPv4 DHCP Part I and II, IPv6 DHCP Part I and II, Network Address Translation Part I and II, Virtual LANs (Static and Dynamic), DNS Configuration, Web Server/HTTP Configuration, Analysis of Key Technologies Performance (Static Routing), Identification and Use of Internetworking Devices and Protocols, Working with Wireshark for Traffic Analysis					
Teaching Methodology:					
Lectures, Written Assignments, Practical labs, Semester Project, Presentations.					
Course Assessment:					
Mid Term Exams, Final Term Exams, Assignments, Quizzes, Project, Presentations, Practical Exam					
Reference Material:					
1. Data Communications and Networking with TCP/IP Protocol Suite ISE by Behrouz A. Forouzan, McGraw-Hill Science, 6th Edition, Year 2021, ISBN-13: 978-1260597820					
2. Data and Computer Communications by William Stallings, Prentice Hall, 10th Edition, Year 2013; ISBN-13: 978-0133506488					
3. Computer Networking: A Top-Down Approach, 7th edition, by James Kurose and Keith Ross, Year 2016, ISBN-13: 978-0133594140					
4. Computer Networks by Andrew S. Tanenbaum and David Wetherall, 6th Edition, Year 2021, ISBN-13: 978-1292374062					