

	Understand										
Level 2	Apply	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
	Analyze										
Level 3	Evaluate	10%	10%	15%	15%	15%	15%	15%	15%	15%	15%
	Create										
	Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %

CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc

Course Designers		
Experts from Industry	Experts from Higher Technical Institutions	Internal Experts
Mr. S. Karthik, IT Analyst, Tata Consultancy Services	Dr. Neelanarayanan,, Professor, School of Computer Science and Engineering, VIT Chennai	1. Mr.M.Ramesh 2. Dr.S.Sabeen

Course Code	USA20502J	Course Name	COMPUTER NETWORKS	Course Category	C	Professional Core	L	T	P	C
							4	0	2	5

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	Computer Science	Data Book / Codes/Standards			Nil

Course Learning Rationale (CLR):	The purpose of learning this course is to:	Learning	Program Learning Outcomes (PLO)
CLR-1 : Understand the evolution of computer networks using the layered network architecture		1 2 3	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CLR-2 : Understand the addressing concepts and learn networks devices		Thinking	al of Related Procedural Knowledge Specializati
CLR-3 : Design computer networks using subnetting and routing concepts		Proficiency	Utilize Skills in Modeling Interpret Investigativ
CLR-4 : Understand the error types, framing, flow control		Attainment	e Skills Solving Communicat
CLR-5 : Understand the various Medium Access Control techniques and also the characteristics of			tion Skills Analytical Skills ICT Skills Professiona Behavior Life Long Learning

	SLO-2	Standards Organizations	Prefix usage	RIPv2	Framing	Wireless 802.11
S-11	SLO-1	Layered Tasks	Network Address Translation (NAT)	Difference of RIPv1 and RIPv2	Flow control	Addressing mechanism
	SLO-2	Hierarchy	Types of NAT	Link state routing	Error control	Transmission Media
S-12	SLO-1	OSI Model	NAT Terminology	Principle of Link state routing	ARQ	Twisted pair
	SLO-2	Layered Approach	Translation table	Dijkstra's Algorithm	ARQ types	Coaxial
S-13-16	SLO-1	Laboratory 2: Implementation of various Topology creation	Laboratory 5: Configuring Interfaces	Laboratory 8: Implementation of Default routing	Laboratory 11: Implementation of EIGRP bandwidth and adjacencies	Laboratory 14: Implementation of Multi-Area OSPF with stub areas and authentication
	SLO-2					
S-17	SLO-1	Peer-Peer Approach	IPv6 addresses	Applications of Dijkstra's Algorithm	Random access	Fiber Optics
	SLO-2	Layers in the OSI Model	Types, Notation	OSPF	ALOHA	Architecture of IEEE 802
S-18	SLO-1	OSI Reference Model	VLSM	EIGRP	CSMA	IEEE 802.15
	SLO-2	Comparison of Layers	Masking	Path vector routing	CSMA/CD	Architecture
S-19	SLO-1	TCP/IP Protocol Suite	CIDR	Applications of Path vector routing	CSMA/CA	IEEE 802.15.4
	SLO-2	TCP/IP Reference Model	Address Aggregation	Stabilized routing table creation for AS	Collision Detection VS Collision Avoidance	Architecture
S-20	SLO-1	Comparison with OSI Model	Networking devices	BGP	Controlled access	IEEE 802.16
	SLO-2	Comparison of the OSI and TCP/IP Reference Models	Router, Switch, Hub, Bridges	BGP sessions	Channelization	Architecture
S-21-24	SLO-1	Laboratory 3: Implement the categories of network(LAN,MAN,WAN)	Laboratory 6: Basic router configuration, creating passwords	Laboratory 9: Implementation of RIPv1,v2	Laboratory 12: Implementation of EIGRP authentication and timers	Laboratory 15: Redistribution Between EIGRP and OSPF
	SLO-2					

Learning Resources	1. Behrouz A. Forouzan, (2010), "Data Communications and Networking", 5 th Edition 2. Todd Lammle, (2011), "CCNA Study Guide", Seventh Edition 3. William Stallings, (2010), "Data and Computer Communications", Ninth Edition
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Learning Assessment											
Bloom's Level of Thinking		Continous Learning Assessment(50% Weightage)								Final Examination (50% weightage)	
		CLA – 1 (10%)		CLA – 2 (10%)		CLA – 3 (20%)		CLA – 4# (10%)			
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice
Level 1	Remember	20%	20%	15%	15%	15%	15%	15%	15%	15%	15%

	Understand										
Level 2	Apply	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
	Analyze										
Level 3	Evaluate	10%	10%	15%	15%	15%	15%	15%	15%	15%	15%
	Create										
	Total	100 %		100 %		100 %		100 %		100%	

CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc

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Experts from Industry	Experts from Higher Technical Institutions	Internal Experts
Mr. S. Karthik, IT Analyst, Tata Consultancy Services	Dr. Neelanarayanan,, Professor, School of Computer Science and Engineering, VIT Chennai	Dr. P.Muthulakshmi
		Dr. S.Kanchana

Course Code	USA20503J	Course Name	SOFTWARE ENGINEERING AND TESTING	Course Category	C	Professional Core Course	L	T	P	C
							4	0	2	5

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	Computer Science			Data Book / Codes/Standards	Nil

Course Learning Rationale (CLR):	The purpose of learning this course is to,	Learning	Program Learning Outcomes (PLO)
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CLR-1 : Familiarize the software life cycle models and software development process	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CLR-2 : Understand the various techniques for requirements, planning and Testing	Thinking Expected Proficiency (%)	Expected Attainment (%)		Engineering Knowledge	Problem Analysis	Design & Development	Design, Modern Tool Usage	Society & Culture	Environment & Sustainability	Ethics	Individual & Team Work	Communication	Project Mgt. & Finance	Life Long Learning	PSO - 1	PSO - 2	PSO - 3	
CLR-3 : Examine the basic methodologies for software design, development, testing																		
CLR-4 : Manage user expectations and software development team																		
CLR-5 : Acquire the latest industry knowledge like agile for development																		
CLR-6 : Usage of tools and comply the global standards for testing																		