

SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

DEPARTMENT OFELECTRONICS AND COMMUNICATION ENGINEERING

TEACHING PLAN

Course Code Co		Course	ſitle	Semester	Branches	Contact Periods/ Week	Academi Year	ic com	Date of mencement of Semester
20EC7E04 TELECOM SWITCHIN		COMMU CHING N	NICATION IETWORKS	TICATION VII ECE		5	2025-202	26 09-06-2025	
COUR	SE OUTCON	MES							
After co	ompletion of t	he course	students can	able to					
1	1 Demonstrate the operation of basic switching networks. (K3)								
2	2 Analyze the different signaling techniques in Switching networks (K4)								
3	Analyze ISD	N and B	SDN (K4)						
4	Illustrate DS	L and SC	NET (K3)						
UNIT	Out Comes Bloom's Lev	/ Topi el No	28	Topics/Activ	ity	Text	t Book / erence	Contact Hour	Delivery Method
	CO 1: Expl	1. 1. 1.	UNI Basic Swi Simple Te Evolution	IT-1: TELE tching Syste elephone Co of switchin	ECOMMUN em mmunicatio g systems	TICATION T1, n, T1, T1, T1,	S TRANS T2,R1 T2,R1 T2,R1	MISSIO 1 1 1 1	N Chalk & Talk, PPT Tutorial, & Case Study
	the basic		Stronger s	witching sy	stems,	T1,	12,R1	l	Video
	switching	$\frac{1}{2}$	Cross bar	switching,			12,KI	1	leactures
Ι	system and	the $\frac{1}{1}$	Electronic	Switching	hina		2,KI	1	
	operation of various switching techniques. (K2,	of 1	Space Div	ision Switch	ning,	T1, 1	12,KI	1	Chalk & Talk,
		1.	Combinet	ion Switchi	nng, na	T1	$\frac{12, \text{KI}}{\text{T2 R1}}$	1	PPT Tutorial, & Case Study
		g 1.	$\frac{1}{10000000000000000000000000000000000$	f Switching	Systems	T1,	T2,R1	1	
		(K2, 11)	1 Call proce	essing functi	ons	T1,	T2,R1	1	
	K3)	1.1	2 Common control.	control, Stor	red program	T1,	T2,R1	1	
			CLASS T	EST-I				1	Class Room
		I				I	Total	13	

			UNIT – 2: TELEPHO	ONE NETWORKS		
П	CO2: Analyze the signaling techniques like routing, transmission	2.1	2.1 Subscriber Loop System Common T1,T3,R2		1	
		2.2	Switching Hierarchy And Routing, T1,T3,R2		1	
		2.3	Transmission Plan,	T1,T2,R1,R2	1	Chalk & Talk,
		2.4	2.4 Transmission System Numbering Plan, T1,T2,R1,R2		1	PPT Tutorial,
	plan, numbering	2.5	Charging Plan,	I, T2, R1,R2	1	Active
	plans and	2.6	Signaling Techniques,	T1,T3,R2	1	Learning &
	in telephone networks.(K2)	2.7	In-channel Signaling, Channel Signaling,	T1,T3,R1,R2	1	Case Study
		2.8	Network Traffic load and parameters,	T1,T3,R2,R3	1	
		2.9	Grade of service and blocking probability.	T1,T3,R2,R3	1	
			CLASS TEST-II		1	Class Room
		1		Total	10	
		UNI	Γ – 3: DATA NETWORKS			
		3.1	Data transmission in PSTNs	T1, T2.R1,R2	1	
	CO2: Analyze the signaling	3.2	Data Rates in PSTNs	T1, T2.R1,R2	1	
		3.3	Modems	T1, T2.R1,R2	1	-
	techniques like routing,	3.4	Switching Techniques for data Transmission	T1, T2.R1,R2	1	Chalk & Talk, PPT
	transmission	3.5	Circuit Switching	T1, T3.R1,R2	1	Tutorial
III	plan,	3.6	Store and Forward Switching Data	T1, T3.R1,R2	1	-
	numbering plans and charging plans in telephone networks.(K2)		communication Architecture		1	
		3.7	ISO-OSI Reference Model	T1, T3.R1,R2	1	
		3.8	LAN, MAN, WAN	T1, T3.R1,R2	1	E-Learning
		3.9	Repeaters, Bridges	T1, T3.R1,R2	1	Chalk & Talk, PPT
		3.10	Routers and Gateways	T1, T3.R1, R2	1	Tutorial
			CLASS TEST-III		1	Class Room
				Tota	il 11	

		UNI	$\Gamma - 4$: INTEGRATED SERVICES DIGI	TAL		
	CO3: Describe layered network architecture and various	4.1	Motivation for ISDN	T1, T3.R1,R2	1	
		4.2	New services	T1, T2.R1,R2	1	
		4.3	Network and Protocol architecture	T1, T3.R1,R2	1	
		4.4	Networks transmission Channels	T1, T3.R1,R2	1	
		4.5	User Network Interface	T1, T3.R1,R2	1	Chalk & Talk, PPT Tutorial
IV		4.6	signaling	T1, T3.R1,R2	1	
	types of data	4.7	Numbering and Addressing	T1, T3.R1,R2	1	
	network and analyze ISDN and	4.8	Service characterization	T1, T2.R1,R2	1	
		4.9	Interworking	T1, T2.R1,R2	1	
	BISDN.(K1)	4.10	ISDN standards, Broadband ISDN	T1, T2.R1,R2	1	
		4.11	Voice data Integration.	T1, T2.R1,R2	1	
			Class Test-IV		1	Class Room
				Total	12	
		UNI	Г – 5 : DSL TECHNOLOGY			
		5.1	ADSL	T1, T3.R1,R2	1	Chalk & Talk, PPT Tutorial, Active Learning &
	CO4: Illustrate DSL and SONET and study respective networks and frame transmissions involved.(K2)	5.2	Cable Modem	T1, T3,T3,R1	1	
		5.3	Traditional Cable Networks	T1,T3,R1,R2	1	
		5.4	HFC Networks	T1, T3,R1,R2	1	
		5.5	Sharing	T1, T2.R1,R2	1	
		5.6	CM & CMTS and DOCSIS	T1, T2.R1,R2	1	
		5.7	SONET	T1, T2.R1,R2	1	
V		5.8	Devices			
		5.9	Frame	T1, T2.R1,R2	1	
		5.10	Frame Transmission	T1, T2.R1,R2	1	Case Study
		5.11	Synchronous Transport Signals, STS I	T1, T2.R1,R2	1	
		5.12	Virtual Tributaries and Higher rate of service	T1, T2.R1,R2	1	
			Class Test-V		1	Class Room
Course	Beyond syllabus		Cellular communication system		1	
	Total					
			CUMULATIVE PROPOS	SED PERIODS	60	

Text Book	is:							
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION							
1.	ThiagarajanVishwanathan,"Telecommunication Switching Systems and Networks";PHI Publications, 2015.							
2.	J.E.Flood, "TelecommunicationsSwitching, TrafficandNetworks", PearsonEducation, 2012							
Reference	Books:							
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION							
1.	Wayne Tomasi, "Advanced Electronic Communications System", PHI.2014							
2.	Behrouz A Frouzan, "Data Communication and networking", 4th Edition, Tata McGraw Hill,							
Web Deta	ils							
1.	https://www.iete.org/							
2.	https://en.wikipedia.org/wiki/Telecommunications engineering							
3.	https://www.tec.gov.in/							

		Name	Signature with Date
. i.	Faculty i	Mr. M.Murali	Heras
ii.	Course Coordinator	Mr. M.Murali	Hurab
iii.	Module Coordinator	Dr. Sekhar Didde	OSeland
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