

#### SWARNANDHRA COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Narsapur, West Godavari District, A.P. 534280

### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING <u>TEACHING PLAN</u>

Course Code	Course Title	Semester	Branch	Contact Period/Week	Academic Year	Course Commencement Date
20EC7E09	Television Systems and Design(R-20)	VII	ECE	5	2024-25	05-06-2023

COURS	E OUTCOMES:
At the e	nd of the TV Engineering Course student can able to
CO1.	Categorize the TV components based on their operations.(K4)
CO2.	Demonstrate the working of Monochrome Television Transmitter and Receiver Systems.(K3)
CO3.	Compare various Colour Television systems with a greater emphasis on PAL systems. (K4)
CO4.	Interpret the advanced topics in Television systems and Video Engineering. (K4)

Unit No.	Out Comes/ Bloom's Level	Topic No	Topics/Activity	Number of periods	Text Book/ Reference	Delivery Method	
1			771	UNIT-I: INTRODUCTION			
		1.1	TV Transmitters	1			
		1.2	TV Receivers	1	7, 8		
		1.3	Synchronization	1			
		1.4	Geometric form and aspect ratio,	10 1			
		1.5	Image continuity, interlaced	1			
	42	1.6	picture resolution	1			
	CO1:Categorize	1.7	Composite video signal	1			
	the TV components	1.8	Horizontal and Vertical sync scanning sequence	1		Chalk & Talk, PPT	
	based on their operations.(K4)	1.9	Color signal generation and Encoding	1	T1,T2	Active Learning	
		1.10	Perception of brightness and colors	1		& Tutoria	
		1.11	Additive color mixing	1			
		1.12	Video signals for colors	1			
		1.13	Luminance signal, color difference signals,	1			
		1.14	Encoding of color difference signals, formation of chrominance signals	1			
		1.15	Class test-1	1	17 × 58		
		ati u	Unit 4 Things of	15			

Swarnandhra College of Engineering and Technology Department of Electronics and Communication Engineering



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2		UN	IIT-II: TV SIGNAL TRANSMISSION PROPAGATION	AND		
		2.1	Picture Signal Transmission	1		Chalk &
	CO2:Demonstrate	2.2	Positive and Negative Modulation	1	T1, T2	Talk, PPT,
	the working of	2.3	VSB Transmission	1	111,12	Active
	Monochrome	2.4	Sound Signal Transmission	1		Learning
	Television	2.5	Standard Channel BW	1		& Tutorial.
	Transmitter and	2.6	TV Transmitter	1		& Tutoriai.
	Receiver	2.7	TV signal propagation & interference	1	- 9 - Niles	
	Systems.(K3)	2.8	TV broadcast channels and transmission Antennas	1		
		2.9	Class test-2	1		
	THE PERSON NAMED IN		N = 8 =	09		V. OF V.
		UN	IT-III: TV CAMERAS & PICTURE T	UBES		
		3.1	Camera Tube Types, Vidicon	2		
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3.2	Silicon Diode Array Vidicon	1	1	
3	CO2:Demonstrate	3.3	Monochrome TV Camera	1		
5	the working of	3.4	Color Camera	1		
	Monochrome	3.5	CCD Image Sensors	1		Chalk and
		3.6	Monochromatic Picture Tube	1	T1, T2	Talk, PPT
	Television	3.7	Electrostatic Focusing	1	11,12	er er
	Transmitter and	3.8	Beam Deflection	1		and
	Receiver Systems.(K3)	3.9	Picture tube characteristics and specifications	1.5		Tutorial
		3.10	Color picture tubes	1	1	
		3.11	TV Standards	1		
		3.12	Class test-3	1	1	
				13		
4		UN	IT- IV: COLOUR TELEVISION SYST	<b>TEMS</b>		
		4.1	NTSC Colour TV system	1		
		4.2	NTSC Colour Receiver	1		
		4.3	Limitations of NTSC System	1		
	1.	4.4	PAL Colour TV system	1	5	
	coa Cammana	4.5	Cancellation of phase errors	ī		
	1 CO3: Compare		PAL-D Colour System			Chalk &
	co3: Compare	4.6	I FAL-D COIOUI SYSICIII	1		I hall X
	various Colour	4.6 4.7		1		
	various Colour Television systems with a	4.6 4.7 4.8	PAL Coder Chromo signal amplifier separation	1 1	T1, T2,T3	Talk, Smart
	various Colour Television systems with a greater emphasis	4.7	PAL Coder Chromo signal amplifier separation of U and V signals	1	T1, T2,T3	Talk, Smart Class,
	various Colour Television systems with a greater emphasis on PAL systems.	4.7 4.8 4.9	PAL Coder Chromo signal amplifier separation of U and V signals Colour Burst Separation	1	T1, T2,T3	Talk, Smart Class, PPT
	various Colour Television systems with a greater emphasis	4.7 4.8 4.9 4.10	PAL Coder Chromo signal amplifier separation of U and V signals Colour Burst Separation Burst phase Discriminator	1 1 1	T1, T2,T3	Talk, Smart Class, PPT Tutorial, &
	various Colour Television systems with a greater emphasis on PAL systems.	4.7 4.8 4.9 4.10 4.11	PAL Coder Chromo signal amplifier separation of U and V signals Colour Burst Separation Burst phase Discriminator Ident and Colour killer circuits	1 1 1	T1, T2,T3	Talk, Smart Class, PPT Tutorial, &
	various Colour Television systems with a greater emphasis on PAL systems.	4.7 4.8 4.9 4.10	PAL Coder Chromo signal amplifier separation of U and V signals Colour Burst Separation Burst phase Discriminator Ident and Colour killer circuits U and V demodulators Merits and Demerits of the PAL	1 1 1	T1, T2,T3	Talk, Smart Class, PPT Tutorial, &
	various Colour Television systems with a greater emphasis on PAL systems.	4.7 4.8 4.9 4.10 4.11 4.12	PAL Coder Chromo signal amplifier separation of U and V signals Colour Burst Separation Burst phase Discriminator Ident and Colour killer circuits U and V demodulators	1 1 1 1 1	T1, T2,T3	Talk, Smart Class,



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44.0				15		
5		UNIT	<b>I-V:ADVANCED TELEVISION SYS</b>	STEMS		17 14 1 F
		5.1	Satellite TV Technology, Cable TV	2	l be 4	1
	18 18	5.2	Tele Text Broadcast Receiver	1	42943 11	
		5.3	Digital Television	. 1		
	CO4: Interpret	5.4	Transmission and Reception	1		
	the advanced	5.5	Projection Television	1		Chalk &
	topics in Television	5.6	Displays in TV Receivers Flat panel display	1		Talk, Smart
	systems and	5.7	LED (Light Emitting Diode)	1	T2, T4	Class,
	Video	5.8	LCD (Liquid Crystal Display)	1	1 og	PPT
	Engineering. (K4)	5.9	Organic Light Emitting Diode (OLED)	1		Tutorial, &
	(ici)	5.10	QLED (Quantum-Dot Light Emitting Diode)	1		Case study
		5.11	IGZO (Indium Gallium Zinc Oxygen). (Oxcde)	1		
		5.12	Class test-5	1	1 to 1	
				13		i i i i i i i i i i i i i i i i i i i
	and the second	3 -	TOTAL	65		
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Principal (Dr.S.Suresh Kumar)

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