



# ChristuJyoti Institute of Technology & Science

(Approved by AICTE, Permanent Affiliated to JNTU Hyderabad)

Colombo Nagar, Yeshwanthapur, Jangaon, TS-506 167

Department of Electronics & Communication engineering

## Lesson Plan

<b>Program Name:</b>	B. Tech in ECE	<b>AY</b>	2022-23
<b>Course Name:</b>	Linear IC Applications	<b>Class / Sem</b>	II/II-Sem
<b>Faculty Name:</b>	D.SRAVANI	<b>Regulation</b>	R-18

S.No	Lecture No.	Unit	Topic	Teaching Aid/Methodology	Text/Ref
1	1	I	Introduction	TM1	T1/R1
2	2		Introduction Classification of ICS	TM1	T1/R1
3	3		CHIP size & Complexity,	TM2	T1/R1
4	4		Differential amplifiers(DIBO.BIUBO)	TM5	T1/R1
5	5		Basic information of Op-amp Ideal & practical Op-Amp internal circuits	TM5	T1/R1
6	6		AC Characteristics of Op- Amp	TM1	T1/R1
7	7		DC Characteristics of Op- Amp	TM1	T1/R1
8	8		741 op- amp and its features	TM1	T1/R1
9	9		Modes of Operation: Inverting Mode,	TM1	T1/R1
10	10		Non Inverting Mode	TM1	T1/R1
11	11		Differential Mode	TM1	T1/R1
12	12		<b>Slip Test-I</b>	TM2	T1/R1
13	13	II	Basic Applications of Op-Amp	TM1	T1/R1
14	14		Instrumentation Amplifier	TM1	T1/R1
15	15		AC Amplifier, V to I Converters	TM9	T1/R1
16	16		I to V Converters		
17	17		Sample & Hold Circuits	TM1	T1/R1
18	18		multipliers and dividers	TM1	T1/R1
19	19		Comparators, Differentiators	TM1	T1/R1
20	20		Integrators	TM5	T1/R1
21	21		Schmitt trigger	TM1	T1/R1
22	22		Multi vibrators	TM1	T1/R1
23	23		<b>Slip Test-II</b>	TM13	T1/R1
24	24	III	Introduction: First Order & Second Order High Pass Filter,	TM2	T1/R1
25	25		First Order Low Pass Filter	TM	T1/R1
26	26		Second Order Low Pass Filter	TM1	T1/R1
27	27		Band Pass Filter	TM1	T1/R1/R2
28	28		Mid Examination-I	TM1	T1/R1/R2
29	29		Active Band Reject Filter,	TM1	T1/R1/R2

30	30		All Pass Filter	TM1	T1/R1/R2
31	31		Principle of Operation of Oscillators	TM1	T1/R1/R2
32	32		Types of Oscillators, RC Phase Shift,	TM5	T1/R1/R2
33	33		Wien Bridge Oscillator,	TM1	T1/R1/R2
34	34		Quadrature type Oscillator	TM1	T1/R1/R2
35	35		Wave Generators: Sawtooth, Square,	TM1	T1/R1/R2
36	36		Triangular Wave Generators	TM2	T1/R1/R2
37	37		VCO	TM1	T1/R1/R2
38	38		<b>Slip Test-III</b>		T1/R1/R2
39	39	IV	Introduction to 555 Timer,	TM1	T1/R1/R2
40	40		functional diagram	TM1	T1/R1/R2
41	41		Monostable operations and applications	TM1	T1/R1/R2
42	42		Astable operations and applications	TM1	T1/R1/R2
43	43		Schmitt Trigger	TM5	T1/R1/R2
44	44		PLL Introduction Principles	TM9	T1/R1/R2
45	45		Description of Individual 565 Blocks	TM2	T1/R1/R2
46	46		Introduction to 555 Timer	TM1	T1/R1/R2
47	47		Revision	TM1	T1/R1/R2
48	48		<b>Slip Test-IV</b>	TM1	T1/R1/R2
49	49	V	Introduction: Basic DAC Techniques, Weighted Resistor Type		T1/R1/R2
50	50		R-2R ladder type,	TM1	T1/R1/R2
51	51		Inverted R-2R Ladder Type,	TM1	T1/R1/R2
52	52		Different types of ADCs: Parallel & Comparator type Counter Type,	TM1	T1/R1/R2
53	53		IC 1408 DAC. Different types of ADC	TM1	T1/R1/R2
54	54		Parallel comparator type ADC	TM1	T1/R1/R2
55	55		counter type ADC	TM1	T1/R1/R2
56	56		Successive Approximation Register Type	TM1	T1/R1/R2
57	57		Dual Slope Integration Type	TM1	T1/R1/R2
58	58		DAC Specifications	TM2	T1/R1/R2
59	59		ADC Specifications	TM2	T1/R1/R2
60	60		Revision	TM1	T1/R1/R2
61	61		<b>Slip Test-V</b>	TM5	T1/R1/R2

S. No	Text Book	Book Name
1.	T1	Ramakanth A. Gayakwad - Op-Amps & Linear ICs, PHI, 2003
2.	R1	John. F. Wakerly – Digital Design Principles and Practices, 3rdEd., Pearson, ,2009.
3.	R2	William D.Stanley- Operational Amplifiers with Linear Integrated Circuits, 4 thEd., Pearson Education India, 2009.

**Teaching methods**

TM1	Chalk and Board	TM7	Debate
TM2	Power point Presentation	TM8	Quiz
TM3	Video Lecture	TM9	NPTEL Videos
TM4	Discussion	TM10	Problem Solving
TM5	Seminar	TM11	Lab Experiment
TM6	Guest Lecture	TM12	Web references
		TM13	Think share