

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

Multiple Modes Teaching Learning Pattern

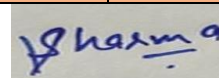
Name of Course with Code: Integrated Circuit (20242104)		Class: B. Tech. ET-II Year		Session: July-Dec 2025	
S. No.	Unit	Content to be Covered	Teaching Session	CO Level	Mode
1.	Unit 1	Differential amplifier configurations	1-2	1	Offline Teaching
2.		Block diagram of Op-amp	3	1	Offline Teaching
3.		Features of practical (IC-741) and ideal op-Amp	4	1	Open discussion
4.		PSRR, CMRR, Slew rate and its Effect	5	1	Activity /Problem based Learning
5.		Input and output offset voltages	6	1	Activity /Problem based Learning
6.		Open and Closed loop configuration of Op-amp	7	1	Activity /Problem based Learning
7.		Inverting and non- inverting amplifier	8-9	1	Learning through experiment/Problem based Learning
8.		Summing amplifier	10	1	Learning through experiment/Problem based Learning
9.		Integrators and differentiators	11	1	Learning through experiment/Problem based Learning
10.		Logarithmic and anti-logarithmic amplifier	12	1	Learning through experiment/Problem based Learning

11.		Schmitt Trigger	13	1	Learning through experiment/Problem based Learning
12.	Unit 2	Characteristics and classifications of filters	14	2	Offline Teaching
13.		Magnitude and frequency response	15	2	Offline Teaching
14.		Frequency response of an amplifier	16	2	Learning through experiment/Problem based Learning
15.		1 st and 2 nd order Low pass and High pass filters	17-18	2	Learning through experiment
16.		Band pass filter	19	2	Learning through experiment

17.		Band reject filter	20	2	Offline Teaching
18.	Unit 3	Oscillators: Phase shift oscillator	21	3	Offline Teaching
19.		Clapp oscillator	22	3	Open discussion
20.		Wien bridge oscillator	23	3	Offline Teaching
21.		Hartley Oscillator	24	3	Offline Teaching
22.		Colpiit's oscillator	25	3	Open discussion
23.		Crystal oscillator using Op-amp	26	3	Offline Teaching
24.		Multivibrators: Introduction to 555 timer IC	27	4	Offline Teaching

25.	Unit 4	Block diagram	28	4	Open discussion
26.		Astable Multivibrator Circuits using 555 timer IC and their applications.	29	4	Learning through projects
27.		Monostable Multivibrator Circuits using 555 timer IC and their applications.	36	4	Learning through projects
28.		Bistable Multivibrator Circuits using 555 timer IC and their applications.	37	4	Learning through projects
29.	Unit 5	Integrated Circuits for Industrial Applications	38	5	Learning through projects
30.		Low noise instrumentation amplifier for Signal Processing	39	5	Learning through projects
31.		Integrated Circuits in AI Edge Devices	40	5	Learning through projects
32.		EV Electronics	41	5	Learning through projects
33.		Review of Unit-V	42	5	Offline Teaching

Online	Offline						
-	Offline Teaching	Group based Learning	Learning through projects	Learning through demonstration	Learning through experiment	Activity /Problem based Learning	Onsite/ field-based learning/Open Discussion
	30%	-	21.21%	-	27.27%	9%	12.12%



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