

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY
Department of Electronics & Communication Engineering

LESSON PLAN

Subject Name: - MSD
Year: - 4th

Subject Code: - ECO-16A
Semester: - 8th

Lecture No	Unit No.	Topic	COs Covered
L 1	1	Switched-Capacitor Circuits Introduction to Sampling Switches: MOSFETS as switches	CO1
L 2		Speed considerations	
L 3		Precision considerations,	
L 4		Charge injection cancellations	
L 5		Switched-Capacitor Amplifiers: Unity Gain Sampler-Buffer	
L 6		Noninverting Amplifier	
L 7		Precision Multiply-by-Two Circuit	
L 8		Switched-Capacitor Integrator	
L 9		Switched-Capacitor Common-Mode Feedback	
L 10		Revision	
L 11	2	Phase Locked Loop: Characterization of a comparator	CO1
L 12		Basic CMOS comparator design	CO2
L 13		Basic CMOS comparator design	
L 14		Analog multiplier design	
L 15		PLL -Simple PLL	
L16		Charge-Pump PLL	
L17		Applications of PLL	CO4
L 18		Revision	CO2
L 19	3	D/A Converter: Sample-and-Hold Characteristics	CO1
L 20		DAC Specifications	CO1
L 21		DAC Architectures: Digital input Codes	CO1
L 22		Resister Steering	CO2, CO3
L 23		R-2R Ladder Networks	
L 24		Current Steering	
L 25		Charge-Scaling DACs	
L 26		Cyclic DACs	
L 27		Pipeline DACs	
L 28	Revision		
L 29	4	A/D Converter: ADC Specifications	CO1

L 30		ADC Architectures: Flash	CO2, CO3
L 31		The Two-Step Flash ADC	
L 32		The Pipeline ADC	
L 33		Integrating ADCs	
L 34		The Successive Approximation ADC	
L 35		The Oversampling ADC	
L 36		Applications of DACs and ADCs	CO4
L 37		Revision	

TEXT BOOKS:

1. Jacob Baker, "CMOS circuit design, layout and simulation", John Wiley India.
2. Razavi, "Design of analog CMOS integrated circuits", McGraw Hill, Edition 2002.

REFERENCE BOOKS:

1. CMOS Analog Circuit Design –Philip E. Allen and Douglas R. Holberg, Oxford University Press, International Second Edition/Indian Edition.
2. Gregorian, Temes, "Analog MOS Integrated Circuit for signal processing", John Wiley & Sons, 1986.
3. Analog Integrated Circuit Design- David A. Johns, Ken Martin, Wiley Student Edition