

		National Institute of Technology Meghalaya An Institute of National Importance												CURRICULUM		
		Programme Master of Technology in VLSI and Embedded Systems						Year of Regulation						2018-19		
Department		Electronics and Communication Engineering						Semester						I		
Course Code	Course Name	Credit Structure				Marks Distribution										
		L	T	P	C	Continuous Evaluation	VIVA	Total								
EC 565	Mixed Signal Design Lab	0	0	2	1	70	30	100								
Course Objectives	To know about Analog to Digital Convertors CMOS based design	Course Outcomes	CO1	Able to design and analyze Analog to Digital Convertors CMOS based design												
	To know about Digital to Analog Convertors CMOS based design		CO2	Able to design and analyze Digital to Analog Convertors CMOS based design												
	To know about Phase lock loop and Delay lock loop		CO3	Able to design and analyze on Phase lock loop and Delay lock loop												
No.	COs	Mapping with Program Outcomes (POs)												Mapping with PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	CO1	3	3	0	1	0	0	0	0	2	0	0	0	3	0	3
2	CO2	3	3	0	1	0	0	0	0	2	0	0	0	2	0	2
3	CO3	2	3	3	1	2	0	0	0	0	0	0	0	2	3	2
SYLLABUS																
No.	Content												Hours	COs		
I	Suggested list of Experiments: 1. Design of CMOS Op-Amp based Comparator. 2. Design of DAC 3. Analysis of DAC properties like Linearity (DNL, INL), Noise, PSRR, etc 4. Design of ADC 5. Analysis of ADC properties like Linearity (DNL, INL), Noise, PSRR, etc 6. Design of PLL 7. Analysis of PLL properties like Capture frequency, Linearity, Noise etc												1 2 2 2 2 2 1	CO1 CO2 CO3		
Total Hours												12				
Essential Readings																
1. Baker, Li, Boyce, "CMOS Circuits Design, Layout and Simulation", TMH.																
2. Allen Halburg, "Analog Integrated Circuits", Oxford																
3. David A. Johns, Ken Martin, John , "Analog Integrated Circuit Design" Wiley & Sons.																
Supplementary Readings																
1. B.Razavi, "Design of AnalogCMOS Circuits" ,TMH																
2. R. Gregorian, Gabor. C. Temes , "Analog MOS ICs for Signal Processing " , John Wiley & Sons.																