

Program Schedule (Tentative):

Day and Date	Time	Module*/Activity	Instructor/TA
17.06.2024 1.	9:00 – 10:00 am	Introduction to the Course	Prof. Yash/Manish
	10:00 – 11:00 am	Introduction to VLSI	Prof. Yash Agrawal
	11:00 – 11:15 am	Break	
	11:15 am – 12:15 pm	VLSI, AI/ML, Future Trend and Applications	Prof. Rohit Kumar, IIT Ropar
	12:15 am – 1:15 pm	Introduction to SPICE Netlist	Prof. Yash Agrawal
	1:15 pm – 2:00 pm	Lunch Break	
	2:00 pm - 4:00 pm	Lab Exercise on SPICE and Cadence Simulator for Circuit Implementation and Analysis	Prof. Yash Agrawal
	4:00 pm – 4:15 pm	Tea/Coffee Break	
	4:15 pm – 6:15 pm	Lab Exercise on Circuit Design using BJTs and MOSFETs using SPICE	Prof. Yash Agrawal
18.06.2024 2.	9:00 – 10:00 am	Artificial Intelligence and Overview	Prof. Manish Khare
	10:00 – 11:00 am	Basic of Machine Learning (Part-I)	Prof. Manish Khare
	11:00 – 11:15 am	Break	
	11:15 am – 12:15 pm	Basic of Machine Learning (Part-II)	Prof. Manish Khare
	12:15 am – 1:15 pm	Basic of Machine Learning (Part-III)	Prof. Manish Khare
	1:15 pm – 2:00 pm	Lunch Break	
	2:00 pm - 4:00 pm	Lab on AI/ML	Prof. Manish Khare
	4:00 pm – 4:15 pm	Tea/Coffee Break	
	4:15 pm – 6:15 pm	Lab on AI/ML	Prof. Manish Khare
19.06.2024 3.	9:00 – 10:00 am	On-Chip VLSI Interconnects	Prof. Yash Agrawal
	10:00 – 11:00 am	AI/ML Model for Interconnects	Prof. Somesh Kumar, ABV-IIITM Gwalior
	11:00 – 11:15 am	Break	
	11:15 am – 12:15 pm	Variability and Reliability Effects in VLSI Design	Prof. Yash Agrawal
	12:15 am – 1:15 pm	Monte Carlo Analysis	Prof. Yash Agrawal
	1:15 pm – 2:00 pm	Lunch Break	
	2:00 pm - 4:00 pm	Lab on Interconnect Design and Analysis	Prof. Yash Agrawal
	4:00 pm – 4:15 pm	Tea/Coffee Break	
	4:15 pm – 6:15 pm	Lab on Variability and Reliability Analysis	Prof. Yash Agrawal

20.06.2024	9:00 – 10:00 am	Deep Learning: Conceptual and Practical Guide (Part-I)	Prof. Bakul Gohel
	10:00 – 11:00 am	Deep Learning: Conceptual and Practical Guide (Part-II)	Prof. Bakul Gohel
	11:00 – 11:15 am	Break	
	11:15 am – 12:15 pm	Deep Learning: Conceptual and Practical Guide (Part-III)	Prof. Bakul Gohel
	12:15 am – 1:15 pm	Deep Learning: Conceptual and Practical Guide (Part-IV)	Prof. Bakul Gohek
	1:15 pm – 2:00 pm	Lunch Break	
	2:00 pm - 4:00 pm	VLSI Interconnect System Design using AI/ML	Prof. Yash Agrawal
	4:00 pm – 4:15 pm	Tea/Coffee Break	
	4:15 pm – 6:15 pm	VLSI Interconnect System Design using AI/ML	Prof. Yash Agrawal
21.06.2024	9:00 – 10:00 am	Hardware Design for AI/ML	Prof. Binod Kumar, IIT Jodhpur
	10:00 – 11:00 am	Applications of AI/ML in Embedded and VLSI Design	Prof. Vinay Palaparthu
	11:00 – 11:15 am	Break	
	11:15 am – 12:15 pm	Lab on Exploratory Data Analysis	Prof. Vinay Palaparthu
	12:15 am – 1:15 pm	Lab on Exploratory Data Analysis	Prof. Vinay Palaparthu
	1:15 pm – 2:00 pm	Lunch Break	
	2:00 pm - 4:00 pm	Applying Computational Intelligence and Machine Learning to address Computational Problems in VLSI Systems	Prof. Jai Narayan Tripathi, IIT Jodhpur
	4:00 pm – 4:15 pm	Tea/Coffee Break	
	4:15 pm – 6:15 pm	Emerging and Futuristic Applications of AI/ML in VLSI Domain	Prof. Manish Khare