NEW HORIZON COLLEGE OF ENGINEERING

Name of the Event	**Expert lecture**
Date	03-10-2024
Beneficiary	V SEMESTER STUDENTS
Faculty Coordinator	Dr. M. Jayanthi and Dr. P.Sudhakiran
Write up	Title: "Advanced CMOS VLSI Design Techniques: From Fundamentals to Cutting-Edge Innovations" The Department of Electronics and Communication Engineering organized an expert lecture on the topic "Advanced CMOS VLSI Design Techniques: From Fundamentals to Cutting-Edge Innovations". The session provided valuable insights into CMOS VLSI design techniques, covering both fundamental concepts and advanced methodologies. The focus was on low-power design strategies, device scaling, and modern CMOS innovations such as FinFETs and SOI technology. The lecture was aimed at equipping participants with practical knowledge to address challenges in designing high-performance VLSI systems. The session concluded with an interactive Q&A segment, where participants actively engaged in discussions with the speaker. Around 73 students attended the session. It was conducted for v semester students.

NEW HORIZON
COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION

Expert Lecture

Course & Code: CMOS VLSI Design (22ECE53)

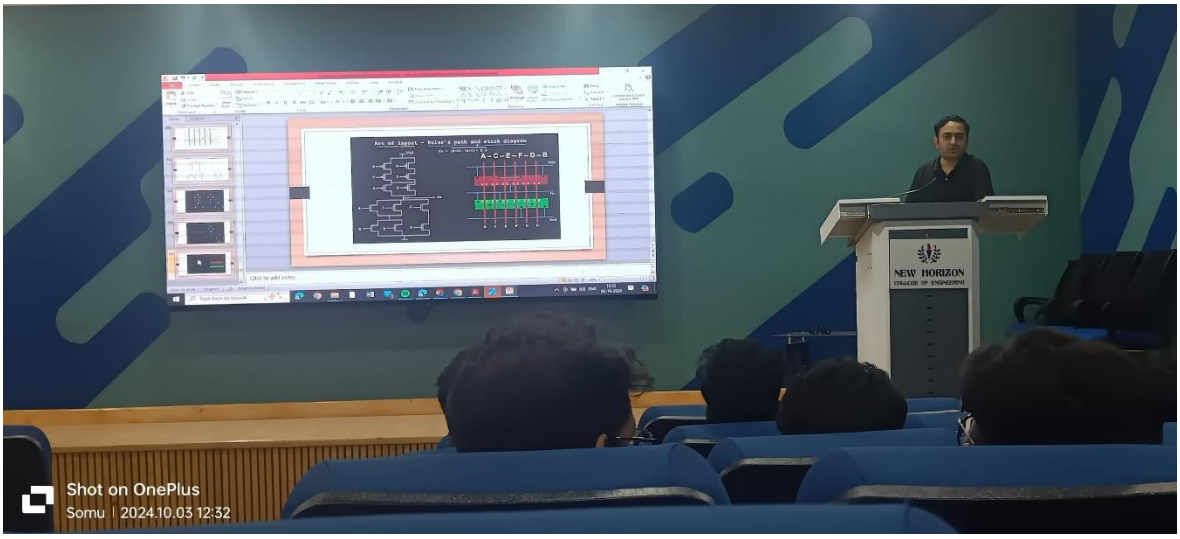
Advanced CMOS VLSI Design Techniques
(From Fundamentals to Cutting-Edge Innovations)

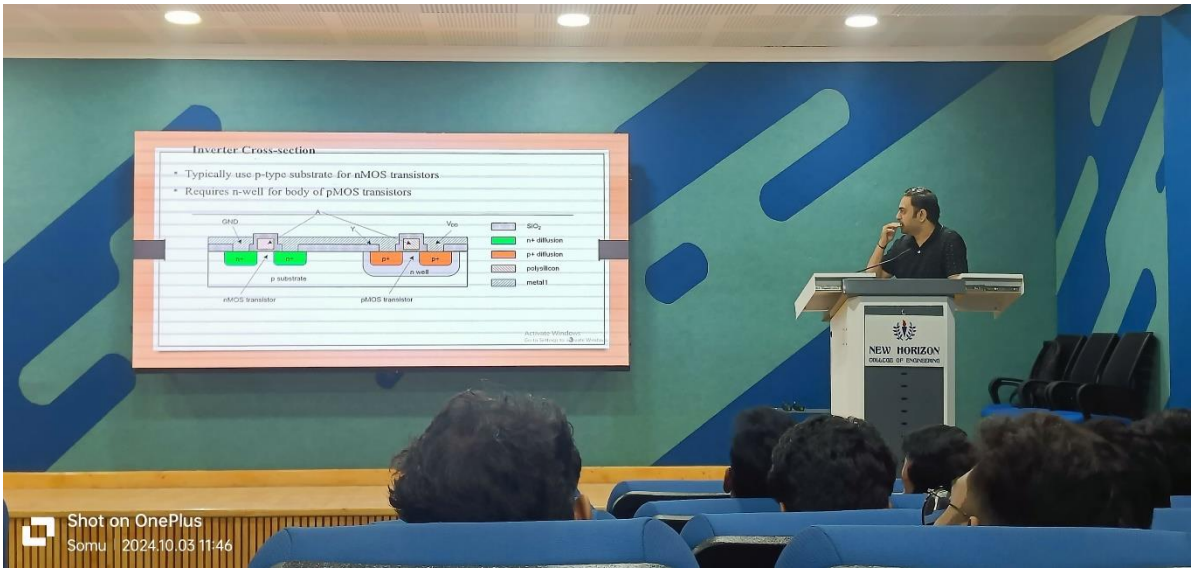
Sameer Kirve
Principal Memory Layout Engineer,
Laksh Semiconductor

3-10-2024	5th Semester (ECE)
11:00 AM to 1:00 PM	Tejas Seminar Hall

Faculty Coordinators:
Dr. Jayanthi M
Dr. Sudhakiran P

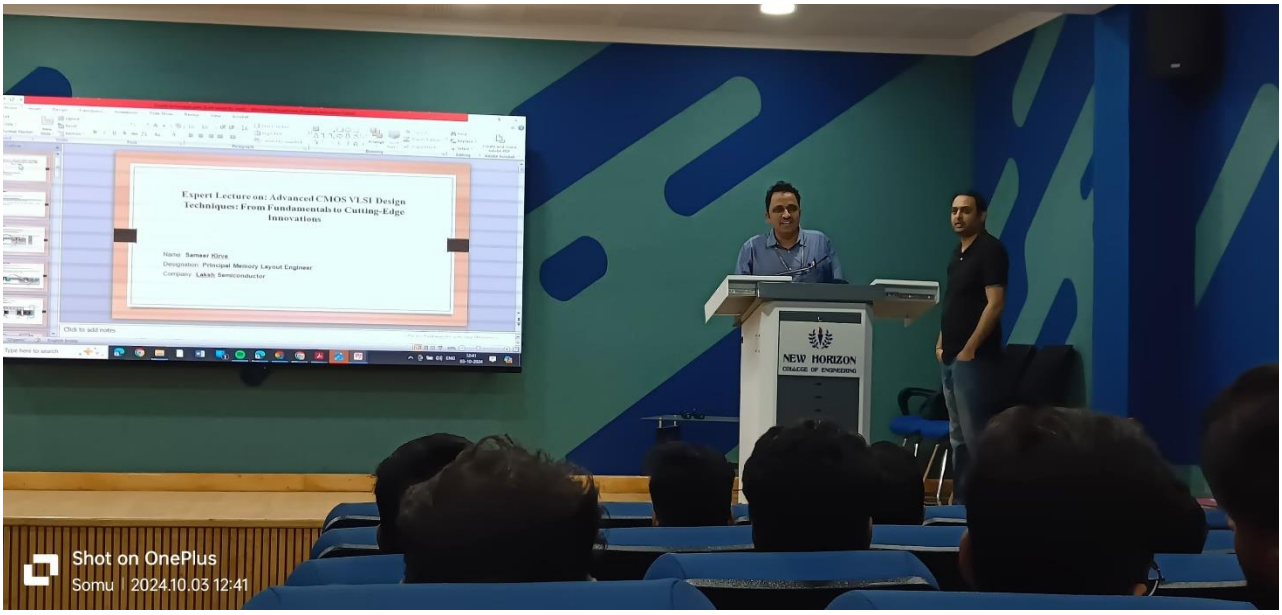
Convenor:
Dr. Aravinda K
Professor & HoD-ECE


Art of layout – Euler's path and stick diagram
A–C–E–F–D–B
NEW HORIZON
COLLEGE OF ENGINEERING
Shot on OnePlus
Somu | 2024.10.03 12:32


Inverter Cross-section
Typically use p-type substrate for nMOS transistors
Requires n-well for body of pMOS transistors
GND
Vout
Vdd
SiO2
n+ diffusion
p+ diffusion
polysilicon
metal1
p substrate
n well
nMOS transistor
pMOS transistor
NEW HORIZON
COLLEGE OF ENGINEERING
Shot on OnePlus
Somu | 2024.10.03 11:46


Art of layout – Euler's path and stick diagram
A–C–E–F–D–B
NEW HORIZON
COLLEGE OF ENGINEERING
Shot on OnePlus
Somu | 2024.10.03 12:40


Shot on OnePlus
Somu | 2024.10.03 11:29


Expert Lecture on: Advanced CMOS VLSI Design Techniques: From Fundamentals to Cutting-Edge Innovations
Name: Samaer Kirve
Designation: Principal Memory Layout Engineer
Company: Lakah Semiconductor
NEW HORIZON
COLLEGE OF ENGINEERING
Shot on OnePlus
Somu | 2024.10.03 12:41


NEW HORIZON
COLLEGE OF ENGINEERING
B116-C

Attendance

NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Expert Lecture on: Advanced CMOS VLSI Design Techniques: From Fundamentals to Cutting-Edge Innovation Attendance sheet

s.no	USN	Name of the student	Name of the Section	Signature of student
1	1NH22EC019	Anubrata Ray	A	Anubrata Ray.
2	1NH22EC053	Rohit. Y. Patil	C	
3	1NH22EC087	Sagib Hussain Das	C	
4	1NH22EC143	Sakshi. C. Mattin	C	
5	1NH22EC140	Pallu Krishnan	C	
6	1NH22EC081	Shree Vas	C	
7	1NH22EC175	Vaishu Sharma	C	
8	1NH22EC110	Thanushree R.	C	
9	1NH22EC128	R Lakshmanan	C	
10	1NH22EC122	Hamsavarun	C	
11	1NH22EC139	V. Mallavika	C	
12	1NH22EC176	Varsha Reddy B	C	
13	1NH22EC051	Sneha S J	C	
14	1NH22EC154	Sindhu. S.	C	
15	1NH22EC006	Agnes Arul	A	
16	1NH22EC009	AKSHAYAPRIYA-S	A	
17	1NH22EC036	Charanya. S. Reddy	A	
18	1NH22EC037	Harsha. G. J	A	
19	1NH22EC034	Chandana. M	A	
20	1NH22EC016	Amulya K	A	
21	1NH22EC015	Bhavitha. H.K.	A	
22	1NH22EC066	Lavanya Kumar	A	
23	1NH22EC062	Ashok K	A	
24	1NH22EC021	Darshan Gowda PS	A	
25	1NH22EC003	Abhishek. L. G	A	
26	1NH22EC056	Harisai Nikhil S	A	
27	1NH22EC070	P. Ramanjaneyulu	A	
28	1NH22EC058	G. Vishnuvardhan Reddy	A	
29	1NH22EC142	S. Sunethana V	C	
30	1NH22EC139	P. Sowjanyamrudula	C	
31	1NH22EC180	V. V. Sai Kiranreddy	C	
32	1NH22EC167	Sai Krishna	C	
33	1NH22EC111	Prajwal	C	
34	1NH22EC183	Vaishnavi C	C	
35	1NH22EC185	Varshini Gadu	C	
36	1NH22EC133	Shravani P	C	
37	1NH22EC129	Rajitha. K	C	
38	1NH22EC145	Sona Neesha	C	
39	1NH22EC186	Yeddula Reethika	C	
40	1NH22EC160	Satya A	C	

NEW HORIZON COLLEGE OF ENGINEERING

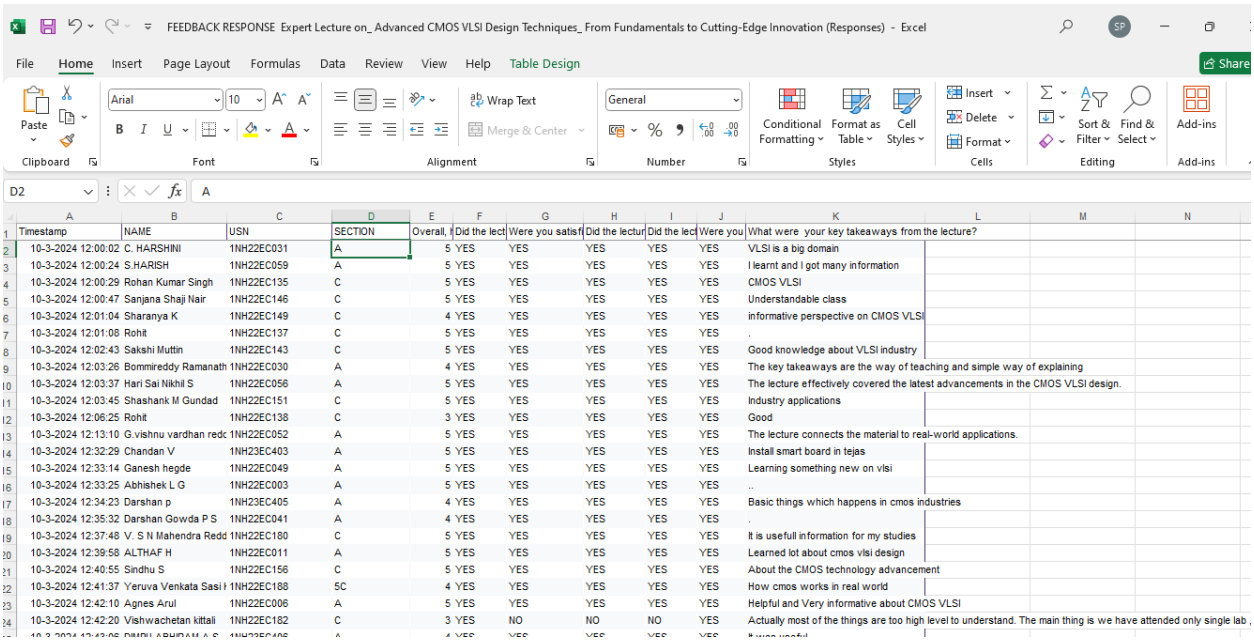
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

32	INH22EC053	G Deepthi chowday	A	
33	INH22EC038	Keerthi ch	A	
34	INH22EC033	Rafi Kha	A	
35	INH22EC040	Prathyusha	A	
36	INH22EC047	Dsuva. S	A	
37	INH22EC048	Darshan. M	A	
38	INH23EC405	Darshan. P	A	
39	INH22EC160	Sriraj Ramesh	C	
40	INH22EC020	Anupama. S	A	
41	INH22EC004	Abuzar Yasin	A	
42	INH22EC008	Akshay. S. J	A	
43	INH22EC057	Manka. T	A	
44	INH22EC058	Hariprya. K	A	
45	INH22EC179	Varahith kumar D P	C	
46	INH23EC409	Manoj. K S	A	
47	INH22EC049	Ganesh Hegde	A	
48	INH23EC408	Dimpu Abhiram A. J	A	
49	INH23EC403	Chandan. V	A	
50	INH23EC411	Raghavendra. H	A	
51	EC151	Shashank	C	
52	EC159	Somashekhar	C	
53	EC185	Yashas	C	
54	EC133	Rithesh	C	
55	EC184	Vivek	C	
56	EC130	Ravikiran	C	
57	EC189	Chandru	C	
58	EC182	Vishwachetan	C	
59	EC011	Althaf. H	A	
60	EC050	girish	A	
61	EC032	DS Yashwanth	A	
62	EC183	Vishwanath	A	
63	EC125	R. Vijay	C	
64	EC126	Rahul. S.P	C	
65	EC152	Sharavan kumar	C	
66	INH22EC180	Mahendra Reddy	C	
67	INH22EC124	R. Lokeshwaran	C	R. Lokeshwaran
68	INH22EC141	S. KARAN	C	
69	INH22EC155	SIDDHARTH. S	C	
70	INH22EC048	Shanki Sharma	A	
71	INH22EC148	Shailesh	C	
72	INH22EC144	Sanchita	C	Sanchita
73	INH22EC127	Rahul Mahesh	C	Rahul

Faculty Coordinator

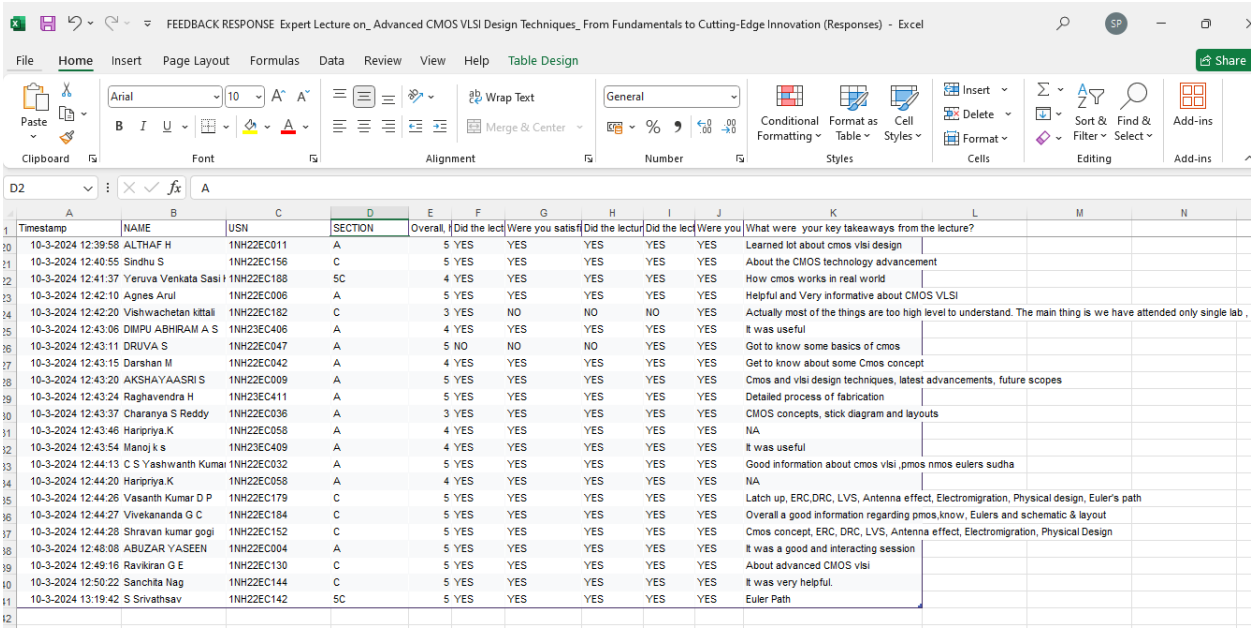
HOD-ECE

Feedback



FEEDBACK RESPONSE Expert Lecture on_ Advanced CMOS VLSI Design Techniques_ From Fundamentals to Cutting-Edge Innovation (Responses) - Excel

Timestamp	NAME	USN	SECTION	Overall, t	Did the lect	Were you satisf	Did the lectur	Did the lect	Were you	What were your key takeaways from the lecture?
10-3-2024 12:00:02	C. HARSHINI	1NH22EC031	A	5	YES	YES	YES	YES	YES	VLSI is a big domain
10-3-2024 12:00:24	S.HARISH	1NH22EC059	A	5	YES	YES	YES	YES	YES	I learnt and I got many information
10-3-2024 12:00:29	Rohan Kumar Singh	1NH22EC135	C	5	YES	YES	YES	YES	YES	CMOS VLSI
10-3-2024 12:00:47	Sanjana Shaji Nair	1NH22EC146	C	5	YES	YES	YES	YES	YES	Understandable class
10-3-2024 12:01:04	Sharanya K	1NH22EC149	C	4	YES	YES	YES	YES	YES	informative perspective on CMOS VLSI
10-3-2024 12:01:08	Rohit	1NH22EC137	C	5	YES	YES	YES	YES	YES	.
10-3-2024 12:02:43	Sakshi Muttin	1NH22EC143	C	5	YES	YES	YES	YES	YES	Good knowledge about VLSI industry
10-3-2024 12:03:26	Bommireddy Ramanath	1NH22EC030	A	4	YES	YES	YES	YES	YES	The key takeaways are the way of teaching and simple way of explaining
10-3-2024 12:03:37	Hari Sai Nikhil S	1NH22EC056	A	5	YES	YES	YES	YES	YES	The lecture effectively covered the latest advancements in the CMOS VLSI design.
10-3-2024 12:03:45	Shashank M Gundad	1NH22EC151	C	5	YES	YES	YES	YES	YES	Industry applications
10-3-2024 12:06:25	Rohit	1NH22EC138	C	3	YES	YES	YES	YES	YES	Good
10-3-2024 12:13:10	G.vishnu vardhan redc	1NH22EC052	A	5	YES	YES	YES	YES	YES	The lecture connects the material to real-world applications.
10-3-2024 12:32:29	Chandan V	1NH23EC403	A	5	YES	YES	YES	YES	YES	Install smart board in tejas
10-3-2024 12:33:14	Ganesh hegde	1NH22EC049	A	5	YES	YES	YES	YES	YES	Learning something new on vlsi
10-3-2024 12:33:25	Abhishek L G	1NH22EC003	A	5	YES	YES	YES	YES	YES	..
10-3-2024 12:34:23	Darshan p	1NH23EC405	A	4	YES	YES	YES	YES	YES	Basic things which happens in cmos industries
10-3-2024 12:35:32	Darshan Gowda P S	1NH22EC041	A	4	YES	YES	YES	YES	YES	.
10-3-2024 12:37:48	V. S N Mahendra Redd	1NH22EC180	C	5	YES	YES	YES	YES	YES	It is usefull information for my studies
10-3-2024 12:39:58	ALTHAF H	1NH22EC011	A	5	YES	YES	YES	YES	YES	Learned lot about cmos vlsi design
10-3-2024 12:40:55	Sindhu S	1NH22EC156	C	5	YES	YES	YES	YES	YES	About the CMOS technology advancement
10-3-2024 12:41:37	Yeruva Venkata Sasi I	1NH22EC188	SC	4	YES	YES	YES	YES	YES	How cmos works in real world
10-3-2024 12:42:10	Agnes Arul	1NH22EC006	A	5	YES	YES	YES	YES	YES	Helpful and Very informative about CMOS VLSI
10-3-2024 12:42:20	Vishwachetan kittali	1NH22EC182	C	3	YES	NO	NO	NO	YES	Actually most of the things are too high level to understand. The main thing is we have attended only single lab ,



Timestamp	NAME	USN	SECTION	Overall, h	Did the lect	Were you satisfi	Did the lectur	Did the lect	Were you	What were your key takeaways from the lecture?
10-3-2024 12:39:58	ALTHAF H	1NH22EC011	A	5	YES	YES	YES	YES	YES	Learned lot about cmos vlsi design
10-3-2024 12:40:55	Sindhu S	1NH22EC156	C	5	YES	YES	YES	YES	YES	About the CMOS technology advancement
10-3-2024 12:41:37	Yeruva Venkata Sasi I	1NH22EC188	5C	4	YES	YES	YES	YES	YES	How cmos works in real world
10-3-2024 12:42:10	Agnes Arul	1NH22EC006	A	5	YES	YES	YES	YES	YES	Helpful and Very informative about CMOS VLSI
10-3-2024 12:42:20	Vishwachetan kittali	1NH22EC182	C	3	YES	NO	NO	NO	YES	Actually most of the things are too high level to understand. The main thing is we have attended only single lab ,
10-3-2024 12:43:06	DIMPU ABHIRAM A S	1NH23EC406	A	4	YES	YES	YES	YES	YES	It was useful
10-3-2024 12:43:11	DRUVA S	1NH22EC047	A	5	NO	NO	NO	YES	YES	Got to know some basics of cmos
10-3-2024 12:43:15	Darshan M	1NH22EC042	A	4	YES	YES	YES	YES	YES	Get to know about some Cmos concept
10-3-2024 12:43:20	AKSHAYAASRI S	1NH22EC009	A	5	YES	YES	YES	YES	YES	Cmos and vlsi design techniques, latest advancements, future scopes
10-3-2024 12:43:24	Raghavendra H	1NH23EC411	A	5	YES	YES	YES	YES	YES	Detailed process of fabrication
10-3-2024 12:43:37	Charanya S Reddy	1NH22EC036	A	3	YES	YES	YES	YES	YES	CMOS concepts, stick diagram and layouts
10-3-2024 12:43:46	Haripriya.K	1NH22EC058	A	4	YES	YES	YES	YES	YES	NA
10-3-2024 12:43:54	Manoj k s	1NH23EC409	A	4	YES	YES	YES	YES	YES	It was useful
10-3-2024 12:44:13	C S Yashwanth Kumar	1NH22EC032	A	5	YES	YES	YES	YES	YES	Good information about cmos vlsi ,pmos nmos eulers sudha
10-3-2024 12:44:20	Haripriya.K	1NH22EC058	A	4	YES	YES	YES	YES	YES	NA
10-3-2024 12:44:26	Vasanth Kumar D P	1NH22EC179	C	5	YES	YES	YES	YES	YES	Latch up, ERC,DRC, LVS, Antenna effect, Electromigration, Physical design, Euler's path
10-3-2024 12:44:27	Vivekananda G C	1NH22EC184	C	5	YES	YES	YES	YES	YES	Overall a good information regarding pmos,know, Eulers and schematic & layout
10-3-2024 12:44:28	Shravan kumar gogi	1NH22EC152	C	5	YES	YES	YES	YES	YES	Cmos concept, ERC, DRC, LVS, Antenna effect, Electromigration, Physical Design
10-3-2024 12:48:08	ABUZAR YASEEN	1NH22EC004	A	5	YES	YES	YES	YES	YES	It was a good and interacting session
10-3-2024 12:49:16	Ravikiran G E	1NH22EC130	C	5	YES	YES	YES	YES	YES	About advanced CMOS vlsi
10-3-2024 12:50:22	Sanchita Nag	1NH22EC144	C	5	YES	YES	YES	YES	YES	It was very helpful.
10-3-2024 13:19:42	S Srivathsav	1NH22EC142	5C	5	YES	YES	YES	YES	YES	Euler Path

Faculty Coordinator HOD-ECE