

Venue: Multimedia Classroom = (FF-11)

14th June 2024, Friday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Introduction to the fabrication process of leading node logic technology	Prof. Shankar Kumar Selvaraja
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Introduction to the fabrication process of leading node logic technology	Prof. Shankar Kumar Selvaraja
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Introduction to the fabrication process of leading node logic technology	Prof. Sushobhan Avasthi
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Introduction to the fabrication process of leading node logic technology	Prof. Sushobhan Avasthi

15th June 2024, Saturday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 1: Introduction to SEMulator3D	Ms. Shubhangi Bhardwaj
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 1: Introduction to SEMulator3D	Ms. Shubhangi Bhardwaj
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 1: Install SEMulator3D and run an example	Ms. Aashi Panchal
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 1: Install SEMulator3D and run an example	Ms. Aashi Panchal

17th June 2024, Monday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 2: Circuit to layout	Prof. Sushobhan Avasthi
11:30 AM to 11:45 AM	Tea Break	

11:45 AM to 1:00 PM	Lecture 2: Circuit to layout	Prof. Sushobhan Avasthi
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 2: Create a layout of NMOS, PMOS and inverter in SEMulator3D	Shubhangi Bhardwaj
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 2: Create a layout of NMOS, PMOS and inverter in SEMulator3D	Shubhangi Bhardwaj

18th June 2024, Tuesday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 3: Isolation	Prof. Shankar Kumar Selvaraja
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 3: Isolation	Prof. Shankar Kumar Selvaraja
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 3: LOCOS verses STI	Aashi Panchal
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 3: LOCOS verses STI	Aashi Panchal

19th June 2024, Wednesday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 4: Evolution of gate technology	Prof. Shankar Kumar Selvaraja
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 4: Evolution of gate technology	Prof. Shankar Kumar Selvaraja
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 4: Gate-first verses gate-last	Aashi Panchal
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 4: Gate-first verses gate-last	Aashi Panchal

20th June 2024, Thursday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 5: Source & Drain Implantation	Prof. Sushobhan Avasthi
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 5: Source & Drain Implantation	Prof. Sushobhan Avasthi
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 5: Implantation for Source and Drain	Shubhangi Bhardwaj
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 5: Implantation for Source and Drain	Shubhangi Bhardwaj

21st June 2024, Friday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 6: Silicidation	Prof. Sushobhan Avasthi
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 6: Silicidation	Prof. Sushobhan Avasthi
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 6: Different metal-silicides	Aashi Panchal
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 6: Different metal-silicides	Aashi Panchal

24th June 2024, Monday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 7: Replacement metal gate	Prof. Shankar Kumar Selvaraja
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 7: Replacement metal gate	Prof. Shankar Kumar Selvaraja
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 7: Replacement metal gate	Aashi Panchal
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 7: Replacement metal gate	Aashi Panchal

14th to 28th June 2024

25th June 2024, Tuesday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 8: Damascene process	Prof. Shankar Kumar Selvaraja
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 8: Damascene process	Prof. Shankar Kumar Selvaraja
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 8: Replacement metal gate	Shubhangi Bhardwaj
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 8: Replacement metal gate	Shubhangi Bhardwaj

26th June 2024, Wednesday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 9: Failure mechanisms	Prof. Sushobhan Avasthi
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 9: Failure mechanisms	Prof. Sushobhan Avasthi
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 9: Failure in devices	TBD
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 9: Failure in devices	TBD

27th June 2024, Thursday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Lecture 10: DRC	Prof. Shankar Kumar Selvaraja
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Lecture 10: DRC	Prof. Shankar Kumar Selvaraja
1:00 PM to 2:00 PM	Lunch Break (Second Floor Cafeteria)	
2:00 PM to 3:30 PM	Assignment 10: Process limitations and design rules	TBD
3:30 PM to 3:45 PM	Tea Break	
3:45 PM to 5:30 PM	Assignment 10: Process limitations and design rules	TBD



Lam Research, India – CeNSE, IISc Training Program
Semiconductor skills development through SEMulator3D
14th to 28th June 2024



28th June 2024, Friday

Time	Topic	Speaker
9:00 AM – 1:00 PM	Discussion on logistics, licensing, & closure	Prof. Sushobhan Avasthi
11:30 AM to 11:45 AM	Tea Break	
11:45 AM to 1:00 PM	Discussion on logistics, licensing, & closure	Prof. Sushobhan Avasthi