DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code: **567** **M.Tech. (VLSI)**
Department: **EC** **Department of Electronics and Communication Engineering**
Year: **I**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
Semester- I (Autumn)														
1.	ECN-572	MOS Device Physics	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	ECN-573	Digital VLSI Circuit Design	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	ECN-576	Simulation Lab-1	PCC	2	0	0	3	0	3	-	100	-	-	-
		Total		**10**										
Semester-II (Spring)														
1.	ECN-581	Analog VLSI Circuit Design	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	ECN-578	Digital System Design	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.		Elective Lab	PEC	2	0	0	3	0	3	-	100	-	-	-
		Total		**10**										

12 OCT 2021

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Program Code: **567** **M.Tech. (VLSI)**
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Year: **II**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
Semester-III (Autumn)														
1.	ECN-584	Mixed Signal Circuit Design	PCC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
2.	ECN-700	Seminar	SEM	2	0	0	0	0	3	-	100	-	-	-
3.		Elective 1	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		**10**										
Semester-IV (Spring)														
1.		Elective 2	PEC	4	-	-	-	-	-	-	-	-	-	-
2.		Elective 3	PEC	4	-	-	-	-	-	-	-	-	-	-
3.		Elective Lab	PEC	2	0	0	3	0	3	-	100	-	-	-
		Total		**10**										

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Program Code: **567** **M.Tech. (VLSI)**
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Year: **III**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
Semester- I (Autumn)														
1.	ECN-701A	Dissertation Stage-I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		**12**										
Semester-II (Spring)														
1.	ECN-701B	Dissertation Stage-II (continued from III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		**18**										

Summary						
Semester	1	2	3	4	5	6
Semester-wise Total Credits	**10**	**10**	**10**	**10**	**12**	**18**
Total Credits	**70**					

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Program Elective Courses M.Tech. (VLSI)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1.	ECN-591	VLSI Physical Design	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
2.	ECN-571	Semiconductor Device Modeling	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
3.	ECN-586	Device & Circuit Interaction	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
4.	ECN-593	CAD for VLSI	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
5.	ECN-594	VLSI Digital Signal Processing	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
6.	ECN-595	VLSI Testing and Testability	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
7.	ECN-596	MEMS and NEMS	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
8.	ECN-588	Performance & Reliability of VLSI Circuits	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
9.	ECN-577	VLSI Technology	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
10.	ECN-582	Semiconductor Microwave Devices and Applications	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
11.	ECN-583	Optoelectronic Materials and Devices	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
12.	ECN-585	VLSI System Design	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
13.	ECN-587	Nano Scale Devices	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
14.	ECN-589	Advanced VLSI Interconnects	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
15.	ECN-590	Organic Electronics	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
16.	ECN-592	Compound Semiconductor and RF Devices	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-

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17.	ECN-575	Microelectronics Lab-1	PEC	2	0	0	3	0	3	-	100	-	-	-
18.	ECN-598	Simulation Lab-2	PEC	2	0	0	2	0	-	-	100	-	-	-
19.	ECN-597	Microelectronics Lab-2	PEC	2	0	0	2	0	-	-	100	-	-	-
20.	ECN-525	Hardware Architecture for Deep Learning	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-

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