

School of Engineering and Technology

2025-26 M.Tech. (VLSI Design)

	Course Code	Course Title	Contact Hours per Week			Credits	ETE Duration	Weightage (%)		
			L	T	P		Hours	* CW	** MTE	ETE
Autumn Semester	EC 23.541	Semiconductor Device Models for Circuit Simulation	3	1	0	4	3	10	40	50
	EC 23.543	VLSI Fabrication Technology	3	1	0	4	3	10	40	50
	EC 23.545	Elements of Digital VLSI Design	3	1	0	4	3	10	40	50
	MA 23.509	Advanced Mathematics	3	1	0	4	3	10	40	50
		Elective I	3	1	0	4	3	10	40	50
	EC 23.571	Digital VLSI Design Laboratory	0	0	4	2	2	20	40	40
		SEFS (Non Graded)	0	0	2	1	2	50		50
	Sub Total		17	5	4	22				

	Course Code	Course Title	Contact Hours per Week			Credits	ETE Duration	Weightage (%)		
			L	T	P		Hours	* CW	** MTE	ETE
Spring Semester	RM 23.502	Research Methodology	3	0	0	3	3	10	40	50
	EC 23.542	Analog VLSI Design	3	1	0	4	3	10	40	50
	EC 23.544	VLSI Systems and Subsystems	3	1	0	4	3	10	40	50
	EC 23.546	Embedded Systems Design	3	1	0	4	3	10	40	50
		Elective II	3	1	0	4	3	10	40	50
		Elective III	3	1	0	4	3	10	40	50
	EC 23.572	Analog VLSI Design Laboratory	0	0	4	2	2	20	40	40
	EC 23.574	HDL Programming Laboratory	0	0	4	2	2	20	40	40
		SEFS (Non Graded)	0	0	2	1	2	50		50
	Sub Total		17	3	8	27				

Second Year

Autumn Semester	Course Code	Course Title	Contact Hours per Week			Credits	ETE Duration	Weightage (%)		
			L	T	P		Hours	CW*	MTE**	ETE
	EC 23.601	Seminar	-	-	-	4	-	--	20	80
	EC 23.603	Project	-	-	-	4	-	--	20	80
	EC 23.605	Dissertation Preliminary	-	-	-	8	-		20	80
	<i>Sub Total</i>		-	-	-	16	-			

Spring Semester	Course Code	Course Title	Contact Hours per Week			Credits	ETE Duration	Weightage (%)		
			L	T	P		Hours	CW*	MTE**	ETE
	EC 23.606	Dissertation Final	-	-	-	16	-	--	20	80
	<i>Sub Total</i>		-	-	-	16	-			

Total Credits = 22+27+16+16 = 81

List of Electives

Autumn Semester (Elective I)

1.	EC 23.551	Design of Digital Systems
2.	EC 23.553	ASIC Design
3.	EC 23.555	Advanced Digital Communication
4.	EC 23.557	RF and Microwave Engineering

Spring Semester (Elective II)

5.	EC 23.552	VLSI Physical Design and Design Automation
6.	EC 23.554	MEMS and Microsystems (Elective II)
7.	EC 23.556	Advanced Wireless Communication
8.	EC 23.558	Advanced Antenna & Wave Propagation

Spring Semester (Elective III)

9.	EC 23.560	Low power VLSI Technology
10.	EC 23.562	Mixed-Signal Systems
11.	EC 23.564	Advanced Digital Signal Processing
12.	EC 23.566	Wireless Sensor Networks



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(Established u/s 2 (f) of the UGC Act, 1959)

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