Course Structure for M.Tech ECE (Microelectronics & VLSI Design)

Admitted 2024 onwards

Semester I

SN	Course Code	Course Name	L- T- P (Hours)	Credits
1		Advanced Communication System	3-0-0	3
2		VLSI Circuits & System Design	3-0-0	3
3		DE -I	3-0-0	3
4		DE – II	3-0-0	3
5		Research Methodology and IPR	2-0-0	2
6		Advanced Communication System Lab	0-0-2	1
7		VLSI Circuits & System Design Lab	0-0-2	1
8		ECE Design & Simulation Lab	0-0-2	1
		TOTAL	20	17

Semester II

SN	Course Code	Course Name	L –T- P (Hours)	Credits
1		Advanced Digital Signal Processing	3-0-0	3
2		Advanced Microprocessor& Microcontroller	3-0-0	3
3		DE –III (Based on Specialization)	3-0-0	3
4		DE – IV (Based on Specialization)	3-0-0	3
5		DE – V (Based on Specialization)	3-0-0	3
6		Advanced Microprocessor& Microcontroller Lab	0-0-2	1
7		Advanced Digital Signal Processing Lab	0-0-2	1
8		Minor Project (based on Specialization)	0-0-6	3
9		Audit Course - I	2-0-0	Qualifying
		TOTAL	27	20

Semester III

SN	Course Code	Course Name	L- T –P (Hours)	Credits
1		Open Elective	3-0-0	3
		DE – VI (Based on Specialization)	3-0-0	3
2		Seminar and Term Paper	0-0-4	2
3		Project Based Learning	0-0-8	4
4		Dissertation - I	0-0-8	4
5		Audit course -II	2-0-0	Qualifying
6		**TOTAL**	28	16

Semester IV

SN	Course Code	Course Name	L -T –P (Hours)	Credits
1		Dissertation - II/Industrial Project	0-0-30	15
		Total	30	15

Total Credits = 68

Discipline Elective (To be updated from time to time)		
S. No.	Course Code	Title
1.	EC710	Analog VLSI Design
2.		Semiconductor Device Modelling
3.		VLSI Physical Design
4.		Mixed Signal IC Design
5.		VLSI Architecture for DSP Applications
6.		Ultra Low Power VLSI Design
7.		HDL based Digital System Design

Open Elective: Communication Systems & Applications