

4-year B.Tech. degree Course in
Bachelor of Technology (B.Tech) in. Electronics Engineering
(VLSI Design and Technology) w.ef. 2025-26

SEMESTER I

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1.	15B11MA111	Mathematics-1	3	1	0	4	4
2.	15B11PH111	Physics-1	3	1	0	4	4
3.	15B11CI111	Software Development Fundamentals-1	3	1	0	4	4
4.	15B11HS112	English	1	0	2	3	2
5.	15B17PH171	Physics Lab-1	0	0	2	2	1
6.	24B15CS111	Software Development Fundamentals Lab-1	0	0	2	2	1
7.	18B15GE111	Engineering Drawing & Design	0	0	3	3	1.5
8.	24B11EC111	Basic Electronics	3	1	0	4	4
9.	24B15EC111	Basic Electronics Lab	0	0	2	2	1
Total						28	22.5

SEMESTER II

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1.	15B11MA211	Mathematics-2	3	1	0	4	4
2.	15B11PH211	Physics-2	3	1	0	4	4
3.	15B11CI211	Software Development Fundamentals-2	3	1	0	4	4
4.	15B17PH271	Physics Lab-2	0	0	2	2	1
5.	24B15CS121	Software Development Fundamentals Lab-2	0	0	2	2	1
6.	24B16HS111	Life Skills & Professional Communication Lab	0	0	2	2	Qualifying
7.	18B15GE112	Workshop	0	0	3	3	1.5
8.	24B11HS111	Universal Human Values (UHV)	2	1	0	3	3
Total						24	18.5

SEMESTER III

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1	15B11MA301	Probability and Random Processes	3	1	0	4	4
2	24B21EC211	Electronic Devices	3	0	0	3	3
3	24B25EC211	Electronic Devices Lab	0	0	2	2	1
4	18B11EC214	Signals and Systems	3	1	0	4	4
5	25B21EC211	Digital Logic and Circuit Design	3	0	0	3	3
6	25B25EC211	Digital Logic and Circuit Design Lab	0	0	2	2	1
7	19B13BT211	Environmental Studies	3	0	0	3	Qualifying
8	24B27EC211	Micro Project-1	0	0	4	4	2
9	24B11MA211	Numerical Techniques	2	0	0	2	2
10	15B11HS211	Economics	2	1	0	3	3
		Total				30	23

SEMESTER IV

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1	25B21EC212	Analog Electronic Circuits	3	0	0	3	3
2	25B25EC212	Analog Electronic Circuits Lab	0	0	2	2	1
3	25B21EC213	Discrete Signal Processing	3	0	0	3	3
4	25B21EC214	Communication Engineering	3	0	0	3	3
5	24B21EC212	Introduction to Microfabrication Technology	3	0	0	3	3
6	24B25EC212	Introduction to Microfabrication Lab	0	0	2	2	1
7	24B25EC213	Introduction to VLSI Lifecycle Lab	0	0	2	2	1
8	24B27EC212	Micro Project-2	0	0	4	4	2
9	15B1NEC733	Fundamentals of Embedded Systems	3	0	0	3	3
10	xxxxxxxxx	HSS Elective-1	2	1	0	3	3
		Total				28	23

SEMESTER V

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1	xxxxxxxxxx	HSS Elective-2	3	0	0	3	3
2	24B21EC311	Semiconductor Materials Synthesis and Characterization	3	0	0	3	3
3	xxxxxxxxxx	Discipline Elective -1*	3	0	0	3	3
4	18B11EC312	Electromagnetic Field Theory	3	1	0	4	4
5	18B15EC312	Electromagnetic Field Theory Lab	0	0	2	2	1
6	15B11EC613	Control Systems	3	0	0	3	3
7	24B21EC312	Microcontrollers and Computer Architecture	3	0	0	3	3
8	24B25EC312	Microcontrollers and Computer Architecture Lab	0	0	2	2	1
9	15B19EC591	Minor Project – 1	0	0	4	4	2
10	20B13HS311	Indian Constitution & Traditional Knowledge	3	0	0	3	Qualifying
		Total				30	23

SEMESTER VI

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1	17B1NEC736	Essentials of VLSI Testing	3	0	0	3	3
2	18B15EC313	Embedded Systems/IoT Lab	0	0	2	2	1
3	xxxxxxxxxx	Discipline Elective -2*	3	0	0	3	3
4	xxxxxxxxxx	Discipline Elective -3*	3	0	0	3	3
5	24B12EC313	Digital CMOS VLSI Design	3	0	0	3	3
6	18B15EC315	VLSI Design Lab-II	0	0	2	2	1
7	xxxxxxxxxx	Open Elective - 1	3	0	0	3	3
8	xxxxxxxxxx	Selected Value Added Course	2	0	0	2	Audit
9	24B25EC313	VLSI Verification and Testing Lab	0	0	2	2	1
10	15B19EC691	Minor Project - 2	0	0	0	4	2
11	xxxxxxxxxx	Discipline Elective -4*	3	0	0	3	3
		Total				30	23

SEMESTER VII

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1	Xxxxx	Discipline Elective – 5*	3	0	0	3	3
2	Xxxxx	Discipline Elective –6*	3	0	0	3	3
3	Xxxxx	Open Elective - 2	3	0	0	3	3
4	15B19EC791	Major Project Part-1	0	0	8	8	4
5	15B19EC793	Summer Training Viva	0	0	0	0	Qualifying
		Total				17	13

SEMESTER VIII

Sr. No.	Course No.	Course Title	L	T	P	Total	Credits
1	Xxxxx	Discipline Elective - 7*	3	0	0	3	3
2	Xxxxx	Open Elective - 3	3	0	0	3	3
3	24B17EC412	Major Project Part-2	0	0	16	16	8
		Total				22	14

* Discipline electives may run in 3 0 0 or 2 0 2 (L T P) mode as per requirement of subject

Total Credits for B.Tech. –160