Curriculum of the B.Tech. Program
in
Electrical Engineering

(from AY 2023-24 onwards)

Revised as per NEP

2nd Year B.Tech. (Electrical Engineering)

SEMESTER III

Course Code	Course Title	Weekly Contact Hours (L-T-P)	Credits
ZZ 2XX	Course-I for Minor Program	X – X - X	3
MA 205	Complex Analysis	3 - 1- 0 (Half Semester)	2
MA 207	Differential Equations - II	3 - 1- 0 (Half Semester)	2
EE 201	Network Theory	2 - 1- 0	3
EE 203	Electronic Devices	2 – 1 - 0	3
EE 207	Electric Machines	2 – 1 - 0	3
EE 209	Digital Systems	2 – 1 - 0	3
EE 251	Electrical Networks Lab	0 – 0 - 2	1
EE 253N	Electronic Devices Lab	0 – 0 - 2	1
EE 259	Digital Systems Lab	0 – 0 - 2	1
EE 2XX	Department Elective – I	X – X - X	3
	TOTAL		22/25

SEMESTER IV

Course Code	Course Title	Weekly Contact Hours (L-T-P)	Credits
ZZ 2XX	Course-II for Minor Program	X – X - X	3
MA 204N	Numerical Methods	2 – 0 - 2	3
EE 202N	Signals and Systems	2 – 1 - 0	3
EE 204	Analog Circuits	2 – 1 - 0	3
EE 212	Power Electronics	2 – 1 - 0	3
EE 252	Electric Machines and Power Electronics Lab	0 – 0 - 3	1.5
EE 254	Analog Circuits Lab	0 – 0 - 3	1.5
EE 2XX	Department Elective – II	X – X - X	3
ZZ 2XX	Institute Open Elective – I	X – X - X	3
	TOTAL		21/24

3rd Year B.Tech. (Electrical Engineering)

SEMESTER V

Course Code	Course Title	Weekly Contact Hours (L-T-P)	Credits
ZZ 3XX	Course – III for Minor Program	X – X - X	3
EE 301N	Microprocessors and Digital Systems Design	2 – 1 - 0	3
EE 305	Electromagnetic Waves	2 – 1 - 0	3
EE 313	Communication Systems Theory	2 – 1 - 0	3
EE 315	Power Systems	2 – 1 - 0	3
EE 317	Digital Signal Processing	2 – 1 - 0	3
EE 351N	Microprocessors and Digital Systems Design Lab	0 – 0 - 2	1
EE 3XX	Department Elective – III	X – X - X	3
ZZ 3XX	Institute Open Elective – II	X – X - X	3
	TOTAL		22/ 25

SEMESTER VI

Course Code	Course Title	Weekly Contact Hours (L-T-P)	Credits
ZZ 3XX	Course – IV for Minor Program	X – X - X	3
EE 302	Control Systems	2 – 1 - 0	3
EE 306	Digital Communications	2 – 1 - 0	3
EE 310	VLSI Systems and Technology	2 – 0 - 2	3
EE 352N	Control Systems Lab	0 – 0 - 3	1.5
EE 356N	Communications Lab	0 – 0 - 2	1
EE 3XX	Department Elective – IV	X – X - X	3
EE 3XX	Department Elective – V	X – X - X	3
ZZ 3XX	Institute Open Elective – III	X – X - X	3
	TOTAL		20.5/23.5

4th Year B.Tech. (Electrical Engineering)

SEMESTER VII

Course Code	Course Title	Weekly Contact Hours (L-T-P)	Credits
ZZ 4XX	Course - V for Minor Program	X – X - X	2
ZZ XXX	Internship I / II	X – X - X	2
EE 4XX	B.Tech. Project (BTP)	0 – 0 - 32	16
	TOTAL		18/20

SEMESTER VIII

Course Code	Course Title	Weekly Contact Hours (L-T-P)	Credits
EE 4XX	Department Elective - VI	X – X - X	3
EE 4XX	Department Elective - VII	X – X - X	3
ZZ 4XX	Institute Open Elective – IV	X – X - X	3
ZZ 4XX	Institute Open Elective – V	X – X - X	3
ZZ 4XX	Institute Open Elective – VI	X – X - X	3
	TOTAL		15

EE Department Elective Courses (for B. Tech. in EE)

SEMESTER III

Course Code	Course Title	Credit Structure (L-T-P-C)
EE 211	Applied Probability for Communication Engineering	2-1-0-3
EE 213	Fundamentals of Optimization	2-1-0-3

SEMESTER IV

Course Code	Course Title	Credit Structure (L-T-P-C)
EE 214	Electronic Instrumentation	2-1-0-3
EE 216	Machine Learning for Signal Processing	2-1-0-3

SEMESTER V

Course Code	Course Title	Credit Structure (L-T-P-C)
EE 319	Design and Analysis of Communication Networks	2-1-0-3
EE 321	Design of Photovoltaic Systems	2-1-0-3

SEMESTER VI

Course Code	Course Title	Credit Structure (L-T-P-C)
EE 312	Microwave and Satellite Communication	2-1-0-3
EE 314	Restructured Power Systems	2-1-0-3
EE 316	RF Devices for Guided and Wireless Transmission	2-1-0-3

VIII SEMESTER

Course Code	Course Title	Credit Structure (L-T-P-C)
EE 410/610	Power Electronics Applications to Power Transmission	2-1-0-3
EE 422/622	Digital Circuit Design	2-1-0-3
EE 426/626	MOSFET Reliability Issues	2-1-0-3
EE 428/628	Advanced Memory Technology	2-1-0-3
EE 434/634	Semiconductor Based Sensors	2-1-0-3
EE 438/638	System on Programmable Chip Design	2-0-2-3
EE 440/640	Analog and Mixed Signal IC Design	2-1-0-3
EE 446/646	Information and Coding Theory	2-1-0-3
EE 447/647	Advanced Photonics	2-1-0-3
EE 448/648	Antennas and Propagation	3-0-0-3
EE 450N/650N	IoT Communication Networks	2-1-0-3