

R19 B.Tech EEE COURSE STRUCTURE FOR B.TECH I YEAR

B. Tech. I Year I Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	BS-1	Mathematics-I	3	1	0	4
2	BS-2	Chemistry	3	1	0	4
3	BS-Lab 1	Chemistry Lab	0	0	3	1.5
4	H&S-1	English	2	0	0	2
5	H&S-Lab 1	English Language Skills Lab (ELSL)	0	0	2	1
6	ES-1	Programming for Problem Solving-I	2	0	0	2
7	ES-Lab 1	Programming for Problem Solving Lab-I	0	0	2	1
8	ES-2	Engineering Graphics & Modeling	1	0	3	2.5
Total			11	2	10	18

B. Tech. I Year II Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	BS-3	Mathematics-II	3	1	0	4.0
2	BS-4	Applied Physics	3	1	0	4.0
3	BS-Lab 2	Applied Physics Lab	0	0	3	1.5
4	ES-3	Basic Electrical Engineering	3	0	0	3.0
5	ES-Lab 2	Basic Electrical Engineering Lab	0	0	2	1.0
6	ES-Lab 3	Engineering Workshop	0	1	3	2.5
7	H&S-Lab 2	English Communication Skills Lab (ECSL)	0	0	2	1.0
8	ES-4	Programming for Problem Solving-II	2	0	0	2.0
9	ES-Lab 4	Programming for Problem Solving Lab-II	0	0	2	1.0
Total			11	3	12	20

R19 COURSE STRUCTURE FOR B.TECH II YEAR

B. Tech. II Year I Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	BS – 5	Complex Analysis & Fourier Transforms	3	0	0	3
2		Electronic Devices and Circuits	3	0	0	3
3	PC – 1	Power Systems –I	3	0	0	3
4	PC – 2	Network Analysis	3	0	0	3
5	PC – 3	Electro Magnetic Fields	3	0	0	3
6	PC – 4	Electrical Machines-I	3	0	0	3
7	PC Lab – 1	Basic Simulation Tools Lab	0	0	2	1
8	PC Lab – 2	Electrical Circuits Lab	0	0	2	1
9	MC – 1	Gender Sensitization	2	0	0	0
Total			20	0	4	20

B. Tech. II Year II Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	BS – 6	Numerical Methods and Partial Differential Equations	3	0	0	3
2	ES – 2	Fluid Mechanics and Hydraulic Machinery	3	0	0	3
3	H&S-2	Professional Communication	2	0	0	2
4.	PC – 5	Electrical Machines-II	4	0	0	4
5	PC – 6	Power Systems - II	3	0	0	3
6	PC – 7	Control Systems	3	0	0	3
7	PC Lab-3	Electrical Machines-I Lab	0	0	2	1
8	PC Lab-4	Electronic Devices and Circuits Lab	0	0	2	1
9	MC – 2	Environmental Science	2	0	0	0
Total			20	0	4	20

R19 COURSE STRUCTURE FOR B.TECH III YEAR

B. Tech. III Year I Semester

S. No	Course Category	Course Title	L	T	P	Credits
1	H&S –3	Managerial Economics and Financial Analysis	3	0	0	3
2	ES – 3	Switching Theory and Logic Design	3	0	0	3
3	PC – 8	Electrical Machines - III	3	0	0	3
4	PC – 9	Power Electronics	3	0	0	3
5	PE – 1	Electrical Energy Conservation and Auditing/ Electrical Estimation and Costing	3	0	0	3
6	OE – 1	Non-Conventional Energy Sources/ Fundamentals of Electrical Power Generation and Protection	3	0	0	3
7	PC Lab – 5	Electrical Machines-II Lab	0	0	2	1
8	H&S -Lab 3	Advanced Communication Skills Lab	0	0	2	1
9	MC – 3	Quantitative Methods & Logical Reasoning	2	0	0	1
Total			20	0	4	21

B. Tech. III Year II Semester

S. No	Course Category	Course Title	L	T	P	Credits
1	PC – 10	Electrical Measurements & Instrumentation	3	0	0	3
2	PC – 11	Computer Methods in Power Systems	3	0	0	3
3	PC – 12	Power Semiconductor Drives	3	0	0	3
4	PC – 13	Switch Gear and Protection	3	0	0	3
5	PE – 2	Integrated Circuit and Applications/ Artificial Intelligence Techniques in Electrical Engineering	3	0	0	3
6	OE – 2	Energy Auditing and Conservation/ Principles of Electric Power Utilization	3	0	0	3
7	PC Lab – 7	Control Systems and Simulation Lab	0	0	2	1
8	PC Lab – 8	Power Electronics and Simulation Lab	0	0	2	1
9	MC – 4	Personality Development & Behavioral Skills	2	0	0	1
Total			20	0	4	21

R19 COURSE STRUCTURE FOR B.TECH IV YEAR

B. Tech. IV Year I Semester

S. No	Course Category	Course Title	L	T	P	Credits
1	PC -14	Microprocessors and Interfacing Devices	3	0	0	3
2	PC -15	Power Systems Operation and Control	3	0	0	3
3	PE – 3	Electric Vehicles / Smart Grids	3	0	0	3
4	PE – 4	Electrical Distribution Systems/ Industrial Electrical Systems	3	0	0	3
5	OE-3	Electric Vehicles and Hybrid Vehicles/ Energy Storage Systems	3	0	0	3
6	PC Lab - 9	Microprocessors and Interfacing Lab	0	0	2	1
7	PC Lab - 10	Electrical Measurements Lab	0	0	2	1
8	-	Mini Project	0	0	0	3
Total			15	0	4	20

B. Tech. EEE IV Year II Semester

S. No	Course Category	Course Title	L	T	P	Credits
1	PC -16	Utilization of Electrical Energy	3	0	0	3
2	PC -17	Renewable Energy and Energy Storage Technologies	3	0	0	3
3	-	Technical Seminar	2	0	0	2
4	-	Comprehensive Viva-Voce	0	0	0	2
5	-	Major Project	0	0	0	10
Total			8	0	0	20

R19 COURSE STRUCTURE (for FAST TRACK)

B. Tech. III Year I Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	H&S – 3	Managerial Economics and Financial Analysis	3	0	0	3
2	ES – 3	Switching Theory and Logic Design	3	0	0	3
3	PC – 8	Electrical Machines - III	3	0	0	3
4	PC – 9	Power Electronics	3	0	0	3
5	PE – 1	Electrical Energy Conservation and Auditing/ Electrical Estimation and Costing	3	0	0	3
6	OE – 1	Non-Conventional Energy Sources / Fundamentals of Electrical Power Generation and Protection	3	0	0	3
7	PC Lab – 5	Electrical Machines -II Lab	0	0	2	1
8	H&S -Lab 3	Advanced Communication Skills Lab	0	0	2	1
9	MC – 3	Quantitative Methods & Logical Reasoning	2	0	0	1
Total			20	0	4	21

B. Tech. III Year II Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	PC – 10	Electrical Measurements & Instrumentation	3	0	0	3
2	PC – 11	Computer Methods in Power Systems	3	0	0	3
3	PC – 12	Power Semiconductor Drives	3	0	0	3
4	PC – 13	Switch Gear and Protection	3	0	0	3
5	PE – 2	Integrated Circuit and Applications/Artificial Intelligence Techniques in Electrical Engineering	3	0	0	3
6	OE – 2	Energy Auditing and Conservation/ Principles of Electric Power Utilization	3	0	0	3
7	PC Lab – 7	Control Systems and Simulation Lab	0	0	2	1
8	PC Lab – 8	Power Electronics and Simulation Lab	0	0	2	1
9	MC - 4	Personality Development & Behavioral Skills	2	0	0	1
10	PC -16	Utilization of Electrical Energy	3	0	0	3
Total			23	0	4	24

R19 COURSE STRUCTURE (for FAST TRACK)

B. Tech. IV Year I Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	PC -14	Microprocessors and Interfacing Devices	3	0	0	3
2	PC -15	Power Systems Operation and Control	3	0	0	3
3	PE - 3	Electric Vehicles / Smart Grids	3	0	0	3
4	PE – 4	Electrical Distribution Systems/ Industrial Electrical Systems	3	0	0	3
5	OE-3	Electric Vehicles and Hybrid Vehicles/ Energy Storage Systems	3	0	0	3
6	PC Lab – 9	Microprocessors and Interfacing Lab	0	0	2	1
7	PC Lab - 10	Electrical Measurements Lab	0	0	2	1
8	-	Mini Project		0	0	3
9	PC - 17	Renewable Energy and Energy Storage Technologies	3	0	0	3
Total			18	0	4	23

B. Tech. IV Year II Semester

S. No.	Course Category	Course Title	L	T	P	Credits
1	-	Technical Seminar	2	0	0	2
2	-	Comprehensive Viva-Voce	0	0	0	2
3	-	Major Project	0	0	0	10
Total			2	0	0	14