

**M.Tech. (EEE)**  
**Electrical Power Engineering**  
**R19 Course Structure**

**I .M.Tech. I- Semester**

S.No	Course Title	L	T	P	C	I	E	TM
1	Power System Operation & Control	4	-		3	40	60	100
2	Analysis of Power Electronics Converters	4	-	-	3	40	60	100
3	<b>Elective – I</b>	4	-	-	3	40	60	100
	i.Electrical DistributionSystems							
	ii.Power System Deregulation							
	iii.Renewable EnergySystems							
4	<b>Elective – II</b>	4	-	-	3	40	60	100
	i. Advanced Power System Protection							
	ii. HVDC Transmission							
	iii.Power System Reliability							
5	Research Methodology	2	0	0	2	40	60	100
6	Electrical Simulation Laboratory	-	-	4	2	40	60	100
7	Power Systems Laboratory	-	-	4	2	40	60	100
8	Audit Course-I	2	0	0	0	-	-	-
	<b>Total</b>	<b>20</b>	<b>0</b>	<b>8</b>	<b>18</b>	<b>280</b>	<b>420</b>	<b>700</b>

**I.M.Tech. II- Semester**

S.No	Course Title	L	T	P	C	I	E	TM
1	Power System Dynamics and Stability	4	-	-	3	40	60	100
2	Real Time Control of Power Systems	4	-	-	3	40	60	100
3	<b>Elective – III</b>	4	-	-	3	40	60	100
	i.FACTS							
	ii. Hybrid Electric Vehicles							
	iii.Modern Control Theory							
4	<b>Elective – IV</b>	4	-	-	3	40	60	100
	i Programmable Logic Controllers and Applications							
	ii.Generation& Measurement of High Voltage							
	iii.Smart Grid Technologies							
5	Power System Simulation Laboratory	-	-	4	2	40	60	100
6	Power Converters Laboratory	-	-	4	2	40	60	100
7	Mini Project with Seminar			4	2	40	60	100
8	Audit Course--II	2	0	0	0	-	-	-
	<b>Total</b>	<b>18</b>	<b>0</b>	<b>12</b>	<b>18</b>	<b>280</b>	<b>420</b>	<b>700</b>

### II. M.Tech. I- Semester

S.No	Course Title	L	T	P	C	I	E	TM
1	<b>Elective – V</b>	4	-	-	3	40	60	100
	i.Demand side Energy Management							
	ii.Power Quality and Custom Power Devices							
	iii.High Voltage Testing Techniques							
2	<b>Elective – IV</b>	4	-	-	3	40	60	100
	i AI Techniques							
	ii. Reactive Power Compensation and Management							
	iii.Operations Research							
3	Dissertation Phase-I	-	-	20	10	40	60	100
	<b>Total</b>	<b>8</b>	<b>0</b>	<b>20</b>	<b>16</b>	<b>120</b>	<b>180</b>	<b>300</b>

### II. M.Tech. II- Semester

S.No	Course Title	L	T	P	C	I	E	TM
1	Dissertation Phase-II	-	-	20	16	40	60	100
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>16</b>	<b>40</b>	<b>60</b>	<b>100</b>