

**VIGNANA BHARATHI INSTITUTE OF TECHNOLOGY
(AUTONOMOUS) HYDERABAD
M. TECH in POWER ELECTRONICS AND ELECTRIC DRIVES
COURSE STRUCTURE & SYLLABUS (R19)**

I YEAR I – SEMESTER

S.No.	Category	Course Code	Course Title	Int. Marks	Ext. Marks	L	T	P	Credits
1	PC	19PE6111	Machine Modeling and Analysis	30	70	3	0	0	3
2	PC	19PE6112	Power Electronic Devices and Converters	30	70	3	0	0	3
3	PE-I	19EE6171 19EE6172 19EE6173	1. HVDC Transmission System 2. Smart Grid Technologies 3. Advanced Digital Signal Processing	30	70	3	0	0	3
4	PE-II	19EE6181 19EE6182 19EE6183	1. Electric Traction System 2. FACTS and Custom Power Devices 3. Modern Control Theory	30	70	3	0	0	3
5	Lab I	19PE6151	Machine Modeling Simulation Lab	30	70	0	0	4	2
6	Lab II	19PE6152	Power Electronics Converters Lab	30	70	0	0	4	2
7	MLC		Research Methodology & IPR	30	70	2	0	0	2
8	AD-1	19AD6MC1	Stress Management by Yoga	30	70	2	0	0	0
Total Credits									18

I YEAR II – SEMESTER

S.No.	Category	Course Code	Course Title	Int. Marks	Ext. Marks	L	T	P	Credits
1	PC	19PE6211	Advanced Power Electronics	30	70	3	0	0	3
2	PC	19PE6212	Electric Drives	30	70	3	0	0	3
3	PE-III	19EE6271 19EE6272 19EE6273	1.Reactive Power Compensation and Management 2.Renewable Energy Systems 3.Restructured Power Systems	30	70	3	0	0	3
4	PE-IV	19EE6283 19EE6284 19EE6285	1. AI Techniques in Electrical Engineering 2. Advanced Micro Controller based Systems 3. Static VAR Controller & Harmonics Filters	30	70	3	0	0	3
5	LAB-III	19PE6251	Advanced Power Electronics Simulation Lab	30	70	0	0	4	2
6	LAB-IV	19PE6252	Electric Drives Lab	30	70	0	0	4	2
7	TS	19EE62TS	Mini project with Seminar			0	0	4	2
8	AD-2	19AD6MC2	English for Research Paper Writing	30	70	2	0	0	0
Total Credits									18

II YEAR I – SEMESTER

S.No.	Category	Course Code	Course Title	Int. Marks	Ext. Marks	L	T	P/D	Credits
1	PE-V	19EE6371 19EE6373 19EE6374	Power Quality Electric and Hybrid Vehicles Digital Control System	30	70	3	0	0	3
2	OE		1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Energy from Waste	30	70	3	0	0	3
3	TS	19EE63TS	Technical Seminar	100	0	0	2	0	1
4	CV	19EE63CV	Comprehensive Viva-Voce	100	0	0	2	0	1
5	DS	19EE63DS	Dissertation Phase -I			0	0	16	8
Total Credits									16

II YEAR II – SEMESTER

S.No.	Category	Course Code	Course Title	Int. Marks	Ext. Marks	L	T	P	Credits
1	DS	19EE64DS	Dissertation Phase-II			0	0	32	16
Total Credits									16