

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR  
ANANTHAPURAMU (A.P.)**

**COURSE STRUCTURE AND SYLLABUS**

(For Affiliated Engineering Colleges w.e.f. 2017-18 Admitted Batch)

**M.TECH - POWER ELECTRONICS, POWER & INDUSTRIAL DRIVES, POWER ELECTRONICS & ELECTRICAL DRIVES and POWER ELECTRONICS AND DRIVES**

**M.Tech I Semester**

S.No	Subject Code	Subject	L	T	P	C
1.	17D54101	Advanced Power Semiconductor Devices	4	-	-	4
2.	17D49102	Machine Modeling and Analysis	4	-	-	4
3.	17D54102	Solid-State DC Drives	4	-	-	4
4.	17D54103	Applications of Power Electronics to Power Systems	4	-		4
5.	17D49105 17D49103 17D54104	<b>Elective-I</b> 1. Modern Control Engineering & Principles of Optimal Control 2. Optimization & Heuristic search Techniques 3. Advanced Digital Signal Processing	4	-	-	4
6.	17D54105 17D54106 17D54107	<b>Elective-II</b> 1. FPGA based Digital System Design 2. Solid-state Lighting and Control 3. Hybrid Electric Vehicle Systems	4	-	-	4
7.	17D54108	Power Electronics and Simulation Lab	-	-	4	2
<b>TOTAL</b>			<b>24</b>	<b>-</b>	<b>04</b>	<b>26</b>

**M.Tech II Semester**

S.No	Subject Code	Subject	L	T	P	C
1.	17D54201	Advanced Power Converters	4	-	-	4
2.	17D49202	Power Quality	4	-	-	4
3.	17D54202	Advanced Drives & Control	4	-	-	4
4.	17D54203	Renewable Energy Conversion Systems	4	-		4
5.	17D49205 17D54204 17D49207	<b>Elective-III</b> 1. Reactive Power Compensation and Management 2. Adaptive Control 3. HVDC & EHVAC Transmission Systems	4	-	-	4
6.	17D49208 17D54205 17D49210	<b>Elective-IV</b> 1. Distributed Generation & Micro Grid Control 2. Energy Efficient Electrical Systems 3. Intelligent Control Techniques	4	-	-	4
7.	17D54206	Electrical Drives and Simulation Lab	-	-	4	2
<b>TOTAL</b>			<b>22</b>	<b>-</b>	<b>04</b>	<b>26</b>

**M.Tech III Semester**

S.No	Subject Code	Subject	L	T	P	C
1.	17D20301 17D20302 17D20303	<b>Elective – V</b> 1. Research Methodology 2. Human Values and Professional Ethics 3. Intellectual Property Rights	4	-	-	4
2.	17D54301	<b>Elective - VI (MOOCS)</b>	-	-	-	-
3.	17D54302	Comprehensive Viva-Voce	-	-	-	2
4.	17D54303	Seminar	-	-	-	2
5.	17D54304	Teaching Assignment	-	-	-	2
6.	17D54305	Project Work Part – I	-	-	-	4
<b>TOTAL</b>			<b>04</b>	<b>-</b>	<b>-</b>	<b>14</b>

**M.Tech IV Semester**

S.No	Subject Code	Subject	L	T	P	C
1.	17D54401	. Project Work Part - II	-	-	-	12

**Project Viva Voce Grades:****A: Satisfactory****B: Not Satisfactory**