

**M.Tech (Electrical Power Engineering)**  
**Course Structure and Syllabus**  
Academic Year: 2015 - 2016

**I Year - I Semester**

Code	Subject	L	T	P	Credits	Marks	
						Int.	Ext.
5X101	Power System Dynamics	3	1	--	3	25	75
5X102	Optimization & Control	3	1	--	3	25	75
5X118	Reactive Power Compensation & Management	3	1	--	3	25	75
5X104	Computer Methods in Power Systems	3	1	--	3	25	75
	<b>Elective – I</b>	3	1	--	3	25	75
	<b>Elective – II</b>	3	1	--	3	25	75
5X174	Research Methodology	2	--	-	2	25	75
5X171	Power System Simulation Lab – I	--	--	4	2	25	75
5X172	Literature Review and Seminar - I	--	--	3	1	100	--
5X173	Comprehensive Viva-I	-	-	-	1	100	--
<b>Total Credits</b>		<b>20</b>	<b>6</b>	<b>7</b>	<b>24</b>	<b>400</b>	<b>600</b>

**I Year - II Semester**

Code	Subject	L	T	P	Credits	Marks	
						Int.	Ext.
5X211	Power System Stability	3	1	--	3	25	75
5X212	Advanced Power System Protection	3	1	--	3	25	75
5X213	Flexible AC Transmission Systems	3	1	--	3	25	75
5X214	Power Quality	3	1	--	3	25	75
	<b>Elective – III</b>	3	1	--	3	25	75
	<b>Open Elective</b>	3	1	--	3	25	75
5X273	Power System Simulation Lab – II	--	--	4	2	25	75
5X274	Literature Review and Seminar-II	--	--	3	1	100	--
5X275	Project Seminar – I (Abstract)	-	-	3	2	100	--
5X276	Comprehensive Viva	--	--	--	1	100	--
<b>Total Credits</b>		<b>18</b>	<b>6</b>	<b>7</b>	<b>24</b>	<b>475</b>	<b>525</b>

**Elective – I:** Any one subject to be selected

Code	Subject
5X105	High Voltage DC Transmission
5X106	Distribution Planning & Automation
5X107	Breakdown Phenomenon in Insulation
5X118	Advanced Control Systems
5X119	Control of Electrical Drives
5P140	Java Programming

**Elective – II:** Any one subject to be selected

Code	Subject
5X108	High Voltage Engineering
5X109	Energy Conversion Systems
5X110	Advanced Operation and Control
5X120	Digital Control Systems
5X121	Smart Electric Grid
5RC17	Database Management Systems

**Elective – III:** Any one subject to be selected

Code	Subject
5X215	Soft Computing Techniques
5X216	Restructuring in Electrical Power Systems
5X217	Extra High Voltage AC Transmission
5X222	Real Time Control of Power Systems
5X223	Switched Mode Power Conversion

<b>5P141</b>	Computer Networks
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**Open Elective:** Any one subject to be selected

<b>Code</b>	<b>Subject</b>
<b>5ZC03</b>	Banking Operations, Insurance and Risk Management
<b>5H233</b>	Ethics, Morals, Gender Sensitization, and Yoga
<b>5T216</b>	Embedded and Real time control
<b>5ZC11</b>	Logistics & Supply Chain Management

**II Year - I Semester**

<b>Code</b>	<b>Subject</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>	<b>Marks</b>	
						<b>Int.</b>	<b>Ext.</b>
<b>5X377</b>	Project Seminar-II ( Design & Development)	-	-	-	4	100	-
<b>5X378</b>	Project work (Part – I) (Project Status Report) ( Excellent/ Good/ Satisfactory/ Un-Satisfactory	--	--	--	20	Grading	--
<b>Total Credits</b>		--	--	--	<b>24</b>	<b>100</b>	<b>--</b>

**II Year - II Semester**

<b>Code</b>	<b>Subject</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>	<b>Marks</b>	
						<b>Int.</b>	<b>Ext.</b>
<b>5X478</b>	Project Seminar-III ( Implementation)	--	--	--	2	100	--
<b>5X479</b>	Pre-submission Seminar (Final)	-	-	-	2	100	-
<b>5X480</b>	Project work and Dissertation ( Excellent/ Good/ Satisfactory/ Un-Satisfactory )	--	--	--	20	--	Grading
<b>Total Credits</b>		--	--	--	<b>24</b>	<b>200</b>	<b>--</b>

**L - Lectures; T - Tutorial; P - Practical; C - Credits**