

# Master of Electrical Engineering

## FIRST SEMESTER

Theoretical Courses	Subjects		Periods/Weeks		Marks		Credit Points
	Subject Code	Specialization Subject Names	Lecture	Sessional	Examination	Sessional	
Departmental / Specialization Basket		Control System (CS) Electrical Machines (MC) Electrical Measurements & Instrumentation (MS) High Voltage (HV) Power System (PS)					
Paper-I	PG / EE / T / 111A	Field Computation of Electromagnetic Devices (MC)	3		100		3
	PG / EE / T / 111B	Modeling & Simulation of Dynamic Systems (CS)					
	PG / EE / T / 111C	Advanced Instrumentation Techniques (MS)					
Paper-II	PG / EE / T / 112A	Special Purpose Electrical Machines (MC)	3		100		3
	PG / EE / T / 112B	Control System Engineering (CS)					
	PG / EE / T / 112C	Advanced Power System Principles (PS)					
	PG / EE / T / 112D	Lighting Design & Calculation					
Paper-III	PG / EE / T / 113A	Static Converters in Electric Drives (MC)	3		100		3
	PG / EE / T / 113B	Digital Control Theory (CS)					
	PG / EE / T / 113C	Elements of High Voltage Engineering (HV)					
<p><b>Note: The students have to select 3 subjects from the departmental/ specialization basket, i.e. one subject each from the list given in the baskets of Paper-I, Paper-II and Paper-III</b></p>							
Inter-Disciplinary Basket	Subject Code	Subject Name	Lecture	Sessional	Examination	Sessional	
Paper-IV	PG / EE / T / 114A	Materials Technology	3		100		3
Paper-V	PG / EE / T / 115A	Active Circuits and Systems	3		100		3
Paper-VI	PG / EE / T / 116A	Optimization Techniques	3		100		3
	PG / EE / T / 116B	Solid State Power Supplies					
<p><b>Note: The students have to select 3 subjects from the inter-departmental basket, i.e. one subject each from the list given in the baskets of Paper-IV, Paper-V and Paper-VI</b></p>							

Sessional Courses							
Sessional 1	PG / EE / S / 111	Laboratory		4		100	3
Sessional 2	PG / EE / S / 112	Seminar		3		200 marks to be included in 2 <sup>nd</sup> semester	
			<b>18</b>	<b>7</b>	<b>600</b>	<b>100</b>	<b>21</b>

**Total Periods/Week = 25**

**Total Marks = 700**

**SECOND SEMESTER**

Theoretical Courses	Subjects		Periods/Weeks		Marks		Credit Points
	Subject Code	Specialization Subject Names	Lecture	Sessional	Examination	Sessional	
Departmental / Specialization Basket		Control System (CS) Electrical Machines (MC) Electrical Measurements & Instrumentation (MS) High Voltage (HV) Power System (PS)					
Paper-VII	PG / EE / T/ 127A	Modeling and Analysis of Electrical Machines and Drives (MC)	3		100		3
	PG / EE / T/ 127B	Transducer Technology (MS)					
	PG / EE / T/ 127C	Power System Analysis (PS)					
	PG / EE / T/ 127D	High Voltage Fields (HV)					
	PG / EE / T/ 127E	Optimal and Robust Control (CS)					
	PG / EE / T/ 127F	Computer Control for Industrial Processes (CS)					
Paper-VIII	PG / EE / T/ 128A	Small Machines, Incremental Motion devices and Actuators (MC)	3		100		3
	PG / EE / T/ 128B	Computer Application in Instrumentation (MS)					
	PG / EE / T/ 128C	Power System Operation (PS)					
	PG / EE / T/ 128D	Dielectric Engineering (HV)					
	PG / EE / T/ 128E	Real-Time Systems (CS)					
	PG / EE / T/ 128F	Non-linear and Adaptive Control (CS)					
Paper-IX	PG / EE / T/ 129A	Advanced Electric Drives (MC)	3		100		3
	PG / EE / T/ 129B	Embedded Systems (MS)					
	PG / EE / T/ 129C	Power System Protection (PS)					
	PG / EE / T/ 129D	High Voltage Measurements (HV)					
	PG / EE / T/ 129E	Mechatronics (CS)					
	PG / EE / T/ 129F	Advanced Topics in Electrical Machine Design (MC)					

**Note: The students have to select 3 subjects from the departmental/ specialization basket, i.e. one subject each from the list given in the baskets of Paper-VII, Paper-VIII and Paper-IX**

Inter-Disciplinary Basket	Subject Code	Subject Name	Lecture	Sessional	Examination	Sessional	
Paper-X	PG / EE / T/ 1210A	Electrical Systems in Vehicular Applications	3		100		3
	PG / EE / T/ 1210B	Advanced Digital Signal Processing					
	PG / EE / T/ 1210C	Power Electronics Application in EHV Transmission					
	PG / EE / T/ 1210D	Condition Monitoring of High Voltage Equipment					
<b>Note: The students have the freedom to choose one subject from the list under Paper-X.</b>							
<b>Sessional Courses</b>							
Sessional 1	PG / EE / S / 121	Term Paper Leading to Thesis		3		100	3
Sessional 2	PG / EE / S / 122	Seminar		3		200	6
			<b>12</b>	<b>6</b>	<b>400</b>	<b>300</b>	<b>21</b>

**Total Periods/Week = 18**

**Total Marks = 700**

### THIRD and FOURTH SEMESTER

Courses							
1	PG / EE / TH / 21	Thesis Work		16		300	12
2	PG / EE / VV/ 22	Viva-Voce on Thesis				100	
				<b>16</b>		<b>400</b>	<b>12</b>

**Total Periods/Week = 16**

**Total Marks = 400**