



**Faculty of Engineering & Technology**

**M. Tech.**

**(Electrical Engineering)**

**(2015-16)**

**Program Structure**

## M.Tech. (EE) Course Structure (2015-16)

### SEMESTER I

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS101	Advance Power System Analysis	3	0	1	50	100	150	4
MTEEPS102	Advanced Power Electronics	3	0	1	50	100	150	4
MTEEPS103	Power System Transient & High Voltage Engineering	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS104A	EHV AC/DC Transmission	3	0	1	50	100	150	4
MTEEPS104B	Advanced Power Electronics Drives	3	0	1	50	100	150	4
MTEEPS104C	Reactive Power Compensation and Management	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS105	Power System Simulation Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

**SEMESTER II****Theory Papers**

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS201	Advance Power System Stability	3	0	1	50	100	150	4
MTEEPS202	Flexible AC Transmission System	3	0	1	50	100	150	4
MTEEPS203	Advanced Circuit Analysis and Design	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS204A	Advanced Relaying & Protection System	3	0	1	50	100	150	4
MTEEPS204B	Power Generation Sources	3	0	1	50	100	150	4
MTEEPS204C	Demand Side Energy Management	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS205	Advance Power System design Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

**SEMESTER III****Theory Papers**

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS301	Power System Networking and Management	3	0	1	50	100	150	4
MTEEPS302	Modeling and analysis Electrical Machines	3	0	1	50	100	150	4
MTEEPS303	Power system operational and control	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS304A	Power system planning and reliability	3	0	1	50	100	150	4
MTEEPS304B	Power Quality	3	0	1	50	100	150	4
MTEEPS304C	Power System Deregulation	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS305	Seminar	0	1	1	60	40	100	2
<b>Total</b>		<b>12</b>	<b>00</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>18</b>

**SEMESTER IV****Theory Papers**

Code	Title Of Subject	L	T/P	IA	EA	Total	Credits
MTEEPS401	Dissertation	0	0	300	400	700	12
<b>Total</b>		<b>-</b>	<b>-</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>



**Faculty of Engineering & Technology**

**M. Tech.**

**(Electrical Engineering)**

**(2016-17)**

**Program Structure**

## M.Tech. (EE) Course Structure (2016-17)

### SEMESTER I

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS101	Advance Power System Analysis	3	0	1	50	100	150	4
MTEEPS102	Advanced Power Electronics	3	0	1	50	100	150	4
MTEEPS103	Power System Transient & High Voltage Engineering	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS104A	EHV AC/DC Transmission	3	0	1	50	100	150	4
MTEEPS104B	Advanced Power Electronics Drives	3	0	1	50	100	150	4
MTEEPS104C	Reactive Power Compensation and Management	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS105	Power System Simulation Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

**SEMESTER II****Theory Papers**

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS201	Advance Power System Stability	3	0	1	50	100	150	4
MTEEPS202	Flexible AC Transmission System	3	0	1	50	100	150	4
MTEEPS203	Advanced Circuit Analysis and Design	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS204A	Advanced Relaying & Protection System	3	0	1	50	100	150	4
MTEEPS204B	Power Generation Sources	3	0	1	50	100	150	4
MTEEPS204C	Demand Side Energy Management	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS205	Advance Power System design Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

### SEMESTER III

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS301	Power System Networking and Management	3	0	1	50	100	150	4
MTEEPS302	Modeling and analysis Electrical Machines	3	0	1	50	100	150	4
MTEEPS303	Power system operational and control	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS304A	Power system planning and reliability	3	0	1	50	100	150	4
MTEEPS304B	Power Quality	3	0	1	50	100	150	4
MTEEPS304C	Power System Deregulation	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS305	Seminar	0	1	1	60	40	100	2
<b>Total</b>		<b>12</b>	<b>00</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>18</b>

### SEMESTER IV

#### Theory Papers

Code	Title Of Subject	L	T/P	IA	EA	Total	Credits
MTEEPS401	Dissertation	0	0	300	400	700	12
<b>Total</b>		<b>-</b>	<b>-</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>





**Faculty of Engineering & Technology**

**M. Tech.**

**(Electrical Engineering)**

**(2017-18)**

**Program Structure**

## M.Tech. (EE) Course Structure (2017-18)

### SEMESTER I

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS101	Advance Power System Analysis	3	0	1	50	100	150	4
MTEEPS102	Advanced Power Electronics	3	0	1	50	100	150	4
MTEEPS103	Power System Transient & High Voltage Engineering	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS104A	EHV AC/DC Transmission	3	0	1	50	100	150	4
MTEEPS104B	Advanced Power Electronics Drives	3	0	1	50	100	150	4
MTEEPS104C	Reactive Power Compensation and Management	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS105	Power System Simulation Lab	0	2	0	60	40	100	1
<b>Total</b>		12	02	04	260	440	700	17

**SEMESTER II****Theory Papers**

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS201	Advance Power System Stability	3	0	1	50	100	150	4
MTEEPS202	Flexible AC Transmission System	3	0	1	50	100	150	4
MTEEPS203	Advanced Circuit Analysis and Design	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS204A	Advanced Relaying & Protection System	3	0	1	50	100	150	4
MTEEPS204B	Power Generation Sources	3	0	1	50	100	150	4
MTEEPS204C	Demand Side Energy Management	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS205	Advance Power System design Lab	0	2	0	60	40	100	1
<b>Total</b>		<b>12</b>	<b>02</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>17</b>

### SEMESTER III

#### Theory Papers

Code	Title Of Subject	L	P	T	IA	EA	Total	Credits
MTEEPS301	Power System Networking and Management	3	0	1	50	100	150	4
MTEEPS302	Modeling and analysis Electrical Machines	3	0	1	50	100	150	4
MTEEPS303	Power system operational and control	3	0	1	50	100	150	4
<b>Electives (Any One)</b>								
MTEEPS304A	Power system planning and reliability	3	0	1	50	100	150	4
MTEEPS304B	Power Quality	3	0	1	50	100	150	4
MTEEPS304C	Power System Deregulation	3	0	1	50	100	150	4
<b>Practical/Viva Voce</b>								
		L	P	T	Sessional	Practical	Total	Credits
MTEEPS305	Seminar	0	1	1	60	40	100	2
<b>Total</b>		<b>12</b>	<b>00</b>	<b>04</b>	<b>260</b>	<b>440</b>	<b>700</b>	<b>18</b>

### SEMESTER IV

#### Theory Papers

Code	Title Of Subject	L	T/P	IA	EA	Total	Credits
MTEEPS401	Dissertation	0	0	300	400	700	12
<b>Total</b>		<b>-</b>	<b>-</b>	<b>300</b>	<b>400</b>	<b>700</b>	<b>12</b>



**Faculty of Engineering & Technology**

**M. Tech.**

**(Electrical Engineering)**

**(2018-19)**

**Program Structure**

## M.Tech. (EE) Course Structure (2018-19)

### Semester I

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS101	Advanced Power System Analysis	3	0	0	50	100	150	3
MTEEPS102	Power System Dynamics-I	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS103A	Renewable Energy System	3	0	0	50	100	150	3
MTEEPS103B	Smart grids	3	0	0	50	100	150	3
MTEEPS103C	High Power Converters	3	0	0	50	100	150	3
MTEEPS103D	Wind and Solar Systems	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS104A	Electrical Power Distribution System	3	0	0	50	100	150	3
MTEEPS104B	Mathematical Methods for Power Engineering	3	0	0	50	100	150	3
MTEEPS104C	Pulse Width Modulation for PE Converters	3	0	0	50	100	150	3
MTEEPS104D	Electric and Hybrid Vehicles	3	0	0	50	100	150	3
MTEEPS105	Research Methodology and IPR	2	0	0	50	100	150	2
MTEEPS106	Audit Course – 1 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 :	2	0	0	50	100	150	0

	Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills							
<b>Practical/Viva Voce</b>								
MTEEPS107	Power System Steady State Analysis Lab	0	0	4	60	40	100	2
MTEEPS108	Renewable Energy Lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

**Semester II**

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS201	Digital Protection of Power System	3	0	0	50	100	150	3
MTEEPS202	Power System Dynamics-II	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS203A	Restructured Power Systems	3	0	0	50	100	150	3
MTEEPS203B	Advanced Digital Signal Processing	3	0	0	50	100	150	3
MTEEPS203C	Dynamics of Electrical Machines	3	0	0	50	100	150	3
MTEEPS203D	Power Apparatus Design	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS204A	Advanced Micro-Controller Based Systems	3	0	0	50	100	150	3
MTEEPS204B	SCADA System and Applications	3	0	0	50	100	150	3
MTEEPS204C	Power Quality	3	0	0	50	100	150	3
MTEEPS204D	AI Techniques	3	0	0	50	100	150	3
MTEEPS205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	2	0	0	0	0	0	0
<b>Practical/Viva Voce</b>								
MTEEPS206	Power System Protection Lab	0	0	4	60	40	100	2
MTEEPS207	Application to Power System Lab	0	0	4	60	40	100	2
MTEEPS208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18



### Semester III

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS301A	Power System Transients	3	0	0	50	100	150	3
MTEEPS301B	FACTS and Custom Power Devices	3	0	0	50	100	150	3
MTEEPS301C	Industrial Load Modeling and Control	3	0	0	50	100	150	3
MTEEPS301D	Dynamics Of Linear Systems	3	0	0	50	100	150	3
MTEEPS302A	Business Analytics	3	0	0	50	100	150	3
MTEEPS302B	Industrial Safety	3	0	0	50	100	150	3
MTEEPS302C	Operations Research	3	0	0	50	100	150	3
MTEEPS302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTEEPS302E	Composite Materials	3	0	0	50	100	150	3
MTEEPS302F	Waste to Energy	3	0	0	50	100	150	3
MTEEPS303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

### Semester IV

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS401	Dissertation II	0	0	32	300	400	700	16
		Total			300	400	700	16



**Faculty of Engineering & Technology**

**M. Tech.**

**(Electrical Engineering)**

**(2019-20)**

**Program Structure**

## M.Tech. (EE) Course Structure (2019-20)

### Semester I

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS101	Advanced Power System Analysis	3	0	0	50	100	150	3
MTEEPS102	Power System Dynamics-I	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS103A	Renewable Energy System	3	0	0	50	100	150	3
MTEEPS103B	Smart grids	3	0	0	50	100	150	3
MTEEPS103C	High Power Converters	3	0	0	50	100	150	3
MTEEPS103D	Wind and Solar Systems	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS104A	Electrical Power Distribution System	3	0	0	50	100	150	3
MTEEPS104B	Mathematical Methods for Power Engineering	3	0	0	50	100	150	3
MTEEPS104C	Pulse Width Modulation for PE Converters	3	0	0	50	100	150	3
MTEEPS104D	Electric and Hybrid Vehicles	3	0	0	50	100	150	3
MTEEPS105	Research Methodology and IPR	2	0	0	50	100	150	2
MTEEPS106	Audit Course – 1 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 :	2	0	0	50	100	150	0

	Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills							
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### Practical/Viva Voce

	Power System Steady State Analysis Lab							
MTEEPS107		0	0	4	60	40	100	2
MTEEPS108	Renewable Energy Lab	0	0	4	60	40	100	2
Total		16	0	8	370	580	950	18

### Semester II

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS201	Digital Protection of Power System	3	0	0	50	100	150	3
MTEEPS202	Power System Dynamics-II	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS203A	Restructured Power Systems	3	0	0	50	100	150	3
MTEEPS203B	Advanced Digital Signal Processing	3	0	0	50	100	150	3
MTEEPS203C	Dynamics of Electrical Machines	3	0	0	50	100	150	3
MTEEPS203D	Power Apparatus Design	3	0	0	50	100	150	3
<b>Electives(Any One)</b>								
MTEEPS204A	Advanced Micro-Controller Based Systems	3	0	0	50	100	150	3
MTEEPS204B	SCADA System and Applications	3	0	0	50	100	150	3
MTEEPS204C	Power Quality	3	0	0	50	100	150	3
MTEEPS204D	AI Techniques	3	0	0	50	100	150	3
MTEEPS205	Audit Course – 2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge	2	0	0	0	0	0	0

	AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills							
<b>Practical/Viva Voce</b>								
MTEEPS206	Power System Protection Lab	0	0	4	60	40	100	2
MTEEPS207	Application to Power System Lab	0	0	4	60	40	100	2
MTEEPS208	Mini Project with Seminar	2	0	0	60	40	100	2
Total		14	0	8	380	520	900	18

### Semester III

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS301A	Power System Transients	3	0	0	50	100	150	3
MTEEPS301B	FACTS and Custom Power Devices	3	0	0	50	100	150	3
MTEEPS301C	Industrial Load Modeling and Control	3	0	0	50	100	150	3
MTEEPS301D	Dynamics Of Linear Systems	3	0	0	50	100	150	3
MTEEPS302A	Business Analytics	3	0	0	50	100	150	3
MTEEPS302B	Industrial Safety	3	0	0	50	100	150	3
MTEEPS302C	Operations Research	3	0	0	50	100	150	3
MTEEPS302D	Cost Management of Engineering Projects	3	0	0	50	100	150	3
MTEEPS302E	Composite Materials	3	0	0	50	100	150	3
MTEEPS302F	Waste to Energy	3	0	0	50	100	150	3
MTEEPS303	Dissertation-I /Industrial Project	0	0	20	60	40	100	10
Total		6	0	20	160	240	400	16

### Semester IV

Course Number	Subject	Scheme Of Studies Per Week			IA	EA	Total	Credits
		L	T	P				
MTEEPS401	Dissertation II	0	0	32	300	400	700	16
		Total			300	400	700	16