



Faculty of Engineering & Technology

Syllabus

For

Master of Technology (M. Tech.)

in

Electrical Engineering

(Program Code: MT0151EE)

**Approved by the Academic Council vide resolution no*

M. Tech. (EE)

9. PROGRAM STRUCTURE M. Tech. (EE)

Semester-I

Code	Title of Subject	Type	L	T	P	IA	EA	Total	Credits
MTEEPS101	Advanced Power System Analysis	Core	3	0	0	50	100	150	3
MTEEPS102	Power System Dynamics-I	Core	3	0	0	50	100	150	3
MTEEPS103A	Renewable Energy System	Elective	3	0	0	50	100	150	3
MTEEPS103B	Smart grids	Elective	3	0	0	50	100	150	3
MTEEPS103C	High Power Converters	Elective	3	0	0	50	100	150	3
MTEEPS103D	Wind and Solar Systems	Elective	3	0	0	50	100	150	3
MTEEPS104A	Electrical Power Distribution System	Elective	3	0	0	50	100	150	3
MTEEPS104B	Mathematical Methods for Power Engineering	Elective	3	0	0	50	100	150	3
MTEEPS104C	Pulse Width Modulation for PE Converters	Elective	3	0	0	50	100	150	3
MTEEPS104D	Electric and Hybrid Vehicles	Elective	3	0	0	50	100	150	3
MTEEPS105	Research Methodology and IPR	Core	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 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	AECC	2	0	0	0	0	0	0
Practical/Viva Voce		Type	L	T	P	IA	EA	Total	Credits
MTEEPS107	Power System Steady State Analysis Lab	Core	0	0	2	60	40	100	2
MTEEPS108	Renewable Energy Lab	Core	0	0	2	60	40	100	2
MTEEPS109	ANANDAM	AECC	1	-	1	50	50	100	2
Total			17	0	5	420	630	1050	20

M. Tech. (EE)

Semester-II

Code	Title of Subject	Type	L	T	P	IA	EA	Total	Credits
MTEEPS201	Digital Protection of Power System	Core	3	0	0	50	100	150	3
MTEEPS202	Power System Dynamics-II	Core	3	0	0	50	100	150	3
MTEEPS203A	Restructured Power Systems	Elective	3	0	0	50	100	150	3
MTEEPS203B	Advanced Digital Signal Processing	Elective	3	0	0	50	100	150	3
MTEEPS203C	Dynamics of Electrical Machines	Elective	3	0	0	50	100	150	3
MTEEPS203D	Power Apparatus Design	Elective	3	0	0	50	100	150	3
MTEEPS204A	Advanced Micro-Controller Based Systems	Elective	3	0	0	50	100	150	3
MTEEPS204B	SCADA System and Applications	Elective	3	0	0	50	100	150	3
MTEEPS204C	Power Quality	Elective	3	0	0	50	100	150	3
MTEEPS204D	AI Techniques	Elective	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	AECC	2	0	0	0	0	0	0
Practical/Viva Voce		Type	L	T	P	IA	EA	Total	Credits
MTEEPS206	Power System Protection Lab	Core	0	0	2	60	40	100	2
MTEEPS207	Application to Power System Lab	Core	0	0	2	60	40	100	2
MTEEPS208	Mini Project with Seminar	Core	2	0	0	60	40	100	2
MTEEPS209	ANANDAM	AECC	1	-	1	50	50	100	2
Total			17	0	5	430	570	1000	20

M. Tech. (EE)**Semester-III**

Code	Title of Subject	Type	L	T	P	IA	EA	Total	Credits
MTEEPS301A	Power System Transients	Elective	3	0	0	50	100	150	3
MTEEPS301B	FACTS and Custom Power Devices	Elective	3	0	0	50	100	150	3
MTEEPS301C	Industrial Load Modeling and Control	Elective	3	0	0	50	100	150	3
MTEEPS301D	Dynamics Of Linear Systems	Elective	3	0	0	50	100	150	3
MTEEPS302A	Business Analytics	Elective	3	0	0	50	100	150	3
MTEEPS302B	Industrial Safety	Elective	3	0	0	50	100	150	3
MTEEPS302C	Operations Research	Elective	3	0	0	50	100	150	3
MTEEPS302D	Cost Management of Engineering Projects	Elective	3	0	0	50	100	150	3
MTEEPS302E	Composite Materials	Elective	3	0	0	50	100	150	3
MTEEPS302F	Waste to Energy	Elective	3	0	0	50	100	150	3
Practical/Viva Voce		Type	L	T	P	IA	EA	Total	Credits
MTEEPS303	Dissertation-I /Industrial Project	Core	0	0	10	60	40	100	10
MTEEPS304	ANANDAM	AECC	1	-	1	50	50	100	2
Total			7	0	11	210	290	500	18

M. Tech. (EE)

Semester-IV

Practical/Viva Voce		Type	L	T	P	IA	EA	Total	Credits
MTEEPS401	Dissertation II	Core	0	0	16	300	400	700	16
MTEEPS402	ANANDAM	AECC	1	-	1	50	50	100	2
					Total	350	450	800	18

Note:

- A student is required to obtain min. 40% marks in individual paper & 50% in aggregate to pass.
- The total credit of M.Tech. (ME) Programme is 76. However, the minimum credit required for award of degree shall be 70.
- The credit relaxation will be applicable only on the elective course (i.e. the student can opt out only elective subject).
- Out of the total credits, 20% of the credits may be earned by the student through MOOCs (SWAYAM, NPTEL, Coursera etc.). However, the choice of online courses to be approved in advance by Dean/ HoD and Coordinator SWAYAM keeping in view the latest guidelines of the UGC/ respective regulatory body guidelines.