



**PERIYAR
MANIAMMAI**
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University)
Established Under Sec. 3 of UGC Act, 1956 • NAAC Accredited
think • innovate • transform

Criterion 1 – Curricular Aspects

Key Indicator	1.2	Academic Flexibility
Metric	1.2.2	Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING
STRUCTURE OF THE PROGRAM CLEARLY INDICATING
COURSES, CREDITS/ELECTIVES**

B.Tech. EEE Full Time**SEMESTER I**

Code No.	Course Title	L	T	P	C	TCH
XMA101	Calculus and Linear Algebra	3	1	0	4	4
XBE102	Electrical and Electronics Engineering Systems	3	1	0	4	4
XAC 103	Chemistry	3	1	0	4	4
XEG 104	Engineering Graphics and Design	1	0	2	3	5
XGS 105	Speech Communication	0	1	2	3	5
XUM 106	Constitution of India / Essence of Indian Traditional Knowledge	0	0	0	0	3
XBE107	Electrical and Electronics Engineering Systems Laboratory	0	0	1	1	2
XAC 108	Chemistry Laboratory	0	0	1	1	2
TOTAL		10	4	6	20	29

SEMESTER II

Code No.	Course Title	L	T	P	C	TCH
XMA 201	Calculus, Ordinary Differential Equations and Complex Variable	3	1	0	4	4
XCP 202	Programming for Problem Solving	3	0	0	3	3
XAP 203	Applied Physics for Engineers	3	1	0	4	4
XGS 204	Technical Communication	2	0	0	2	2
XWP 205	Workshop Practices	1	0	2	3	5
XEM 206	Engineering Mechanics	3	0	0	3	3
XCP 207	Programming for Problem Solving Laboratory	0	0	1	1	2
XAP 208	Applied Physics for Engineers Laboratory	0	0	1	1	2
TOTAL		15	2	4	21	25

SEMESTER III

Code No.	Course Title	L	T	P	C	TCH
XEE 301	Electrical Circuit Analysis	3	1	1	5	6
XEE 302	Analog Electronics	3	0	1	4	5
XEE 303	Electrical Machines - I	3	1	1	5	6
XEE 304	Electromagnetic Fields	3	1	0	4	4
XEE 305	Transmission and Distribution	3	0	0	3	3
XEE 306	In-plant Training - I	0	0	0	0	0
TOTAL		15	3	3	21	24

SEMESTER IV

Code No.	Course Title	L	T	P	C	TCH
XPS 401	Probability and Statistics	3	1	0	4	4
XEE 402	Digital Electronics	3	0	1	4	5
XEE 403	Power Electronics	3	0	1	4	5
XEE 404	Electrical Machines - II	3	1	1	5	6
XUM 405	Entrepreneurship Development	3	0	0	3	3
XEE 406	Signals and Systems	2	1	0	3	3
TOTAL		17	3	3	23	26

SEMESTER V

Code No.	Course Title	L	T	P	C	TCH
XEE 501	Power Systems - I (Apparatus and Modelling)	3	1	1	5	6
XEE 502	Control Systems	3	0	1	4	5
XEE 503	Microprocessors and Microcontrollers	3	0	1	4	5
XEE E1*	Professional Elective - 1	3	0	0	3	3
X** OE*	Open Elective – 1	3	0	0	3	3
XUM 506	Constitution of India	3	0	0	3	3
XEE 507	In-plant Training – II	0	0	0	0	0
XEE M01	Minor Course – I	0	0	0	0	2
TOTAL		18	1	3	22	27

SEMESTER VI

Code No.	Course Title	L	T	P	C	TCH
XUM 601	Economics for Engineers	3	0	0	3	3
XEE 602	Power Systems - II (Operation and Control)	3	1	1	5	6
XEE E2*	Professional Elective - 2	3	0	1	4	5
XEE E3*	Professional Elective - 3	3	0	1	4	5
X** OE*	Open Elective – 2	3	0	0	3	3
XUM 606	Disaster Management	3	0	0	P/F*	3
XEE M02	Minor Course – II	0	0	0	0	2
TOTAL		18	1	3	19	27

***Pass / Fail course**

SEMESTER VII

Code No.	Course Title	L	T	P	C	TCH
XEE E4*	Professional Elective – 4	3	0	0	3	3
XEE E5*	Professional Elective – 5	3	0	0	3	3
XUM 703	Human Ethics, Values, Rights and Gender Equality	3	0	0	3	3
X** OE*	Open Elective – 3	3	0	0	3	3
X** OE*	Open Elective – 4	3	0	0	3	3
XEE 706	Project Phase – I	0	0	8	4	6
XEE 707	In-plant Training – III	-	-	4	2	-
XEE M03	Minor Course – III	0	0	0	0	2
TOTAL		15	0	12	21	23

SEMESTER VIII

Code No.	Course Title	L	T	P	C	TCH
XUM 801	Cyber Security	0	0	0	P/F	3
XEE E6*	Professional Elective – 6	3	0	0	3	3
X** OE*	Open Elective -5	3	0	0	3	3
XEE 804	Project Phase – II	0	0	12	6	16
TOTAL		6	0	12	12	25

LIST OF ELECTIVES

ELECTIVE GROUP –1: (5th Sem)

Code No.	Course Title	L	T	P	C
E11	Protection and Switchgear	3	0	0	3
E12	Electrical Machine Design	3	0	0	3
E13	Electrical Safety, Operations and Regulations	3	0	0	3
E14	Computer Architecture	3	0	0	3

ELECTIVE GROUP – 2: (6th Sem)

Code No.	Course Title	L	T	P	C
E21	Measurements and Instrumentation	3	0	1	4
E22	Electromagnetic Waves	3	0	0	3
E23	Computational Electromagnetics	3	0	0	3
E24	Digital Control Systems	3	0	0	3

ELECTIVE GROUP –3: (6th Sem)

Code No.	Course Title	L	T	P	C
E31	Industrial Automation	3	0	1	4
E32	Digital Signal Processing	3	0	0	3
E33	Electrical Energy Conservation and Auditing	3	0	0	3
E34	Industrial Electrical Systems	3	0	0	3

ELECTIVE GROUP –4: (7th Sem)

Code No.	Course Title	L	T	P	C
E41	High Voltage Engineering	3	0	0	3
E42	Embedded System	3	0	0	3
E43	Power System Restructuring	3	0	0	3
E44	Line Commutated and Active Rectifiers	3	0	0	3

ELECTIVE GROUP –5:(7th Sem)

Code No.	Course Title	L	T	P	C
E51	Electrical Drives	3	0	0	3
E52	Power System Dynamics and Control	3	0	0	3
E53	HVDC Transmission Systems	3	0	0	3
E54	Power Quality and FACTS	3	0	0	3

ELECTIVE GROUP - 6:(8th Sem)

Code No.	Course Title	L	T	P	C
E61	Electrical and Hybrid Vehicles	3	0	0	3
E62	Wind and Solar Systems	3	0	0	3
E63	Power System Protection	3	0	0	3
E64	Advanced Electric Drives	3	0	0	3

OPEN ELECTIVES:

Code No.	Course Title	L	T	P	C
OE1	Industrial Automation	3	0	0	3
OE2	Energy Management and Auditing	3	0	0	3
OE3	Renewable Energy Technology	3	0	0	3

CURRICULUM

REGULATION – 2018

(Applicable to the students admitted from the Academic year 2018-19 onwards)

SEMESTER I

Code No.	Course Title	L	T	P	C	TCH
	Calculus and Linear Algebra	3	1	0	4	4
	Applied Physics for Engineers	3	1	0	4	4
	Chemistry	3	1	0	4	4
	Electrical Circuit Analysis	3	1	0	4	4
	Electrical Circuit Analysis Laboratory	0	0	1	1	2
Total		12	4	1	17	18

SEMESTER II

Code No.	Course Title	L	T	P	C	TCH
	Calculus, Ordinary Differential Equations and Complex Variable	3	1	0	4	4
	Analog Electronics	3	1	0	4	4
	Electromagnetic Fields	3	1	0	4	4
	Electrical Machines – I	3	1	0	4	4
	Electrical Machines – I Laboratory	0	0	1	1	2
Total		12	4	1	17	18

SEMESTER III

Code No.	Course Title	L	T	P	C	TCH
PEE 301	Transmission and Distribution	3	0	0	3	3
PEE 302	Environmental Sciences	3	0	0	3	3
PEE 303	Signals and Systems	2	1	0	3	3
PEE 304	Electrical Machines-II	3	0	1	4	5
		11	1	1	13	14

SEMESTER IV

Code No.	Course Title	L	T	P	C	TCH
PEE 401	Digital Electronics	3	0	0	3	3
PEE E1*	Professional Elective-1	3	0	0	3	3
PEE E2*	Professional Elective-2	3	0	0	3	3
PEE 404	Power Electronics	3	0	1	4	5
		12	0	1	13	14

SEMESTER V

Code No.	Course Title	L	T	P	C	TCH
PEE501	Power Systems – I (Apparatus and Modeling)	3	0	0	3	3
PEE E3*	Professional Elective-3	3	0	0	3	3
	Industrial Economics and Foreign Trade	3	0	0	3	3
PEE504	Control Systems	3	0	1	4	5
		12	0	1	13	14

SEMESTER VI

Code No.	Course Title	L	T	P	C	TCH
PEE601	Power Systems –II (Operation and Control)	3	0	0	3	3
PEE602	E-Waste Management	3	0	0	3	3
PEE603	Disaster Management	3	0	0	3	3
PEE 604	Microprocessors and Microcontrollers	3	0	1	4	5
		12	0	1	13	14

SEMESTER VII

Code No.	Course Title	L	T	P	C	TCH
PEE E4*	Professional Elective-4	3	0	0	3	3
PEE E5*	Professional Elective-5	3	0	0	3	3
PEE E6*	Professional Elective-6	3	0	0	3	3
PEE 704	Main Project	0	0	16	12	16
		9	0	16	21	25

OVER ALL CREDITS = 105CREDITS

ELECTIVE GROUP - 1 :(4th Sem)

Code No.	Course Title	L	T	P	C	TCH
PEE E11	Protection and Switchgear	3	0	0	3	3
PEE E12	Electrical Machine Design	3	0	0	3	3
PEE E13	Energy Auditing and Management	3	0	0	3	3
PEE E14	Computer Architecture	3	0	0	3	3

ELECTIVE GROUP - 2 :(4th Sem)

Code No.	Course Title	L	T	P	C	TCH
PEE E21	High Voltage Engineering	3	0	0	3	3
PEEE22	Electromagnetic Waves	3	0	0	3	3
PEEE23	Computational Electromagnetics	3	0	0	3	3
PEEE24	Digital Control Systems	3	0	0	3	3

ELECTIVE GROUP - 3 :(5th Sem)

Code No.	Course Title	L	T	P	C	TCH
PEEE31	Bio Medical Instrumentation	3	0	0	3	3
PEEE32	Digital Signal Processing	3	0	0	3	3
PEE E33	Industrial Electrical Systems	3	0	0	3	3

ELECTIVE GROUP - 4 :(7th Sem)

Code No.	Course Title	L	T	P	C	TCH
PEEE41	Power Plant Engineering	3	0	0	3	3
PEEE42	Embedded System	3	0	0	3	3
PEEE43	Eco Power Generation	3	0	0	3	3

ELECTIVE GROUP - 5 :(7th Sem)

Code No.	Course Title	L	T	P	C	TCH
PEEE51	Electrical Drives	3	0	0	3	3
PEEE52	Power System Dynamics and Control	3	0	0	3	3
PEEE53	Line Commutated and Active Rectifiers	3	0	0	3	3

ELECTIVE GROUP - 6 :(7th Sem)

Code No.	Course Title	L	T	P	C	TCH
PEE E61	HVDC Transmission Systems	3	0	0	3	3

PEE E62	Wind and Solar Energy Systems	3	0	0	3	3
PEE E63	Electrical Energy Conservation and Auditing	3	0	0	3	3