



GOVERNMENT COLLEGE OF ENGINEERING, SALEM

(NAAC Accredited with A⁺, An Autonomous Institution, Affiliated to Anna University, Chennai)

UNDERGRADUATE CURRICULUM

(Applicable to the students admitted in B.E. Programme, from the Academic Year 2026-2027)

Programme: B.E. Electrical and Electronics Engineering (Working Professionals)

Regulations: 2026

Overview of Credits

Sem	BS	HM	ES(G)	ES(PC)	ES(PE)	OE	SD	MC	Total
I	3	2		19					24
II				16			1	6	23
III				19	3		1		23
IV				8	9	3	3		23
V				14	6				20
VI							10		10
Total	3	2	0	76	18	3	15	6	123
% of Category	2.44	1.63	0.00	61.79	14.63	2.44	12.20	4.88	100

Abbreviations:

Course Type:

- T** - Theory
- L** - Laboratory
- LIT** - Laboratory Integrated Theory
- CDP** - Capstone Design Project
- PW** - Project Work
- IOC** – Industry Oriented Course

Category :

- BS** - Basic Science
- HM** - Humanities
- ES** - Engineering Science [General (**G**)
Programme Core (**PC**)
Programme Elective (**PE**)]
- OE** - Open Elective
- SD** - Skill Development
- MC** - Mandatory Course

Others :

- L** - Lecture
- T** - Tutorial
- P** - Practical
- SL** - Term work (TW) + Self Learning (SL)
- TH** - Total Number of Teaching – Learning Hours per Semester

Semester I													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
1.	26MA302	Statistics and Numerical Methods	T	45	15	0	30	90	3	BS	40	60	100
2.	26EE301	Electromagnetic Theory	T	30	15	0	45	90	3	ES(PC)	40	60	100
3.	26EE302	Signals and Systems	T	30	15	0	45	90	3	ES(PC)	40	60	100
4.	26EE303	DC Machines and Transformers	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26EE304	Analog and Digital Integrated Circuits	T	45	0	0	45	90	3	ES(PC)	40	60	100
6.	26EE305	Measurements and Instrumentation	T	45	0	0	45	90	3	ES(PC)	40	60	100
7.	26EE306	DC Machines and Transformers Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
8.	26EE307	Analog and Digital Integrated Circuits Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
9.	26ENC03	Placement and Soft Skills Laboratory	L	0	0	45	15	60	2	HM	60	40	100
TOTAL								720	24				

Semester II													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
1.	26EE401	Synchronous and Induction Machines	T	30	15	0	45	90	3	ES(PC)	40	60	100
2.	26EE402	Power Generation, Transmission and Distribution System	T	30	15	0	45	90	3	ES(PC)	40	60	100
3.	26EE403	Power Electronics	T	30	15	0	45	90	3	ES(PC)	40	60	100
4.	26EE404	Industrial Management and Economics	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26EE405	Synchronous and Induction Machines Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
6.	26EE406	Power Electronics Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
7.	26MCC02	Environmental Science and Engineering	T	45	0	0	45	90	3	MC	40	60	100
8.	26MCC03	Universal Human Values	T	45	0	0	45	90	3	MC	40	60	100
9.	26EEICXX	Industry Oriented Course - I	IOC	15	0	0	15	30	1	SD	100	-	100
TOTAL								690	23				

Semester III													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
1.	26EE501	Control Systems	T	30	15	0	45	90	3	ES(PC)	40	60	100
2.	26EE502	Electrical Machine Design	T	30	15	0	45	90	3	ES(PC)	40	60	100
3.	26EE503	Power System Analysis and Stability	T	30	15	0	45	90	3	ES(PC)	40	60	100
4.	26EE504	Microprocessor and Microcontroller	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26EE505	Electric Drives and Control	T	30	15	0	45	90	3	ES(PC)	40	60	100
6.	26EEPEXX	Programme Elective - I	T	45	0	0	45	90	3	ES(PE)	40	60	100
7.	26EE506	Control and Instrumentation Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
8.	26EE507	Microprocessor and Microcontroller Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
9.	26EEICXX	Industry Oriented Course - II	IOC	15	0	0	15	30	1	SD	100	-	100
10.	26MCC04	Disaster Management and Preparedness	T	30	0	0	30	60	0	MC	100	-	100
11.	26MCC05	Indian Constitution	T	15	0	0	15	30	0	MC	100	-	100
TOTAL								780	23				

Semester III													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
For Honours Degree													
1.	26EED01	Capstone Design Project Level-I	CDP	0	0	90	90	180	6	SD	60	40	100
OR													
1.	26EEHXX	Honours Elective - I	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26EEHXX	Honours Elective - II	T	45	0	0	45	90	3	ES(PE)	40	60	100
For Minor Degree													
1.	26EEMXX	Minor Elective - I	T	45	0	0	45	90	3	OE	40	60	100
2.	26EEMXX	Minor Elective - II	T	45	0	0	45	90	3	OE	40	60	100
TOTAL								180	6				

Semester IV													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
1.	26EE601	Power System Protection and Switch Gear	T	45	0	0	45	90	3	ES(PC)	40	60	100
2.	26EE602	Power System Operation and Control	T	45	0	0	45	90	3	ES(PC)	40	60	100
3.	26EEPEXX	Programme Elective - II	T	45	0	0	45	90	3	ES(PE)	40	60	100
4.	26EEPEXX	Programme Elective - III	T	45	0	0	45	90	3	ES(PE)	40	60	100
5.	26EEPEXX	Programme Elective - IV	T	45	0	0	45	90	3	ES(PE)	40	60	100
6.	26XXOEXX	Open Elective - I	T	45	0	0	45	90	3	OE	40	60	100
7.	26EE603	Electric Drives and Control Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
8.	26EE604	Mini Project	PW	0	0	45	45	90	3	SD	100	-	100
TOTAL								690	23				

Semester IV													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
For Honours Degree													
1.	26EED02	Capstone Design Project Level-II	CDP	0	0	90	90	180	6	SD	60	40	100
OR													
1.	26EEHXX	Honours Elective - III	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26EEHXX	Honours Elective - IV	T	45	0	0	45	90	3	ES(PE)	40	60	100
For Minor Degree													
1.	26EEMXX	Minor Elective - III	T	45	0	0	45	90	3	OE	40	60	100
2.	26EEMXX	Minor Elective - IV	T	45	0	0	45	90	3	OE	40	60	100
TOTAL								180	6				

Semester V													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
1.	26EE701	High Voltage Engineering	T	30	15	0	45	90	3	ES(PC)	40	60	100
2.	26EE702	Smart Grid	T	45	0	0	45	90	3	ES(PC)	40	60	100
3.	26EE703	Solar and Wind Energy Conversion System	T	45	0	0	45	90	3	ES(PC)	40	60	100
4.	26EE704	Electric Vehicles	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26EEPEXX	Programme Elective - V	T	45	0	0	45	90	3	ES(PE)	40	60	100
6.	26EEPEXX	Programme Elective - VI	T	45	0	0	45	90	3	ES(PE)	40	60	100
7.	26EE705	Power Systems Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
TOTAL								600	20				

Semester V													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
For Honours Degree													
1.	26EED03	Capstone Design Project Level-III	CDP	0	0	90	90	180	6	SD	60	40	100
OR													
1.	26EEHXX	Honours Elective - V	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26EEHXX	Honours Elective - VI	T	45	0	0	45	90	3	ES(PE)	40	60	100
For Minor Degree													
1.	26EEMXX	Minor Elective - V	T	45	0	0	45	90	3	OE	40	60	100
2.	26EEMXX	Minor Elective - VI	T	45	0	0	45	90	3	OE	40	60	100
TOTAL								180	6				

Semester VI													
Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
1.	26EE801	Project Work	PW	0	0	300	0	300	10	SD	60	40	100
TOTAL								300	10				
Total Credits of the Programmes									123				

Programme Electives

Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
Programme Elective - I (III Semester)													
Streams : Advanced Control													
1.	26EEPE01	Advanced Control Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26EEPE02	Nonlinear Control Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
3.	26EEPE03	Optimal Control Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
4.	26EEPE04	Adaptive Control Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
5.	26EEPE05	Biomedical Instrumentation	T	45	0	0	45	90	3	ES(PE)	40	60	100
6.	26EEPE06	Network Analysis and Synthesis	T	45	0	0	45	90	3	ES(PE)	40	60	100
Programme Electives II (IV Semester)													
Streams : Power Engineering													
7.	26EEPE07	HVDC Transmission Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
8.	26EEPE08	Flexible AC Transmission Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
9.	26EEPE09	Power System Transients	T	45	0	0	45	90	3	ES(PE)	40	60	100
10.	26EEPE10	Power System Dynamics and Control	T	45	0	0	45	90	3	ES(PE)	40	60	100
11.	26EEPE11	Substation Engineering and Automation	T	45	0	0	45	90	3	ES(PE)	40	60	100
12.	26PSC01	Applied Design Thinking	T	45	0	0	45	90	3	ES(PE)	40	60	100
Programme Electives III (IV Semester)													
Streams : Embedded Systems													
13.	26EEPE12	Digital Signal Processing	T	45	0	0	45	90	3	ES(PE)	40	60	100
14.	26EEPE13	Embedded System Design	T	45	0	0	45	90	3	ES(PE)	40	60	100
15.	26EEPE14	Soft Computing Techniques	T	45	0	0	45	90	3	ES(PE)	40	60	100
16.	26EEPE15	MEMS and NEMS	T	45	0	0	45	90	3	ES(PE)	40	60	100
17.	26EEPE16	Embedded Processors	T	45	0	0	45	90	3	ES(PE)	40	60	100
18.	26PSC02	Startup Fundamentals	T	45	0	0	45	90	3	ES(PE)	40	60	100

Programme Electives IV (IV Semester) Streams: Power Electronic Converters and Drives													
19.	26EEPE17	Special Electrical Machines	T	45	0	0	45	90	3	ES(PE)	40	60	100
20.	26EEPE18	Modern Power Converters	T	45	0	0	45	90	3	ES(PE)	40	60	100
21.	26EEPE19	Distributed Generation and Micro Grid	T	45	0	0	45	90	3	ES(PE)	40	60	100
22.	26EEPE20	Power Quality	T	45	0	0	45	90	3	ES(PE)	40	60	100
23.	26EEPE21	SMPS and UPS	T	45	0	0	45	90	3	ES(PE)	40	60	100
24.	26EEPE22	Control of Power Electronic Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
Programme Electives V (V Semester) Streams: Energy Engineering													
25.	26EEPE23	Utilization and Conservation of Electrical Energy	T	45	0	0	45	90	3	ES(PE)	40	60	100
26.	26EEPE24	Energy Management and Auditing	T	45	0	0	45	90	3	ES(PE)	40	60	100
27.	26EEPE25	Energy Storage Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
28.	26EEPE26	Hybrid Energy Technology	T	45	0	0	45	90	3	ES(PE)	40	60	100
29.	26EEPE27	Hydrogen and Fuel Cell Technology	T	45	0	0	45	90	3	ES(PE)	40	60	100
30.	26EEPE28	Electrical Safety	T	45	0	0	45	90	3	ES(PE)	40	60	100
Programme Electives VI : (V Semester) Streams: Electric Vehicle Technology													
31	26EEPE29	e-Mobility	T	45	0	0	45	90	3	ES(PE)	40	60	100
32.	26EEPE30	Electric Vehicle Architecture	T	45	0	0	45	90	3	ES(PE)	40	60	100
33.	26EEPE31	Design of Motor and Power Converters for Electric Vehicles	T	45	0	0	45	90	3	ES(PE)	40	60	100
34.	26EEPE32	EV Charging Infrastructure	T	45	0	0	45	90	3	ES(PE)	40	60	100
35.	26EEPE33	Safety and Testing of Electric Vehicles	T	45	0	0	45	90	3	ES(PE)	40	60	100
36.	26EEPE34	Battery Management Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100

Open Electives

Sl. No.	Course Code	Course Name	Course Type	Hours per Semester					Credits	Category	Weightage		
				L	T	P	SL	TH			CA %	ES %	Total
Courses Offered by the Department of Civil Engineering													
1.	26CEOE01	Environmental Management	T	45	0	0	45	90	3	OE	40	60	100
2.	26CEOE02	Repair and Rehabilitation of Building Elements	T	45	0	0	45	90	3	OE	40	60	100
3.	26CEOE03	Mechanics of Deformable Bodies	T	45	0	0	45	90	3	OE	40	60	100
Courses Offered by the Department of Computer Science and Engineering													
1.	26CSOE01	Object Oriented Programming Concepts	T	45	0	0	45	90	3	OE	40	60	100
2.	26CSOE02	Operating Systems Principles	T	45	0	0	45	90	3	OE	40	60	100
3.	26CSOE03	Python Programming	T	45	0	0	45	90	3	OE	40	60	100
4.	26CSOE04	Fundamentals of Java Programming	T	45	0	0	45	90	3	OE	40	60	100
5.	26CSOE05	Data Structures using C	T	45	0	0	45	90	3	OE	40	60	100
6.	26CSOE06	Introduction to Artificial Intelligence	T	45	0	0	45	90	3	OE	40	60	100
7.	26CSOE07	Cloud Computing Fundamentals	T	45	0	0	45	90	3	OE	40	60	100
Courses Offered by the Department of Electronics and Communication Engineering													
1.	26ECOE01	Fundamentals of Electron Devices	T	45	0	0	45	90	3	OE	40	60	100
2.	26ECOE02	Principles of Modern Communication Systems	T	45	0	0	45	90	3	OE	40	60	100
3.	26ECOE03	Microcontrollers and Its Applications	T	45	0	0	45	90	3	OE	40	60	100
4.	26ECOE04	Basics of Embedded Systems	T	45	0	0	45	90	3	OE	40	60	100
5.	26ECOE05	Basics of Internet of Things	T	45	0	0	45	90	3	OE	40	60	100

Courses Offered by the Department of Electrical and Electronics Engineering													
1.	26EEOE01	Renewable Energy Systems	T	45	0	0	45	90	3	OE	40	60	100
2.	26EEOE02	Industrial Drives	T	45	0	0	45	90	3	OE	40	60	100
3.	26EEOE03	Electrical Energy Conservation and Management	T	45	0	0	45	90	3	OE	40	60	100
4.	26EEOE04	Fundamentals of Electric Vehicle	T	45	0	0	45	90	3	OE	40	60	100
5.	26EEOE05	Electrical Safety and Energy Auditing	T	45	0	0	45	90	3	OE	40	60	100
6.	26EEOE06	Energy Storage Systems and its Applications	T	45	0	0	45	90	3	OE	40	60	100
Courses Offered by the Department of Mechanical Engineering													
1.	26MEOE01	Design of Machine Elements and Machining	T	45	0	0	45	90	3	OE	40	60	100
2.	26MEOE02	Internal Combustion Engines	T	45	0	0	45	90	3	OE	40	60	100
3.	26MEOE03	Refrigeration and Air conditioning	T	45	0	0	45	90	3	OE	40	60	100
4.	26MEOE04	Power Plant Engineering	T	45	0	0	45	90	3	OE	40	60	100
5.	26MEOE05	Hydraulics and Pneumatics	T	45	0	0	45	90	3	OE	40	60	100
6.	26MEOE06	Industrial Engineering and Management	T	45	0	0	45	90	3	OE	40	60	100
7.	26MEOE07	Renewable Energy Sources	T	45	0	0	45	90	3	OE	40	60	100
8.	26MEOE08	Robotics and Automation	T	45	0	0	45	90	3	OE	40	60	100
9.	26MEOE09	Total Quality Management	T	45	0	0	45	90	3	OE	40	60	100
10.	26MEOE10	Automotive Systems	T	45	0	0	45	90	3	OE	40	60	100
Courses Offered by the Department of Metallurgical Engineering													
1.	26MTOE01	Foundry and Welding Technology	T	45	0	0	45	90	3	OE	40	60	100
2.	26MTOE02	Surface Engineering	T	45	0	0	45	90	3	OE	40	60	100
3.	26MTOE03	Design and Selection of Materials	T	45	0	0	45	90	3	OE	40	60	100
4.	26MTOE04	Nano Science and Technology	T	45	0	0	45	90	3	OE	40	60	100
5.	26MTOE05	Materials for Automobile Components	T	45	0	0	45	90	3	OE	40	60	100
6.	26MTOE06	Metallurgy for Non-metallurgist	T	45	0	0	45	90	3	OE	40	60	100

List of Honours Courses

Sl. No.	Course Code	Course Name
1.	26EEH01	Smart System Automation
2.	26EEH02	Building Cyber-Physical Systems
3.	26EEH03	Restructured Power Market
4.	26EEH04	Design and Modelling of Renewable Energy Systems
5.	26EEH05	Grid Integration Techniques
6.	26EEH06	Power Electronics for Renewable Energy Systems
7.	26EEH07	System Identification Techniques
8.	26EEH08	VLSI Design
9.	26EEH09	Machine Learning
10.	26EEH10	Drone Technologies
11.	26EEH11	EMI and EMC
12.	26EEH12	Connected Vehicle
13.	26EEH13	Model based Control
14.	26EEH14	Process Control
15.	26EEH15	Factory Automation
16.	26EEH16	Condition Monitoring and Testing of Electrical Equipment

List of Minors Courses

Sl. No.	Course Code	Course Name
1.	26EEM01	Linear and Digital Electronics Circuits
2.	26EEM02	Basics of Microprocessors and Microcontrollers
3.	26EEM03	Linear Control Systems
4.	26EEM04	Electrical Measurements and Instrumentation
5.	26EEM05	Electrical Machines
6.	26EEM06	Electrical Drives
7.	26EEM07	Fundamentals of Electric Vehicles
8.	26EEM08	Electrical Energy Conservation and Auditing
9.	26EEM09	Switched Mode Power Conversion
10.	26EEM10	Distributed Generation