



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. Electronics and Communication Engineering (Working Professionals)

Regulations: 2026

Overview of Credits

Sem	BS	HM	ES(G)	ES(PC)	ES(PE)	OE	SD	MC	Total
I	3			20				3	26
II	3			19			1	3	26
III		2		15	3		1		21
IV				8	9	3	3		23
V				14	6				20
VI							10		10
Total	6	2	0	76	18	3	15	6	126
% of Category	4.76	1.59	0.00	60.32	14.29	2.38	11.90	4.76	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.	26MAC04	Partial Differential Equations and Complex Variables	T	45	15	0	30	90	3	BS	40	60	100
2.	26EC301	Analog Circuits - I	T	45	0	0	45	90	3	ES(PC)	40	60	100
3.	26EC302	Digital System Design	LIT	45	15	45	15	120	4	ES(PC)	50	50	100
4.	26EC303	Network Theory and Synthesis	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26EC304	Signals and Systems	T	45	15	0	60	120	4	ES(PC)	40	60	100
6.	26EC305	Problem Solving using Python	LIT	45	15	45	15	120	4	ES(PC)	50	50	100
7.	26EC306	Analog Circuits - I Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
8.	26MCC03	Universal Human Values	T	45	0	0	45	90	3	MC	40	60	100
Total								780	26				

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.	26MAC05	Statistics and Random Processes	T	45	15	0	30	90	3	BS	40	60	100
2.	26EC401	Analog Circuits - II	T	45	0	0	45	90	3	ES(PC)	40	60	100
3.	26EC402	Microprocessors and Microcontrollers	T	45	0	0	45	90	3	ES(PC)	40	60	100
4.	26EC403	Analog Communication	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26EC404	Control Systems	T	45	0	0	45	90	3	ES(PC)	40	60	100
6.	26EC405	Transmission Lines and Waveguides	T	45	0	0	45	90	3	ES(PC)	40	60	100
7.	26EC406	Analog Circuits - II Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
8.	26EC407	Microprocessors and Microcontrollers Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
9.	26MCC02	Environmental Science and Engineering	T	45	0	0	45	90	3	MC	40	60	100
10.	26ECICXX	Industry Oriented Course - I	IOC	15	0	0	15	30	1	SD	100	-	100
11.	26MCC04	Disaster Management & Preparedness	T	30	0	0	30	60	0	MC	100	-	100
Total								840	26				

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.	26EC501	Digital Communication	T	45	0	0	45	90	3	ES(PC)	40	60	100
2.	26EC502	Digital Signal Processing	LIT	45	15	45	15	120	4	ES(PC)	50	50	100
3.	26EC503	Antennas and Wave Propagation	T	45	0	0	45	90	3	ES(PC)	40	60	100
4.	26EC504	Data Communication Networks	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26EC505	Communication Systems Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
6.	26ECPEXX	Programme Elective - I	T	45	0	0	45	90	3	ES(PE)	40	60	100
7.	26ENC03	Placement and Soft Skills Laboratory	L	0	0	45	15	60	2	HM	60	40	100
8.	26ECICXX	Industry Oriented Course - II	IOC	15	0	0	15	30	1	SD	100	-	100
9.	26MCC05	Indian Constitution	T	30	0	0	30	60	0	MC	100	-	100
Total								690	21				

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.	26ECD01	Capstone Design Project Level-I	CDP	0	0	90	90	180	6	SD	60	40	100
OR													
1.	26ECHXX	Honours Elective - I	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26ECHXX	Honours Elective - II	T	45	0	0	45	90	3	ES(PE)	40	60	100
For Minor Degree													
1.	26ECMXX	Minor Elective - I	T	45	0	0	45	90	3	OE	40	60	100
2.	26ECMXX	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.	26EC601	VLSI Design	T	45	0	0	45	90	3	ES(PC)	40	60	100
2.	26EC602	Embedded Systems	T	45	0	0	45	90	3	ES(PC)	40	60	100
3.	26ECPEXX	Programme Elective - II	T	45	0	0	45	90	3	ES(PE)	40	60	100
4.	26ECPEXX	Programme Elective - III	T	45	0	0	45	90	3	ES(PE)	40	60	100
5.	26ECPEXX	Programme Elective - IV	T	45	0	0	45	90	3	ES(PE)	40	60	100
6.	26XXOEEXX	Open Elective - I	T	45	0	0	45	90	3	OE	40	60	100
7.	26EC603	VLSI Design and Embedded Systems Laboratory	L	0	0	45	15	60	2	ES(PC)	60	40	100
8.	26EC604	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.	26ECD02	Capstone Design Project Level-II	CDP	0	0	90	90	180	6	SD	60	40	100
OR													
1.	26ECHXX	Honours Elective - III	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26ECHXX	Honours Elective - IV	T	45	0	0	45	90	3	ES(PE)	40	60	100
For Minor Degree													
1.	26ECMXX	Minor Elective - III	T	45	0	0	45	90	3	OE	40	60	100
2.	26ECMXX	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.	26EC701	Wireless and Mobile Communication	T	45	0	0	45	90	3	ES(PC)	40	60	100
2.	26EC702	Optical Communication	T	45	0	0	45	90	3	ES(PC)	40	60	100
3.	26EC703	Microwave Engineering	T	45	0	0	45	90	3	ES(PC)	40	60	100
4.	26EC704	Digital Image Processing	T	45	0	0	45	90	3	ES(PC)	40	60	100
5.	26ECPEXX	Programme Elective - V	T	45	0	0	45	90	3	ES(PE)	40	60	100
6.	26ECPEXX	Programme Elective - VI	T	45	0	0	45	90	3	ES(PE)	40	60	100
7.	26EC705	Optical and Microwave Engineering 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.	26ECD03	Capstone Design Project Level-III	CDP	0	0	90	90	180	6	SD	60	40	100
OR													
1.	26ECHXX	Honours Elective - V	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26ECHXX	Honours Elective - VI	T	45	0	0	45	90	3	ES(PE)	40	60	100
For Minor Degree													
1.	26ECMXX	Minor Elective - V	T	45	0	0	45	90	3	OE	40	60	100
2.	26ECMXX	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.	26EC801	Project Work	PW	0	0	225	75	300	10	SD	60	40	100
TOTAL								300	10				
Total Credits of the Programmes									126				

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)													
1.	26ECPE01	Electronic Measurements	T	45	0	0	45	90	3	ES(PE)	40	60	100
2.	26ECPE02	Virtual Instrumentation	T	45	0	0	45	90	3	ES(PE)	40	60	100
3.	26ECPE03	RF and EMI/EMC Testing	T	45	0	0	45	90	3	ES(PE)	40	60	100
4.	26ECPE04	Bio Medical Electronics	T	45	0	0	45	90	3	ES(PE)	40	60	100
5.	26ECPE05	Modern Sensors and its Applications	T	45	0	0	45	90	3	ES(PE)	40	60	100
Programme Elective - II (IV Semester)													
6.	26ECPE06	Multimedia Compression and Communication Techniques	T	45	0	0	45	90	3	ES(PE)	40	60	100
7.	26ECPE07	Radar Communication	T	45	0	0	45	90	3	ES(PE)	40	60	100
8.	26ECPE08	Satellite Communication	T	45	0	0	45	90	3	ES(PE)	40	60	100
9.	26ECPE09	Software Defined Radio	T	45	0	0	45	90	3	ES(PE)	40	60	100
10.	26ECPE10	Cognitive Radio Networks	T	45	0	0	45	90	3	ES(PE)	40	60	100
11.	26PSC01	Applied Design Thinking	T	45	0	0	45	90	3	ES(PE)	100	0	100

Programme Elective - III (IV Semester)													
12.	26ECPE11	Network Security	T	45	0	0	45	90	3	ES(PE)	40	60	100
13.	26ECPE12	High Speed Networks	T	45	0	0	45	90	3	ES(PE)	40	60	100
14.	26ECPE13	Massive MIMO Networks	T	45	0	0	45	90	3	ES(PE)	40	60	100
15.	26ECPE14	Wireless Sensor Networks	T	45	0	0	45	90	3	ES(PE)	40	60	100
16.	26ECPE15	Telecommunication and Switching Networks	T	45	0	0	45	90	3	ES(PE)	40	60	100
17.	26PSC02	Startup Fundamentals	T	45	0	0	45	90	3	ES(PE)	100	0	100
Programme Elective - IV (IV Semester)													
18.	26ECPE16	Internet of Things	T	45	0	0	45	90	3	ES(PE)	40	60	100
19.	26ECPE17	Embedded C	T	45	0	0	45	90	3	ES(PE)	40	60	100
20.	26ECPE18	Automotive Electronics	T	45	0	0	45	90	3	ES(PE)	40	60	100
21.	26ECPE19	Robotics	T	45	0	0	45	90	3	ES(PE)	40	60	100
22.	26ECPE20	Computer Organization and Architecture	T	45	0	0	45	90	3	ES(PE)	40	60	100
Programme Elective - V (V Semester)													
23.	26ECPE21	Artificial Intelligence	T	45	0	0	45	90	3	ES(PE)	40	60	100
24.	26ECPE22	Machine Learning	T	45	0	0	45	90	3	ES(PE)	40	60	100
25.	26ECPE23	Deep Learning	T	45	0	0	45	90	3	ES(PE)	40	60	100
26.	26ECPE24	Natural Language Processing	T	45	0	0	45	90	3	ES(PE)	40	60	100
27.	26ECPE25	Data Science	T	45	0	0	45	90	3	ES(PE)	40	60	100
Programme Elective - VI (V Semester)													
28.	26ECPE26	VLSI Physical Design	T	45	0	0	45	90	3	ES(PE)	40	60	100
29.	26ECPE27	System on Chip Design	T	45	0	0	45	90	3	ES(PE)	40	60	100
30.	26ECPE28	Micro Electro Mechanical Systems	T	45	0	0	45	90	3	ES(PE)	40	60	100
31.	26ECPE29	Nano Electronics	T	45	0	0	45	90	3	ES(PE)	40	60	100
32.	26ECPE30	Integrated Circuit Design	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.	26ECH01	Next Generation Networks
2.	26ECH02	5G Communication Networks
3.	26ECH03	Software Defined Networks
4.	26ECH04	Embedded System for Networking
5.	26ECH05	Statistical Theory of Communication
6.	26ECH06	Millimeter Wave Communication
7.	26ECH07	Smart Antennas
8.	26ECH08	RF IC and Microwave MEMs
9.	26ECH09	Brain Computer Interface and Applications
10.	26ECH10	Speech Processing
11.	26ECH11	Wavelet Signal Processing
12.	26ECH12	Biomedical Signal and Image Processing
13.	26ECH13	Analog CMOS IC Design
14.	26ECH14	DSP Integrated Circuits
15.	26ECH15	Mixed Signal VLSI Design

List of Minors Courses

Sl. No.	Course Code	Course Name
1.	26ECM01	Electron Devices and Circuits
2.	26ECM02	Digital Electronics
3.	26ECM03	Signal Processing
4.	26ECM04	Fundamentals of Microprocessors and Microcontrollers
5.	26ECM05	Analog and Digital Communication
6.	26ECM06	Communication Networks
7.	26ECM07	Fundamentals of IoT
8.	26ECM08	Wireless Sensors and Networking
9.	26ECM09	Fundamentals of Embedded Systems
10.	26ECM10	Basics of VLSI Design