

K.S. Rangasamy College of Technology

(Autonomous)



CURRICULUM & SYLLABI

of

B.E. Electrical and Electronics Engineering

(For the Batch Admitted in 2026 – 2027)

R 2026

**Programme Accredited by NBA, NAAC with 'A++' Grade,
Approved by AICTE, Affiliated to Anna University, Chennai**

**KSR Kalvi Nagar, Tiruchengode – 637 215.
Namakkal District, Tamil Nadu, India**

Rev.No. 00 / w.e.f. 04.01.2026

Passed in BoS Meeting held on 15/12/2025

Approved in Academic Council Meeting held on 03/01/2026

BoS Chairman Signature

K.S. RANGASAMY COLLEGE OF TECHNOLOGY, TIRUCHENGODE -637215
(An Autonomous Institution, Affiliated to Anna University, Chennai)

COURSES OF STUDY
(For the Batch Admitted in 2026 - 2027)

SEMESTER I

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
		Induction Programme	-	-	-	-	-	0
THEORY								
1.	26EN1C1I	English Essentials I	HS	3	1	0	2	2
2.	26MA1C6T	Matrices and Calculus	BS	5	3	1	0	4
3.	26PH1C2T	Physics for Electrical Sciences	BS	3	3	0	0	3
4.	26CH1C3T	Chemistry for Electrical Sciences	BS	3	3	0	0	3
5.	26CS1C1T	C - Programming	ES	3	3	0	0	3
6.	26GE1C1T	Heritage of Tamils / தமிழர் மரபு	HS	1	1	0	0	1
7.	26MY1C1T	Environmental Science and Sustainability	MC	2	2	0	0	0
8.	26MY1Y2T	Universal Human Values	MC	3	3	0	0	3*
PRACTICALS								
9.	26CS1C1L	C – Programming Laboratory	ES	3	0	0	3	1.5
10.	26PH1C2L	Applied Physics Laboratory	BS	2	0	0	2	1
11.	26CH1C2L	Engineering Chemistry Laboratory	BS	2	0	0	2	1
12.	26EE101P	Design Thinking	PC	2	0	0	2	1
13.	26TP1G1P	Career Skill Development I - Aptitude 1	CG	2	0	0	2	1
Total				34	19	1	13	21.5

SEMESTER II

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1.	26EN2C1I	English Essentials II	HS	3	1	0	2	2
2.	26MA2C4T	Vector Calculus And Laplace Transforms	BS	5	3	1	0	4
3.	26EE201I	Electron Devices	PC	4	2	0	2	3
4.	26EE202T	Electric Circuit Analysis	PC	5	3	1	0	4
5.	26ME2C2I	Engineering Graphics	ES	4	2	0	2	3
6.	26GEC2T	Tamils and Technology / தமிழரும் தொழில் நுட்பமும்	HS	1	1	0	0	1
PRACTICALS								
7.	26EE201L	Electric Circuits Laboratory	PC	3	0	0	3	1.5
8.	26EE2C1L	Makerspace	ES	2	0	0	2	1
9.	26EE202P	Innovation for Engineering and Technology	PC	2	0	0	2	1
10.	26TP2G1P	Career Skill Development II - Aptitude 2	CG	2	0	0	2	1
Total				31	12	2	15	21.5

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SEMESTER III

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1.	26MA3C3T	Transforms and Partial Differential Equations	BS	5	3	1	0	4
2.	26EE301T	DC Machines and Transformers	PC	5	3	1	0	4
3.	26EE302T	Electromagnetic Fields	PC	3	3	0	0	3
4.	26EE303T	Analog Circuits and Systems	PC	3	3	0	0	3
5.	26EE304I	Digital Logic Circuit and Design	PC	4	2	0	2	3
6.	26CS3C3T	Data Structures and Algorithms	ES	3	3	0	0	3
7.	26MY3Y1T/ 26MY4Y1T	Life Skills for Engineers / Biology for Engineers	MC	1	1	0	0	1
8.	26MY3C2T	Disaster Management	MC	2	2	0	0	0
PRACTICALS								
9.	26CS3C3L	Data Structures and Algorithms Laboratory	ES	3	0	0	3	1.5
10.	26EE301L	DC Machines and Transformers Laboratory	PC	3	0	0	3	1.5
11.	26TP3G1P	Language Laboratory	HS	2	0	0	2	1
12.	26TP3G1P	Career Skill Development III	CG	2	0	0	2	1*
Total				34	20	2	10	25

*Career Skill Development (CSD) - additional credit is offered not accounted for CGPA.

SEMESTER IV

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1.	26MA4C4T	Numerical Methods and Statistics	BS	5	3	1	0	4
2.	26EE401T	Induction and Synchronous Machines	PC	4	2	1	0	3
3.	26EE402T	Signals and Systems	PC	5	3	1	0	4
4.	26EE403T	Linear Integrated Circuits and its applications	PC	3	3	0	0	3
5.	26EE404T	Measurements and Instrumentation	PC	3	3	0	0	3
6.	26XX4NXT	Open Elective – I	OE	3	3	0	0	3
7.	26MY4C1T	Universal Human Values	MC	1	1	0	0	1
PRACTICALS								
8.	26EE401L	Induction and Synchronous Machines Laboratory	PC	3	0	0	3	1.5
9.	26EE402L	Analog Electronics Laboratory	PC	3	0	0	3	1.5
10.	26EE403P	Mini Project	PC	4	0	0	4	2
11.	26TP4G1P	Career Skill Development IV	CG	2	0	0	2	1*
12.		Summer Internship®	CG		0	0	0	1*
Total				34	18	3	12	26

*Career Skill Development (CSD) - additional credit is offered not accounted for CGPA.

® Summer Internship Additional Credit – 2 weeks

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SEMESTER V

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1.	26EE501T	Electrical Power Transmission and Distribution	PC	5	3	1	0	4
2.	26EE502T	Electrical Machine Design	PC	5	3	1	0	4
3.	26EE503T	Control Systems	PC	5	3	1	0	4
4.	26EE504T	Power Electronics and Industrial Drives	PC	3	3	0	0	3
5.	26EE5EXI	Professional Elective – I	PE	4	2	0	2	3
6.	26XX5NXT	Open Elective – II	OE	3	3	0	0	3
7.	26MY5C1T	Start-ups and Entrepreneurship	MC	2	2	0	0	2*
PRACTICALS								
8.	26EE501L	Control and Virtual Instrumentation Laboratory	PC	3	0	0	3	1.5
9.	26EE502L	Power Electronics and Drives Laboratory	PC	3	0	0	3	1.5
10.	26TP5G1P	Career Skill Development V	CG	2	0	0	2	1*
Total				31	17	3	8	24

*Career Skill Development (CSD) - additional credit is offered not accounted for CGPA.

* Start-ups and Entrepreneurship (MC) - additional credit is offered not accounted for CGPA.

SEMESTER VI

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1.	26EE601T	Power System Analysis and Stability	PC	5	3	1	0	4
2.	26EE602T	Power System Protection and Switchgear	PC	5	3	0	2	4
3.	26EE603T	Microprocessor and Microcontrollers	PC	3	3	0	0	3
4.	26EE6EXT	Professional Elective – II	PE	3	3	0	0	3
5.	26EE6EXI	Professional Elective – III	PE	4	2	0	2	3
6.		Self Learning Course (MOOC / SWAYAM) *		3	3	0	0	3*
PRACTICALS								
7.	26EE601L	Microprocessor and Microcontrollers Laboratory	PC	3	0	0	3	1.5
8.	26EE602L	Power System Switchgear Laboratory	PC	3	0	0	3	1.5
9.	26TP6G1P	Career Skill Development VI	CG	2	0	0	2	1*
10.		Summer Internship®			0	0	0	2*
Total				31	14	1	10	20

* Self learning - Additional Credit

® Summer Internship Additional Credit – 4 weeks

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SEMESTER VII

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1.	26EE701T	Engineering Economics and Financial Accounting (Self Learning)	HS	3	3	0	0	3
2.	26EE702I	Power System Operation and Control	PC	6	2	1	2	4
3.	26EE703I	Embedded Systems	PC	5	3	0	2	4
4.	26EE7EXT	Professional Elective – IV	PE	3	3	0	0	3
5.	26EE7EXT	Professional Elective – V	PE	3	3	0	0	3
6.	26EE7EXT	Professional Elective – VI	PE	3	3	0	0	3
7.		NCC ^s	HS	4	2	0	2	3 ^s
8.	26AC7Y1T	Research Skill Development	AC	1	1	0	0	0
9.		NSS/NSO/YRC/RRC/Fine Arts*	HS	4	2	0	2	3*
Total				24	18	1	04	20

NCC^s - Course can be waived with 3 credits in VII semester or offered as extra 3 credits.

*NSS/NSO/YRC/RRC/Fine Arts% 3 extra credits not accounted for CGPA.

NCC B Certificate / Sports Certificates in National & International Level 3 Extra Credits (Waiving)

SEMESTER VIII

S.No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
PRACTICALS								
1.	26EE801P	Project Work / Startup / Internship Project	CG	16	0	0	16	8
Total				16	0	0	16	8

TOTAL NUMBER OF CREDITS TO BE EARNED FOR AWARD OF THE DEGREE = 166

Note:

HS- Humanities and Social Sciences Courses; BS- Basic Science Courses; ES- Engineering Science Courses; PC- Professional Core Courses; PE- Professional Elective Courses; GE- General Elective Courses; OE - Open Elective Courses; CGC-Career Guidance Courses; MC- Mandatory Courses; AC- Audit Courses.

L: Lecture

T: Tutorial

P: Practical

C: Credit

1 Hour Lecture = 1 credit

1 Tutorial = 1 credit

2 Hours Practical = 1 credit

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Verticals

	Power Systems	Power Electronic Converters and Drives	Electronic System Design	Electric Vehicle Technology	Control and Instrumentation
<u>Elective - I</u>	Renewable Energy Systems	Analysis of Electrical Machines	Communication Systems	Electric Vehicle Architecture	Sensors for IoT Applications
<u>Elective - II</u>	Utilization and Conservation of Electrical Energy	Modern Power Converters	Micro Electro Mechanical Systems	Design of Motor and Power Converters for Electric Vehicles	Biomedical Instrumentation
<u>Elective - III</u>	Solar Energy Systems	Power Electronics for Renewable Energy Systems	Digital Signal Processing	Batteries and its Management System for Electric Vehicles	Neural Networks and Fuzzy Systems
<u>Elective - IV</u>	Substation Engineering and Automation	SMPS and UPS	Industrial Internet of Things	Electric Vehicle Design, Mechanics and Control	Artificial Intelligence for Electrical Engineering
<u>Elective - V</u>	HVDC and FACTS	Power Quality	VLSI Design	Design of Electric Vehicle Charging System	PLC and SCADA
<u>Elective - VI</u>	Smart Grid	Embedded Control for Electrical Drives	Embedded C-Programming	Safety and Testing of Electric Vehicles	Intelligent Automation

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