



ECE

Power is our ExpErtisE

With the Blessings of our Beloved Founder's



Lion.Dr.K.S.Rangasamy MJF
Founder - KSR Institutions

*Forever in our hearts,
Forever in our thoughts!*

Chairman's Message

"Vision looks inward and become duty.

Vision looks outward and become aspiration.

Vision looks upward and become faith.



Thiru. R. Srinivasan, B.B.M., MISTE

A deep sense of appreciation, gratitude and joy surge through my heart as I greet you through the columns of this department magazine. Publishing a magazine today is indeed a tedious and herculean task. In recent years, when our students are concerned more about their academic excellence, they have to be coaxed, persuaded and encouraged to exhibit their writing talents.

Principal's Message

Pearls from the Principal's pen.....



Dr.P.Senthilkumar

It gives me immense pleasure in presenting the department magazine for the session 2023 – 2024.

Today KSRCE is not just a college but is a FAMILY in which the educational community, the management, staff, students, parents and alumni work united to foster this FAMILY SPIRIT.

*Creating industry ready, globally competitive students and socially acceptable human beings as citizen of India. I heartily congratulate **Prof.Ramesh**, Coordinator and his team members who have taken pains to bring out this magazine.*

"Education is the manifestation of perfection already in man"

Swami Vivekananda

ENERGETICS 2K23 -2K24

Editorial Message

As the summer sun glows pleasantly to heat up everything, the creativity and talents in every techie of our department is thirsty to project his/her talents and skills. On behalf of the editorial board, proudly presenting ENERGETICS 2020 designed with a vision to quench the thirst by layering a platform for innovative ideas.

The soul of creativity lies in the dream to unveil inherent talent. The power of this dream fuelled us forward and made ENERGETICS 2020, a reality.

We are thankful to all who contributed to fulfil our dream. First and foremost let me thank our Chairman who was always with us, to provide a wonderful platform to nourish the talents. I extend my sincere thanks to our Principal who always in the forefront to encourage and inspire to execute wonderful ideas.

It would be totally unfair if I am not mentioning the effort of editorial team who dreamt together to bring out ENERGETICS 2020. I thank all students and faculty coordinators for their overwhelming support. I thank all faculty who helped us for proof reading. I also wish all outgoing students of 2020 a bright future ahead I would like to conclude by quoting few words of former president Dr. A. P. J. Abdul Kalam, who propagated the power of dreaming.

**"Dream, Dream, Dream transfer into thoughts and thoughts
result in action Success will be yours."**

Prof.Dr.S.Ramesh

Head of the Department - EEE



ENERGETICS 2K23 -2K24

VISION OF THE DEPARTMENT

We envision a department that leads in the field of Electrical and Electronics Engineering through education, training and research committed to influence the direction of the field and make a constructive contribution to society wherein the Department can thrive and grow.

MISSION OF THE DEPARTMENT

To create professionally competent and resourceful Electrical and Electronics Engineers.

To promote excellence in teaching, pioneering research and innovation for a sustainable growth of the nation and enrichment of humanity.

DEPARTMENT PROFILE

The Department of Electrical and Electronics Engineering (EEE) was started in the year 2002 with an intake of 60 students. Over the years the Department has steadily grown and currently the student's intake is 60. Along with B.E., the Department also offers an One M.E., degree programme in Power Electronics & Drives. Choice based credit system is introduced in regulation 2018.

The Department has been accredited by the National Board of Accreditation (NBA), New Delhi. The Department has good infrastructure with well-equipped laboratories and an exclusive Departmental library.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Employability and Higher studies: Excel in professional career and/or higher education by acquiring knowledge in basic engineering, science and mathematics in Electrical and Electronics Engineering.

Sustainable Engineering Solutions: Develop and apply engineering solutions for solving contemporary social and human issues with realistic constraints through modern tools.

Interpersonal and Ethical Proficiency: Exhibit professional and ethical standards, effective communication skills, teamwork spirit and multidisciplinary approach for successful careers in Indian and Multinational companies and to engage in lifelong learning. PO'S / PSO'S

PROGRAM OUTCOMES (POS)

Engineering Graduates will be able to:

PO1 Engineering Knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2 Problem Analysis:

Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3 Design/Development of Solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4 Conduct Investigations of Complex Problems:

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5 Modern Tool Usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6 The Engineer and Society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7 Environment and Sustainability:

Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

PO8 Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 Individual and Team Work:

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11 Project Management and Finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 Life-long Learning:

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOS)

Proficiency in Core: Realize the generation, transmission, distribution and utilization of electrical power.

Professional Skill: Formulate the testing procedures needed to make the measurements of electrical and electromagnetic quantities and to provide solutions to the real time problems



DR.S. RAMESH PROFESSOR & HEAD



**DR.P. SUGANYA
PROFESSOR**



**DR.M. VIJAYAKUMAR
PROFESSOR**



**DR.C. GOWRI SHANKAR
PROFESSOR**



**DR.V. RAVI
PROFESSOR**



**DR.M. RAMASAMY
ASSOCIATE PROFESSOR**



**DR.E. VANI
ASSOCIATE PROFESSOR**



**DR.R. SANKARGANESH
ASSOCIATE PROFESSOR**



**MRS.M.SORNALATHA
ASSOCIATE PROFESSOR**



**MRS. K. YAMUNA
ASSOCIATE PROFESSOR**



**DR. R. KUMARESAN
ASSISTANT PROFESSOR**



**DR.S. SENTHILKUMAR
ASSISTANT PROFESSOR**



**DR.M. VIJAYAKUMAR
ASSISTANT PROFESSOR**



**MS. A. VASANTHI
ASSISTANT PROFESSOR**



**MR.M. SUBRAMANI
ASSISTANT PROFESSOR**



**MRS. B. YUVARANI
ASSISTANT PROFESSOR**



**MR.S. GOWTHAM
ASSISTANT PROFESSOR**



**MR. R. CHANDRASEKAR
ASSISTANT PROFESSOR**



**MR.E. KANNAN
ASSISTANT PROFESSOR**



**MRS. S. CHINNAIA
ASSISTANT PROFESSOR**



**MR.S. DHIVAGAR
ASSISTANT PROFESSOR**



**DR.J. THIYAGARAJAN
ASSISTANT PROFESSOR**

DEPARTMENT ACTIVITIES

Name of the Coordinators	Title of the Programme	Date	Name of Funding Agency/Chapter	Resource Person
Dr.Sankar Ganesh	GRID2K23	01.09.2023	-	Er.S.R. Vignesh Energy Management – IIOT and Smart Factory Consultant, Faclon Labs PVT LTD, Bangalore
Dr.K.Laxmi Dr.M. Vijaya kumar	Seminar on Writing Research Proposal for Funding Agency	29.12.2023	Aarthi Trust	Dr.C.Bharatiraja Professor, Centre Head- Centre of Electric Mobility, SRM Institute of Science and Technology, Chennai- 603203
Mrs.A.Vasanthi Dr.E.Vani	Webinar on Career Guidance –Opportunities for Success	23.12.2023	Aarthi Trust	Mr.S.Hari Gokul Frontend Developer at Aspire Systems and Founder of Fluid Design Hub
Dr.MRamasamy Dr.M. Vijayakumar	Orientation Programme on MATLAB	21.12.2023	IEEE	Niveitha Mohankumar from educational customer success team at Math works Er.R. Gowtham Senior Application Engineer MATLAB, ARK Info Solution Pvt. Ltd, Chennai
Dr.M. Ramasamy Mr.M.Subramani	Value Added Course on MATLAB	18.12.2023 to 22.12.2023	Aarthi Trust	Dr.MRamasamy /ASP Mr.M.Subramani / AP Department of EEE K.S.R.College of Engineering, Tiruchengode,

Mr.Dhivagar	Alumni Lecture on Job Opportunities in Automatic Industry	07.12.2023	-	Chandru P Application Engineer, ACE Micromatic Manufacturing, Intelligent Technologies Pvt Ltd, Bangalore.
Dr.M. Ramasamy Mr.M.Subramani	Value Added Course on PCB Design	04.12.2023 to 08.12.2023	Aarthi Trust	Mr.T. Anandkumar, Febino Solutions, Erode – 638004.
Dr.M. Vijayakumar Dr.M.Ramasamy	Guest Lecture on “RE-ONBOARDING MATLAB”	29.11.2023	IEEE	Er.R. Gowtham Senior Application Engineer MATLAB, ARK Info Solution Pvt. Ltd,
Mrs.B. Yuvarani Mr.S. Dhivagar	Guest Lecture on Generative AI and Career Transformation	16.11.2023	Aarthi Trust	Mr.P.N. Vignesh Analyst TCS, Bangalore
Dr.M. Ramasamy Dr.M. Vijayakumar	IEEE Sponsored International Conference on Advance in Electrical, Electronics and Computational Intelligence (ICAEECI 2023)	19.10.2023 to 20.10.2023	IEEE	Prof. Ir.Dr. H.J. Ahmad Rashidly Razali, University Teknologi MARA, Malaysia. Dr. Dattatrya Narayan Gaonkar, National Institute of Technology, Surathkal, Dr.D. Nirmal, member, EXECOM 2023, IEEE Madras Section.
Mr.K.Yamanua Mr.S.Dhivagar Mr.M.Subramani Mr.S.Gowtham Mrs.A.Vasanthi Mrs.B.Yuvarani Dr.E,Vani	One-week Virtual Interdisciplinary Faculty Development Program on “Challenges and Opportunity in Electric Vehicle”	09.10.2023 to 20.10.2023	IEEE	Dr.T.R.Sumithra/AP/EE E Govt College of Engg, Salem. Mr.M.Parthiban, Managing Director, Caliber Embedded Technologies India Pvt.Ltd. Salem Mr.M.Sridhar Deputy Manager –product Development,Ford Motor PrivateLimited, Chennai Ashokkumar Duraisamy Benchmarking Engineer, Care soft Global Ipswich IP 43DY, UK Dr. G.Vijayakumar, Professor / EEE, Sanjivani College of Engineering, Maharashtra. Praveena Sadasivam, Principal Hardware Er, AGEYE TECHNOLOGIES, Bengaluru.

Dr.V.Ravi Dr.R.Shankar Ganesh	Value Added Course on IoT and Sensor Integration for System Applications	22.09.2023 to 27.09.2023	Aarthi Trust	
Dr.M.Ramasamy Mr.M.Subramani	Value Added Course on Programmable Logic Controller (PLC)	16.05.2023 – 19.08.2023 &21.08.2023	Aarthi Trust	
Dr.M.Ramasay Dr.M.Vijayakumar	One day Seminar on Programming of DELTA PLC using LD	12.08.2023	Aarthi Trust	Er.S.Aravinth Senior Project Engineer. IPCS Global Solution Private Limited Salem
Dr.V.Ravi Dr.R.Shankar Ganesh Mrs.B.Yuvarani	Industrial Lecture on “Emerging Trends in Engineering Entrepreneurship: Exploring Lucrative Business Opportunities in the Modern Technological Landscape	11.08.2023	Aarthi Trust	Er. Parthiban, Caliber Embedded System Salem

MOU'S

Name of the Coordinators	Company Name	Date	Guest
Dr.R.Shankar Ganesh	Rivera Coil Rewinding,	11.08.2023	M.S.N.Nirmal Raj Founder, Rivera Coil
Dr.V.Ravi	Erode		Rewinding, Erode

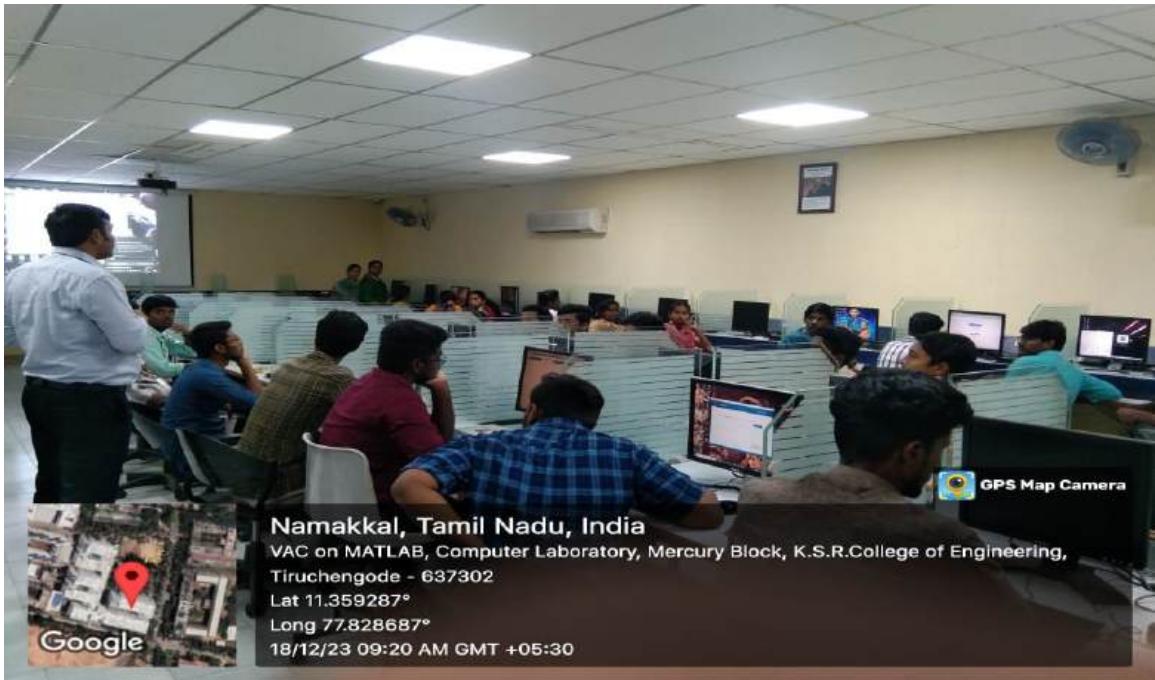
INFO CORNER



IEEE Technically Sponsored International Conference on Advances in Electrical, Electronics and Computational Intelligence (ICAEECI 2023)
on 19th & 20th - October -2023



Value Added Course on “Programmable Logic Controller (PLC)” on 16 - 19 & 21.08.2023



Value-Added Course on “Design and Fabrication of Printed Circuit Board (PCB) using Photoresist Technique” 04 to 08.12.2023



**Pre-Conference Workshop on “MATLAB & ITS APPLICATIONS IN ENGINEERING”, on
18.10.2023**

GUEST LECTURES

A.Vasanthi	Circuit Innovations: Advancement In Electrical Circuit Theory	GUEST LECTURE	29.07.2023	R P Sarathy INSTITUTE OF TECHNOLOGY, SALEM
Dr.M. Vijayakumar	Affordable And Green Energy	GUEST LECTURE	--	K.S.R. Institute Of Technology,Tiruchengode
Dr.M. Ramasamy	Interconnected Grid System	GUEST LECTURE	25.09.2023	K.S.Rangasamy Institute Of Technology,Tiruchengode
K. Yamuna	Facts Controller	GUEST LECTURE	12.10.2023	K.S.Rangasamy Institute Of Technology,Tiruchengode

FACULTY ACHIEVEMENTS

PUBLICATIONS:

Name of the Authors	Title of the paper	Title of the journal	Volume	Page No.	Year
N Kanagaraj, Obaid Martha Aldosary, M. Ramasamy, M. Vijayakumar	Enhanced Perturb and Observe Control Algorithm for a Standalone Domestic Renewable Energy System	Intelligent Automation & Soft Computing	vol 37, no. 2	pp. 2291–2306	2023
N. Kanagaraj, M. Vijayakumar, M. Ramasamy and O. Aldosari,	Energy Management and Power Quality Improvement of Hybrid Renewable Energy Generation System Using Coordinated Control Scheme	IEEE Access	vol. 11, doi: 10.1109/A CCESS.202 3.3299035.	pp. 93254- 93267	2023
Murugesan Manivel, Lakshmi Kaliappan	Design and implementation of modified Multilevel inverter fed BLDC motor for electric vehicle application	Comptes rendus de l'Acad'emie bulgare des Sciences	vol.76, no 10,	pp.1562–157 1	2023
G Hari Krishnan, B V Sai Thrinath, G. Karthikeyan, V. Ravi, and E Parimalasundar	Switched Capacitor -Based Bidirectional Power Converter with Enhanced Voltage Boost and reduced Switching Strain for Electric Vehicle Applications	International Journal of Electrical and Electronics Research	Vol. 11, No.4	pp. 904-908	2022

PUBLICATIONS:

N., Kanagaraj, Ramasamy M., Vijayakumar M., and Obaid Aldosari	Experimentation of Multi-Input Single-Output Z-Source Isolated DC-DC Converter-Fed Grid-Connected Inverter with Sliding Mode Controller	Sustainability	vol.15, no. 24., https://doi.org/10.3390/su152416875	pp. 16875	2023
V. V. Rajasegharan, P. Veena, S. Ramesh & G. Karthikeyan	Virtual Power Plant for Optimizing Power Flow in Large Scale Distributed Networks	Electric Power Components and Systems	DOI: 10.1080/15325008.2023.2281627		2023

CONFERENCE PUBLICATION

Name of the Authors	Title of the paper	Name of the Conference	Conducted by	Year
Vijayakumar Madhaiyan, Ramasamy Murugesan, Gobimohan Sivasubramanian, K.Sathyasekar, V. Arun, S.Prabhu	Sixty Degree PWM Controlled 7- Level Inverter Utilizing Binary Input	First IEEE Technically Sponsored International Conference on Advances in Electrical, Electronics and Computational Intelligence (ICAEECI 2023)	K.S.R. College of Engineering, Tiruchengode	2023
Vijayakumar Madhaiyan, Ramasamy Murugesan, Senthilkumar Sengottaiyan, Vijayakumar Munian, Arun Vijayakumar, Prabhu Sundaramoorthy	Analysis of Performance for Multilevel Inverters Utilizing Different Pulse Width Modulation Techniques	First IEEE Technically Sponsored International Conference on Advances in Electrical, Electronics and Computational Intelligence (ICAEECI 2023)	K.S.R. College of Engineering, Tiruchengode	2023
Vijayakumar Madhaiyan, Ramasamy Murugesan, V. Arun, S.Prabhu	Nine Switch Dual Input 9- Level Inverter (NSDI9LI) with Inherent AC Voltage Generation Ability	First IEEE Technically Sponsored International Conference on Advances in Electrical, Electronics and Computational Intelligence (ICAEECI 2023)	K.S.R. College of Engineering, Tiruchengode	2023

Book/Book Chapter

Dr.V.Arun Dr.R.Senthilkumar Dr.N.Rameshkumar Dr.M.Vijayakumar Dr.E.Vani	Renewable Energy	Scientific International Publishing House	2023
A.Vasanthi K.Yamuna B.Yuvarani	Recent Trends in Renewable Energy with Power Electronics	Scientific International Publishing House	2023
Dr.P.S. Periasamy Dr. S.Ramesh Dr.C.Gowri Shankar	Soft Computing	Scientific International Publishing House	2023

PATENT PUBLICATIONS:

Title	Inventors	Application No.	Grant Date	Status
Wind and solar power charging Station for E vehicle	Dr. M.Vijayakumar Dr.R.Sankarganesh Mr.M.Jothimani	397631-001 14/10/2023	27/12/2023	Patent Granted
IOT Based Automated Rail Track Inspection Trolley	Dr. M.Vijayakumar (1) Dr.V.Ravi Dr. Senthilkumar	397634-001 14/10/2023	08/12/2023	Patent Granted
Face Mask Detector	Dr. R. Sankar Ganesh	363759-001 05/05/2022	08/11/2023	Patent Granted
Compact Finger Wearable Mouse	Dr.M.Vijayakumar (1)	395641-001 21/09/2023	08/11/2023	Patent Granted
Solar Power Air Pollution Detecting Billboard	Dr. M.Vijayakumar (1) Dr.Vijayakumar Muniyan	395642-001 21/09/2023	02/11/2023	Patent Granted
20EE322 Analog Electronics Laboratory Manual Cum Record	Mrs.A.Vasanthi Mrs.K.Yamuna Mrs.B.Yuvarani Dr.E.Vani	3507/2023 -CO/L 09/02/2022 3	27/10/2023	Copyright received

Solar Powered Glass Cleaning Robot	Dr.S.Ramesh	392222-001 & 08/08/2023	27/09/2023	Patent Granted
Exam Invigilation Drone	Dr. Vijayakumar M (1) Dr. Senthilkumar Sengottaiyan Dr. Vani Easwaran Mrs.Yamuna Krishnasamy Mr. Kannan Eswaran	6308687 08/09/2023 3	18/09/2023	UK Patent Grant
Sensor Based Wearable Medical Monitoring Device	Dr. Vijayakumar M (1) Dr. Ramasamy Murugesan Mrs. Yuvarani Balan	6308755 08/09/2023 3	25/09/2023	UK Patent Grant
Floating Wind-Powered Aerator System For Ponds And Lakes	Dr. Vijayakumar M (1) Mrs.Vasanthi Arumugam	6309099 08/09/2023 3	18/09/2023	UK Patent Grant
Intellisense Ecosmart meter: IoT-enabled energy monitoring system for Sustainable power consumption	Dr. K. Lakshmi	20234103 8926 A 07/06/2023 3	18/08/2023	Patent Published
IoT Based Solar Powered Agriculture Robot	Dr.S. Ramesh	389052-001 & 26/06/2023 3	23/08/2023	Patent Granted

STUDENTS ACHIEVEMENTS:

S. No.	Name of students	Name of the Activity	Date	Organized by	Prize/ Award Won
1	Dhamotharan.c II - Year	Anna University cross country Meet (Athletics)	12.07.2023	Anna University, Chennai	12th position
2	G. Nachimuthu III - Year	75th Republic Day celebrations	15.08.2023	Namakkal District Collector Office	Best Cadet
3	Balachander M III - Year	Desert Safari Camp, Jaisalmer	Nov-Dec 2023	NCC DTE Rajasthan	Best Cadet
4	Varna S II - Year	ISRO - URSC Visit	11.12.2023	ISRO -Bangalore	EEE

S. No	Name of the Student	Achievement	Awarded by
Co-curricular			
1	Rohit M	Medallion of Excellence	TN skills
2	Bhuvaneshwaran.K	1st prize	Adhi college of Engineering &technology
3	Janarthanan S	1st prize	Vellar college of engineering and technology
4	Dineshkumar	1st prize	Vellar college of engineering and technology
5	Bhuvaneshwaran.K	2nd prize	Salem college of engineering and technology
6	Ramanathan G	2nd prize	Vinayaka misssions research foundation
7	Bhuvaneshwaran.K	1st prize	Sri Sai Ranganathan Engineering College, Chennai
8	Bhuvaneshwaran.K	2nd prize	Vellar college of engineering and technology
9	Bhuvaneshwaran.K	1st prize	RP Sarathy Institute of Technology, Salem

10	Hari Annamalai V R	II PRIZE	PAAVAI Engineering College, Namakkal
11	Rohith M	Elite+Silver	IIT-Kharagpur
12	Vasanth J	Elite	IIT-Kharagpur

Extra-curricular

1.	P.Karthick	Best Athletics U20- Won GOLD MEDAL in Open Athletic championship	Namakkal District Athletic Association
2.	P.Karthick	Silver medal	CM Trophy
3.	Lavanya D	Bronze Medal	CM Trophy
4.	Sriram P	3rd position	Kongu Engineering college,Erode
5.	S.Nannan	1st place in 7th state level championship	Thamizham silambam Academy,Cuddalore
6.	P.Karthick	Gold Metal	Anna University Zonal
7.	Sriram P	1st position	KSREI, Nammakkal
8.	Sriram P	Silver medal	Trichy Anna University,Trichy
9.	Sriram P	3rd position	Paavai Engineering College, Nammakkal

INDUSTRIAL VISIT PHOTOS:









