

SVCE

Sri Venkateswara
College of
Engineering

VIDYUT

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Department of Electrical
and Electronics
Engineering

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OFFICIAL
NEWSLETTER

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NEWSLETTER

EDITORIAL TEAM

Dr. KR. Santha, Professor & Head

Dr. Sudhakar K Bharathan, Professor

Dr. R. Karthikeyan, Associate Professor

Ms.S. Sinthamani, Assistant Professor

Ms. K S. Pavithra, Assistant Professor

Mr.Padmanaban Alagappan,IIIrd year

Mr.M.Adithyan , Ist year

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About the Department

The Department of Electrical and Electronics Engineering was started in the year 1985 to cater to the needs of the Electrical engineering subjects in Electronics and Communication Engineering, Mechanical Engineering and Computer Science Engineering. Starting with an intake capacity of 60 in 1994 the Department of Electrical and Electronics Engineering is now catering to the growing need of 120 students. The Department has secured permanent affiliation with Anna University and accredited for five years by NBA for the third consecutive time.

The post graduate program (M.E) in Power Electronics and Drives was started in 2002. The Department has an intake strength of 06. The Department has well equipped state -of- the- art laboratories and is recognized as a nodal research centre of Anna University. The Department has well qualified, experienced faculty and staff members of proven ability and profound skills. The Students of the department are being placed in various reputed companies and substantial number of students pursue higher studies abroad.

There are 31 faculty members in the department, out of which 18 of them are PhD holders, 11 of them are pursuing their PhD.

SRI VENKATESWARA COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Vision of the Institution

To be a leader in Higher Technical Education and Research by providing the state of the art facilities to transform the learners into global contributors and achievers.

Mission of the Institution

To develop SVCE as a "CENTRE OF EXCELLENCE" offering Engineering Education to men and women at undergraduate and postgraduate degree levels, bringing out their total personality, emphasizing ethical values and preparing them to meet the growing challenges of the industry and diverse societal needs of our nation.

Vision of the Department

The vision of Electrical and Electronics Engineering Department is to provide a high standard of education in Electrical and Electronics Engineering so as to meet the industry standards through domain.

Mission of the Department

M1: To create state of the art facilities such that the students excel in Electrical and Electronics Engineering education.

M2: To equip students with a well defined curriculum to meet therequirements of Industries and society.

M3: To promote a culture of research, innovation and entrepreneurship in the thrust and allied areas of Electrical and Electronics Engineering.

M4: To inculcate soft skills and foster ethical values and shape the total personality of the students.

Program Educational Objectives (PEOs) UG-EEE

PEO1: Graduates of EEE transformed to engineering contributors in the fields of Electrical, Electronics and Computer Engineering.

PEO2: Succeed in becoming entrepreneurs through human centered design thinking and innovation.

PEO3: Become eligible to pursue higher studies in their chosen areas of engineering or management

PEO4: Effective, conscious and ethical team player in the field of green energy management and sustainability

Program Outcomes (POs) for UG-EEE

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

2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. 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.
5. Modern tool usage: Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. 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.
7. 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.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
9. **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.
10. **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 lead.
11. **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) for UG-EEE

PSO1: The ability to build, implement, test and maintain analog and/or digital systems and implement Electronic control of Drives for Industrial automation and Electric Vehicle.

PSO2: The ability to analyze Power System network encompassing stability, control and protection and interconnection of Renewable

Energy Sources with Micro and smart grid.

Program Outcomes (POs) for PG-PED

PO1: An ability to independently carry out research/investigation and development work to solve practical problems.

PO2: An ability to write and present a substantial technical report/document.

PO3: Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.

Program Specific Outcomes (PSOs) for PG-PED

PSO1: The ability to design and analyze Power Electronic converters and control of Electric drives for Industrial applications.

PSO2: The ability to apply Power Electronic Circuits in Transmission and distribution network of Power System and interconnection of Renewable Energy.

Student Achievements

Students Achievements in Technical Events

- Mr. Santhosh Kumar. K, III year student secured first prize in analyzing the case “Just in time supply of sub-assembly parts for a transformer unit (within the same industrial estate)” in the Campus event analysis conducted by PALS in the Sri Venkateswara College of Engineering on 28.08.2019.



Santhosh Kumar. K

- Mr. M.V. Ajayragavan, third year student, presented the research topic titled “Modified Protection Scheme for Smart Grid” in IEI Tamil Nadu Centenary Technical Conference, 2019, on 21.08.2019 & 22.08. 2019 and won the second prize. (Mentor: Dr.S.G.Bharathidasan).



M.V. Ajayragavan

- Ms. S. Preethika achieved a world record under the theme “World Biggest International Hands-on IoT & Ethical Hacking Workshop” conducted by Wikitechy and Microsoft Research Community Group, Chennai on 04.08.2019.



S. Preethika

- Mr. Masoud T. participated and secured the third prize in the Brainstorm event in the National Level Students Symposium conducted by the EEE dept of the St. Joseph's Institute of Technology, Chennai on 21.09.2019.
- Mr. Masoud T. participated in Electromania and secured IInd position in the National Level Students Symposium held in St. Joseph's Institute of Technology on 21.09. 2019.



Masoud T

Student Achievement in Co- curricular Activity

- Mr. S. Parthasarathy, first year student, has won 3rd prize in Inter Collegiate Oratorical Competition 2019 in English conducted by Sardar Vallabhbbhai Pate Memorial Trust. The award was given by our Honourable Governor of Tamil Nadu, Thiru. Banwarilal Purohit on 31.10.2019 at Bharatiya Vidya Bhavan, Chennai.



S. Parthasarathy

- Ms. R. L. Gokul Priya participated and achieved 1st place in Javelin Throw (28.02 mts) in Athletics (Women) in the Anna University Zonal Athletic Meet 2019 held at Sri Venkateswara College of Engineering on 23.09.2019 and 24.09. 2019.
- Ms. R. L. Gokul Priya participated and achieved 2nd place in 4x100 Mts Relay in Athletics (Women) in the Anna University Zonal Athletic Meet 2019 held at Sri Venkateswara College of Engineering on 23.09. 2019 and 24.09.2019.



R. L. Gokul Priya

- Mr. R. Mohana Vishwam participated and secured Third position in Men's Table Tennis in the Anna University Inter-Zonal Tournaments held at C.AbdulHakkemm College of Engineering andTechnology on 24.11.2019.



Mr. R. Mohana Vishwam

Internship details

- Mr. Gangaram Sundar G, Final year student got Internship at Wood PLC, Tharamani, Chennai, Period: 12.12.2019 to 27.12.2019



Gangaram Sundar G

- Mr. Harisuriya K.R. and Surya P. Final year students, interned at Flex India, Sipcot Industrial Park, Sriperubudur, Dec 2019.



Harisuriya K.R.



Surya P.

- Mr. Sai Prasanth B L, 2nd Year E student, interned at Digitech Controls and Automation Pvt. Ltd, Chennai, 25.11.2019 to 05.12.2019.



Sai Prasanth B L.

- Mr. Padmanaban Alagappan, third year student, interned at Larsen & Toubro construction, Period from 01.12.2019 to 31.12.2019
- Mr. Padmanaban Alagappan and Santhosh Kumar E, third year students, interned at Inventrom Private Limited (IOTs and Machine Learning), Bengaluru, from 16.09.2019 to 22.11.2019.



Padmanaban Alagappan



Santhosh Kumar E

Student Achievement in Extra Curricular Activity

- Mr. K. Ronak, III/B, received the University level NSS-best volunteer award for the year 2017-19 on 15.10.2019 at Anna University, Chennai-25.



Mr. K. Ronak

Project Funding Received by the Students

Mr. Narendran R, Mr. Nataraj. A and Mr. Rama krishnan.A of IV year, of Electrical and Electronics department received a grant of Rs.30,000 from the Institution of Engineers India (IEI) for the project “Fabrication of a broadband Photo Detector Using Metal Oxides”.



RAMA KRISHNAN A



NATARAJAN A



NARENDRAN R

Higher Studies Details (2015-19 Batch)

S. no	University Roll Number	Name of the Student	Institute/University Name	Degree	Specialization
1	212715105004	AFZAL AHAMED C	Anna University, Chennai	M.E	Power Electronics and Drives
2	212715105019	ASHUTOSH S	Fanshawe College London	MSC	International Business Management
3	212715105047	LOGESH KUMAR S	Anna University, Chennai	M.E	Embedded Systems Tech
4	212715105052	MEGHANA N	University of Exeter, UK	MS	Master of Science Renewable Energy Engineering
5	212715105058	MONISH KUMAR SUNDARARAJAN	Bond University, Australia	MS	Master of Sports Management
6	212715105083	SHANKARLINGAM A	Amrita School of Engineering, Amritapuri	M. Tech	Robotics and Automation
7	212715105086	SHRI LAKSHMI A	Birla Institute of Technology and Science, Pilani, Hyderabad Campus.	M.E	Embedded Systems
8	212715105082	SANATH KUMARAN	Cranfield University, UK	MSc	Logistics and Supply Chain Management
9	212715105096	VARSHA V	Hamburg University of Applied Sciences, Germany	MS	Master Renewable Energy systems
10	212715105089	SRIVASTHAN T.S	The University of Western Australia	MS	Electrical and Electronics Engineering

Faculty Achievements

- Ms.M.Sasikala,Assistant Professor, presented the research topic titled “Micro fabrication of thin film transistor using RF sputtering” at IEI Tamil Nadu Centenary Technical Conference 2019 on 21.08.2019 & 22.08.2019 and won the second prize (Mentor: Dr.K.B.Sudhakar).



Faculty Participations in FDPs/Workshops/Conference

- Dr.KR.Santha and Dr. C. Gopinath attended a one-day workshop on “E-Learning Moocs in Higher Education, CEG, Guindy, on 14.09.2019.
- Dr.Nalin Kant Mohanty, Dr.C.Gopinath, Ms.S.Arulmozhi, Ms.N.Shanmugavadivu, and Mr.T.Annamalai attended five days AICTE Training and Learning Academy sponsored Short Term course on “Power Converter and Controllers for EV and Smart grid” IITDM, Kancheepuram, 18.12.2019 to 22.12.2019.
- Dr. K.B. Sudhakar and Mr. T. Annamalai attended a five-day short-term course on “Solar Energy systems” (under QIP of AICTE), IISc, Bengaluru, from 1.7.19 to 5.7.2019.
- Dr.R.Karthikeyan and Mr.C.Venkatesan Attended three days of FDP on “Teaching Pedagogy” organized by Teaching Learning Centre, PALS, IIT Madras, 16.10.2019 to 18.12.2019
- Dr.C.Gopinath attended two days workshop on “Electric vehicle technology” CEG, Guindy, 11.10.19 and 12.10.19
- Dr.C.Gopinath attended five days Certificate course on “Effective Patent Search and Drafting (PAT DRAFT) 2019”, CEG, 2.12.2019 to 6.12.2019
- Mr.M.Rajvikram attended a one-day International workshop on “Hydrogen Storage” organized by the DST-IIT Bombay Energy Storage platform on Hydrogen on 9.12.2019
- Mr.C.Kamal attended AICTE sponsored two-week FDTP on “Recent Trends in Internet of Things and its Research Issues” MNM Jain Engineering College, Thoraipakkam, Chennai, 06.11.2019 to 19.11.2019
- Ms.D.Amudhavalli Attended six days of FDTP on “IC8451- Control Systems” at Easwari Engineering College, Chennai, from 2.12.19 to 7.12.19

- Mr. C. Venkatesan, Attended a two-day National Level Workshop on “Application of advanced software tools for smart power system” SSN College of Engineering, Chennai. 8.8.19 to 9.8.19
- Ms. K.S. Pavithra Attended a three-day National Workshop on “Deep Learning for Computer Vision Application from Scratch to Development” SRM IST, 12.09.2019 to 14.09. 2019
- Mr. G. Vinoth Kumar and Mr. C. Kamal Attended a two-day National level Conclave on “Electrifying Indian Mobility” SRM IST, 28.12.2019 & 29.12. 2019
- Dr. M. Sankar attended a one-day program titled “Python Workshop” at S.A. Engineering College, Chennai. (Teaching Learning Centre, IIT Bombay) 22.06. 2019
- Ms.M.Sasikala, AP/EE presented the research topic titled “Microfabrication of thin film transistor using RF sputtering” at IEI Tamil Nadu Centenary Technical Conference 2019 on 21.08.2019 & 22.08.2019 and won the second prize (Mentor: Dr.K.B.Sudhakar).

Events Organized by the Association of Electrical and Electronics Engineers

(AEEE) Guest Lecture on “Power System Automation”

Dr. K. Shanti Swarup, Professor, IITM, delivered a guest lecture on “**Power System Automation**” on 10th July 2019. At first, he informed the audience of the basics of Automation. Due to accidents, lightning and natural incidents power failures occur resulting in the interruption of power supply. Therefore power systems should be monitored and controlled effectively to take timely actions and ensure an uninterrupted supply of power. Power system Automation depends on data communications, local intelligence along supervisory monitoring and control. Substation Automation requires the use of SCADA, and data communication to control, monitor, and protect the functions and equipment. It plays an important role in the global economy by eliminating the need for manpower and reducing the costs involved.

Guest Lecture on “IoT-based Automation for SMART Cities”

Prem Kumar P Selvaraj, Manager - Automation Division, Hydrotek Engineering Company, Kuwait, delivered a guest lecture titled, "**IoT-based Automation for SMART Cities**", on 9th August 2019. He gave a brief introduction to Hydrotek Engineering which is an integrated MEP service provider of solutions in the building, industrial, and infrastructure segments. Surveillance, monitoring & timely feedback is critical for smart city systems to work. IoT is enabling the ecosystem and infrastructure development for this with tools that automate data collection, and provide timely inputs & action triggers for improving governance. He listed some IoT applications for smart cities like Water Level Monitoring, Health Cards, and Waste and garbage Management

Guest Lecture on “VLSI circuits and IC designing”

Preethy Nagendran, project manager, L & T Infotech, delivered a lecture on “**VLSI circuits and IC designing**” on 23rd September 2019



Guest Lecture on “Design of Electric Vehicles”

Dr. Ranjan Kumar Behera, Professor, IIT Patna, delivered a lecture on “**Design of Electric vehicles**” on 16th Dec 2019. The guest gave a brief introduction to the history of electric vehicles in India. The steady improvements in cell chemistry, anode, and cathode material, higher-yield fabrication process, and economies of scale should help see a reduction in cost for each battery by around 6-8% every single year.

He discussed various environmental and personal benefits of having an electric car. He concluded his lecture by asking the students to develop their practical knowledge and have a solid foundation on the basics of their subjects.

- Two-day National Workshop on “**Artificial Intelligence Application to Renewable Energy Systems**” was conducted by the EEE Department in association with the AEEE student chapter from 29 to 30 August 2019. The inauguration function was held on 29th August at 9:00 am and Dr. P. Somasundaram, Professor, Department of EEE, Anna University, was invited as chief guest to deliver the keynote address on Artificial Intelligence applicable to Renewable energy systems in the inaugural function. The Inauguration function started with the welcome address given by Dr.KR Santha, Convener of Workshop, Vice Principal & HOD, EEE department, and ended with felicitation and thanks given by Dr. N K Mohanty, Professor, Dept of EEE.
- A 2-day workshop on “**Introduction to Robotics**” for second-year students of the EEE Department was conducted by the AEEE on 03 - 04 September 2019. This Workshop was aimed to deliver the introduction and basic platform of embedded systems and Robotics. The basic understanding and working of various components and sensors were practically shown to the students in different sessions. Various topics covered were the basics of Arduino Programming, LEDs, DC Motor, Servo Motor, Stepper Motor, Ultra Sonic Sensors, and IR sensors.



Events Organized by Institution of Engineers (IEI)

A two-day national-level workshop entitled “**Grid Stability with Distributed Generation Advanced Ancillary Services**” was conducted by the Department of Electrical and Electronics Engineering of Sri Venkateswara College of Engineering under IEI SVCE EEE Student chapter on September 5 & 6 2019. The workshop started with the inaugural ceremony followed by a keynote Lecture on “Distributed Generation-Advanced Ancillary Services” by Dr. P. Somasundaram, professor, at CEG Anna University. He clearly elaborated on the grid stability and other related topics. This lecture was followed by the next lecture session on “Distributed generation” by Dr. S.G. Bharathidasan, Associate Professor, SVCE, Sriperumbudur. He gave a brief introduction to Distributed Generation and justified the idea of restructuring the conventional power systems.

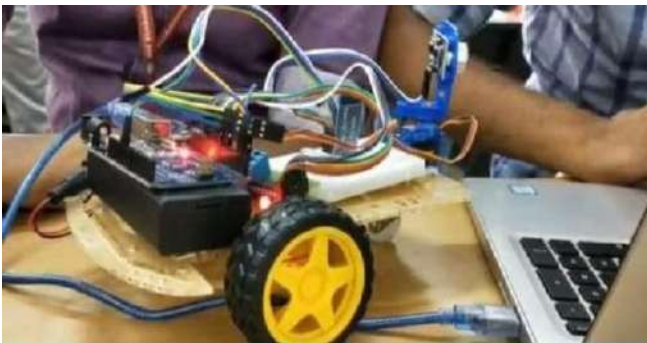
The second day started with the expert talk on “Recent trends of Power system monitoring” by Mr. T. Prakash from TNEB. He discussed the recent innovations in power system monitoring like SCADA and ancillary services under the regulation of NERC standards. In the afternoon, the participants had a hands-on session to learn more about grid frequency control with distribution generation under the guidance of Mr. S. Kumaravel, Assistant Professor at Power System Simulation Laboratory, SVCE, Sriperumbudur.

Events Organized by the Institute of Electrical and Electronics Engineers (IEEE)

- The IEEE student branch – SVCE, Sriperumbudur has been inaugurated for its activities for the academic year 2019 - 2020 on 20.08.2019. The function was presided over by Mr. M. Senthil Kumar, Manager, Paypal. The chief guest spoke to the students about the various opportunities in the field of Engineering. More than 100 students and members of IEEE participated in the event. The chief guest introduced the office bearers to the gathering at the end of the session.



- The IEEE SVCE student chapter organized a One-day Workshop on “**Line follower Robotics workshop**” on 19.9.2019



- SVCE conducted a two-day event for the students of school students towards imparting knowledge on Engineering Education. The event was attended by nearly 250 students from schools situated in Sriperumbudur

Industrial Visits Organized by the Department

Visit to 110KV Substation, MRT Special, Kanchipuram Electricity Distribution Circle

Around 90 second year students of EEE along with four faculty members visited 110KV Substation, MRT Special, Kanchipuram Electricity Distribution circle, (TNGEDCO) Kanchipuram on 8th September, 2019.

Visit to SDSC, Sriharikota

Around 90 final year students of EEE along with four faculty members visited Satish Dhawan Space Centre – SDSC, the primary spaceport of the Indian Space Research Organization (ISRO), located in Sriharikota, Andhra Pradesh on 21st September, 2019.



Visit to Arildevi Paper Mills, Panapakkam, Kanchipuram

Around 50 first year students of EEE along with two faculty members visited Arildevi Paper Mills, Panapakkam, Kanchipuram on 29th, November, 2019.