

# DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

## IMPRESSIONS



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# IMPRESSIONS

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

### ABOUT THE DEPARTMENT OF EEE

Electrical & Electronics engineering arena stands tall at the front facet of the newest technology. Moving beyond wires and circuits, the discipline now is taking giant strides as it percolated into cutting-edge technologies. The Department adopted the following approaches for enhancing learning experiences among the students, Self-Learning, Participative Learning, and Problem Solving Methodologies. New PG programme M.Tech. (PED) was started from the AY 2017-2018. Department is recognized as Research center by the affiliating university. The average age and experience of the faculty of EEE department is quite significant. The faculty retention ratio of the department is also quite significant.

### QUALITY POLICY

Sree Vidyanikethan Engineering College strives to establish a system of quality assurance to continuously address, monitor and evaluate the quality of education offered to students, thus promoting effective teaching processes for the benefit of students and making the College a Centre of Excellence for Engineering and Technological studies.

### VISION:

- ❖ To become the nation's premiere Centre of excellence in electrical engineering through teaching, training, research and innovation to create competent engineering professionals with values and ethics.

### MISSION:

- ❖ Department of Electrical Engineering strives to create human resources in Electrical Engineering to contribute to the nation development and improve the quality of life.
- ❖ Imparting Knowledge through implementing modern curriculum, academic flexibility and learner centric teaching methods in Electrical Engineering.
- ❖ Inspiring students for aptitude to research and innovation by exposing them to industry and societal needs to create solutions for contemporary problems.
- ❖ Honing technical and soft skills for enhanced learning outcomes and employability of students with diverse background through comprehensive training methodologies.
- ❖ Inculcate values and ethics among students for a holistic engineering professional practice.

## PROGRAM SPECIFIC OUTCOMES

On successful completion of the program, engineering graduates will be able to

### B. Tech

- PS01. Demonstrate knowledge of Electrical and Electronic circuits, Electrical Machines, Power Systems, Control Systems, and Power Electronics for solving problems in electrical and electronics
- PS02 Analyze, design, test and maintain electrical systems to meet the specific needs of the Industry and society.
- PS03 Conduct investigations to address complex engineering problems in the areas of Electrical Machines, Power Systems, Control Systems and Power Electronics.
- PS04 Apply appropriate techniques, resources and modern tools to provide solutions for problems related to electrical and electronics engineering.

### M. Tech (EPS)

- PS01. Demonstrate specialized knowledge in Electrical power systems, its operation and control with an ability to combine existing and recent practices.
- PS02 Analyze and solve complex problems to obtain optimal solution in power system operation and control to meet the needs of industry and society.
- PS03 Demonstrate research competence in power system to design innovative products and provide services in the field of electrical power systems and related areas.
- PS04. Apply modern tools, techniques and resources to provide solutions to complex engineering problems related to electrical power systems.

### M. Tech (PED)

- PS01 Demonstrate specialized knowledge in the operation and control of Power Electronic converters & Drives with an ability to combine existing and recent practices.
- PS02 Analyze and solve complex problems in the field of Power Electronics & Drives to meet the needs of industry and society.
- PS03 Demonstrate research competence in the field of Power Electronics & Drives to develop innovative products to meet the industrial needs.
- PS04 Apply modern tools, latest technologies and resources to provide solutions to complex engineering problems related to Power Electronics & Drives.

## PHILOSOPHY

- ❖ To train and enable the students holistically to provide effective solutions for the problems in the field of electrical engineering that are useful to the society involving ethics and morals.

## BEST PRACTICES

- ❖ Conducting Skill development programs for improving placement rate and making students industry ready.
- ❖ Conducting Add-on courses to bridge the gap between industry and academia.
- ❖ Encouraging the students to carryout diversified and real time valued projects as solution to the industrial, day-to-day problems as a part of their academic curriculum.
- ❖ Uplifting the academically weaker students by conducting Remedial and Reinforcement Classes.
- ❖ Performing Annual Energy Audit to monitor the energy consumption and demand of the Institution and propose energy conservation measures if required.
- ❖ Performing energy audit in the nearby villages and propose energy conservation measures.
- ❖ Conducting Technical Talks on Recent Trends in Electrical Engineering helps in updating the core knowledge and enhancing the academic standards among the Faculty and Students.
- ❖ Peer Training to students.
- ❖ Innovative Talks and Idea Presentation by the Students.

❖ **Dr, M S Sujatha** Professor has taken charge as the **Head of the Department** from 19<sup>th</sup> January, 2019.

❖ **Dr. D. Suresh Babu**, Assistant Professor has taken charge as **Research Coordinator**, Centre for Energy from 19<sup>th</sup> January, 2019.

## DEPARTMENT INITIATIONS

**Electrical Systems Design & Green Power (ESD & GP)- Training Centre**, an Industry Recognized Training Centre has been established by the Dept. of Electrical and Electronics Engineering, Sree Vidyanikethan Engineering College, Tirupati , with a motto to sprout and enhance the industry demanded academic skills among Students, Green Adaptive Professionals and Practicing Electrical Engineers on 3<sup>rd</sup> December, 2018.

In recognition with superior academic quality, organizational integrity, and like-mindedness of the mission of Electrical Systems Design and Green Power - Training Centre, established, **M/s. Advanced Ultra Power Transmission Consultancy (AUPTC), Gurgaon, India** acknowledged the association with Sree Vidyanikethan Engineering College (SVEC) to organize Joint Certification Programs under Electrical Systems Design and Green Power - Training Centre at Sree Vidyanikethan Engineering College, Tirupati.

## TEACHING & LEARNING

To make students to understand the industrial practices and technology, the following Add-on courses were conducted, and a total number of 206 students were benefited.

- Design of Robotics using Arduino during 27<sup>th</sup> July, 2018 to 2<sup>nd</sup> August, 2018 and 6<sup>th</sup> to 11<sup>th</sup> August, 2018.
- Matlab Basics and Beyond for Engineering Applications during 28<sup>th</sup> January, 2019 to 5<sup>th</sup> February, 2019.
- EPICS-Design Thinking Course during 28<sup>th</sup> February, 2019 to 1<sup>st</sup> March, 2019.

Through Diagnostic Test, Formative Test and Internal-Exam, 252no. of weak and slow learners were identified and by conducting remedial and reinforcement classes, their pass percentage has been improved by 87.9 %.

Total 184Students undergone Internship training in various reputed Industries like RTPP, BHEL, ECIL, BOSCH, VTPP, VIZAG STEEL PLANT, etc.

Total 104Students were placed in various reputed organizations like CTS, INFOSIS, WIPRO, Medha Servo Drives, Effectronics and SONATA through On-Campus and Off Campus Placements.

Ms. T Supraja (Roll No. 14121A02L2), Mr. M G C Teja (Roll No. 14121A0210), Ms. Advi Sree Priyanka (Roll No. 14121A0201), Mr. C V S Yugesh (Roll No. 14121A0232) and Mr. M Rajesh Naik (Roll No. 14121A02D5) received **Pratibha Awards from the Govt. of AP for the Graduation Year 2018.**

## RESEARCH

In its stride of enhancing its potential in the spectrum of academics, research is being promoted and carried out within the department.

Widespread of research is being carried in the areas of Power Quality Improvement, High Voltage Engineering, Control Systems, Renewable Energy & Grid Integration, Energy Storage, FACTS, Embedded Systems, IoTs, Online Condition Monitoring of Electrical Apparatus, Special Purpose Machineries, etc.



Mr. I. Kumara Swamy, Assistant Professor was awarded Doctor of Philosophy from JNTUH, Hyderabad for carrying out his research on Enhancement of Voltage stability with large distributed generation on 19<sup>th</sup> October, 2018.



Mr. Suresh Babu Daram, Assistant Professor was awarded Doctor of Philosophy from Visvesvaraya Technological University, Belgaum for carrying out his research on Development of Novel Interline Power Flow Controller for Power Transmission System using Artificial Neural Network Technique on 26<sup>th</sup> December, 2018.

### ప్రజాశక్తి

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## రాయచోటి

మంగళవారం 21 మే 2019

### లేలిధర్ రావుకు యువ శాస్త్రవేత్త అవార్డు

ప్రజాశక్తి - సుండువల్లె

మండలంలోని మడితాడు గ్రామానికి చెందిన కోలా లేలిధర్ రావుకు యువ శాస్త్రవేత్త అవార్డు దక్కింది. మండలంలోని మడితాడు గ్రామం బయనేనివారిపల్లెకు చెందిన రిటైర్డ్ వార్డెన్ కోలా నాగన్న, అక్షిపద్మావతిల కుమారుడు కోలా లేలిధర్ రావు ఇంటర్నేషనల్ ఆసోషియేషన్ ఆఫ్ రీసర్చ్ అండ్ డెవలప్ మెంట్ ఆర్గనైజేషన్ వారి ఆధ్వర్యంలో జియోథెర్మల్, సోలార్ ఎనర్జీ సిస్టమ్స్ పై చేసిన పరిశోధనలో ప్రతిభను గుర్తించి వేదాంట్ అకాడమిక్స్ బ్యూరోలోని కాన్స్ట్రక్ట్ యూనివర్సిటీలో జరిగిన ఇంటర్నేషనల్ అవార్డు కాన్ఫరెన్స్ మల్టీ డిస్సిప్లినరీ రీసర్చ్ అప్లికేషన్ -2019లో ప్రతిష్టాత్మకమైన యంగ్ సైంటిస్టు అవార్డును అందజేశారు. ఇంజనీరింగ్, డిగ్రీ అనంతరం థీరీ ఆఫ్ ఫవర్ ఎలక్ట్రానిక్స్ అనే పుస్తకాన్ని అతి తక్కువ వయసులో రచించి అందరి మన్ననలు పొందారు. ప్రస్తుతం తిరుపతిలోని శ్రీ విద్యానికేతన్ ఇంజనీరింగ్ కళాశాలలో (ఆటోన్యూమస్)లో ఆసిస్టెంట్ ప్రొఫెసర్ గా పని చేస్తున్నారు.

- ❖ Total 15 research papers were published in the reputed journals including SCI, SCOPUS and WOS.
- ❖ Total 10 Members of Faculty received letter of appreciation for their valuable contribution and dedicated service in the peer review of manuscripts submitted to various national and international journals.
- ❖ Dr. P. Srinivasa Rao, Associate Professor was invited as Session Chair for International Conference on Innovations in Power and Advanced Computing Technologies (I-PACT 2019) during 22<sup>nd</sup>

**Mr. K. Leleedhar Rao**, Assistant Professor was conferred “**YOUNG SCIENTIST AWARD**” in Vedant Academics Bangkok Awards-2019, presented by International Association of Research and Development Organization (**IARDO**) on the occasion of **International Award Conference** on Multi-Disciplinary Research and Applications-2019, organized at **Kasetsart University**, Bangkok, Thailand on 5<sup>th</sup> May, 2019.

## EXPERT LECTURES

Series of Guest & Expert lectures were organized to explore the knowledge acquired through academic courses by interaction with industry experts. These sessions provide platform to students to express their ideas and view and get benefitted to relate theoretical with practical inputs of field. Series of such session pour an extra enthusiasm to student to give practical approach to their study.

Er. T. Udhaya Kumar, Asst. Divisional Engineer/EHT-Protection/APTRANSCO, delivered a an Expert Lecture on "Testing and Commissioning of EHV Power Transformers" on 28<sup>th</sup> February,



Mr. P.S. Mohammed Haneef, Control Engineer, GE Company, Bangalore, delivered a Seminar on "Control Systems in Automotive and Aerospace Industry" under IEEE student chapter on 13<sup>th</sup> October. 2018.



Mr. Satish Rao Inukurti, Manager in Power Grid corporation of India Ltd, Dharwad, Karnataka delivered an expert lecture on "Practical Approaches to Substations and Transmission lines" on 31<sup>st</sup> Aug, 2018.



**Dr. MS Sujatha, Professor**  
received  
**BEST WOMEN TEACHER**  
**AWARD**

from Vidya Parirakshana  
Samithi in the year 2019.

"Harmonic mitigation is obvious in power distribution networks and by using Hybrid Active filters this problem can be surmounted with low cost and better efficiency.- Mr. Ch Kumar Reddy, Assistant Professor, Dept. of EEE, SVEC

## INDUSTRIAL VISITS

Industrial visit is considered as an important part of an academic curriculum to provide an exposure to students about practical working environment and also to correlate the theoretical conception with practicing techniques. Conducting such visits provides students a good opportunity to gain full awareness about industrial practices and an excellent opportunity to interact with practicing engineers.



Total 374 students visited the following reputed industries in 7 slots during AY: 2018-19.

- ❖ 400kV substation, Vepanjeri, Chittoor, Andhra Pradesh.
- ❖ 220kV substation, Renigunta and 132kV substation, Tirupathi Chittoor, Andhra Pradesh.
- ❖ 3MW Solar PV Power Plant, Kalikiri, Chittoor, A.P.
- ❖ 220/132/33kV Substation, Kalikiri, Chittoor, A.P.
- ❖ Sri Sanjeevaiah Damodaram Thermal Power Plant, Nellore
- ❖ Rayalaseema Thermal Power Plant, Muddanur, Kadapa

During the AY: 2018-19 Total 7 Industrial Visits were conducted.

## OUTREACH ACTIVITIES

Pradhan Mantri Kaushal Vikas Yojna for Technical Institutions (PMKVY-TI) scheme is being implemented with a vision to create skilled manpower to drive the flagship schemes of Government (Make in India, Digital India and Unnat Bharat). In support to these schemes, Sree Vidyanikethan Engineering College has been selected as one of the Institutes under PMKVY under AICTE for imparting engineering technical skills training for free of cost.

**Solar PV Installer-Electrical** is one of the specializations of Green Jobs Sector. Department of EEE is taking over the responsibility in giving the Training under mentorship of Skill Council for Green Jobs and NSDC. Total 19 unemployed youth were successfully trained under this scheme.

**Assistant Electrician** is one of the specializations of Construction Sector. Department of EEE is taking over the responsibility in giving the Training under mentorship of Construction Skill Development Council of India (CSDI) and NSDC. Total 21 unemployed youth were successfully trained under this scheme.

Trainee Solar PV Installers-Electrical



Trainee Assistant Electricians



## SOCIAL - SERVICE

Social Service or Social Work is the work done by individuals for the benefit of the society. It is aimed to promote social transformation or a development in the society. As students are future of our country, they should know how to interact socially, how to understand other people's problems and how to work for the social betterment of the society. This leads to mutual benefit for both society and students.



### MAJOR EVENTS

- Blood Donation Camp
- Health Camps
- Awareness Camps
- Hygiene & Cleanliness
- Drug free India Campaign

During the AY: 2018-19, Total 10 events and 01 special camp were conducted.



## STUDENT'S CORNER

### ELECTRICAL TECHNICAL ASSOCIATION

Under the department's student body Electrical Technical Association (ETA), various events viz., Career development programs, Seminars, Quiz, Industrial visits, Paper contests, Group discussions, Guest lectures, Career guidance sessions and Games were conducted to enhance the interpersonal and intrapersonal skills of students.



Technical Quiz



Rangoli



Pencil Sketch



Valedictory



Tennicoit

During the AY: 2018-19, Total 20 events were conducted under ETA.

**Electrical Systems Design & Green Power (ESD & GP)-Training Centre**



**CERTIFIED TRAINEES: GP BATCH-01, FEBRUARY, 2019**  
with  
Dean Industry Relations, Chairman BoS, HOD- EEE, and Trainers

Under Electrical Systems Design & Green Power (ESD & GP)-Training Centre, 20hrs Joint Outreach Training Program on Solar PV Power Infrastructure and Solutions was conducted during 11<sup>th</sup> to 13<sup>th</sup> February, 2019. Nine external and eleven internal student participants got trained successfully.