SRI MANAKULA VINAYAGAR

ENGINEERING COLLEGE

An Autonomous Institution

23 years of ACADEMIC EXCELLENCE

"ELECTIC"

NEWSLETTER

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

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ACCREDITED WITH GRADE A NAAC

NATIONAL BOARD OF ACCREDITATION

TATA CONSULTANCY SERVICES

About The Department

The department of Electrical and Electronics Engineering was established in the year 1999 with a sanctioned intake of 40. With its strenuous effort shown in academics and extra-curricular activities, the department magnifies gradual growth in its intake to 60 in the academic year 2001, upgraded to120 in 2004 and elevated to 180 in 2011. In its long haul, with a vision of providing finest postgraduate programme, the department introduced M.Tech in Power Electronics and Drives with an intake of 18. To add jewel in the crown, the department received research center in the academic year 2020-2021 for promoting research attitude among the young aspirants. In the quality check of NBA, the department has been accredited in 2 cycles which is valid up to 30thJune 2022.

The department is unique in its own ways by promoting excellence in Electrical Engineering and fulfilling its role in the era of new millennium and meets the needs and demands of various industrial sectors. With the intent of instilling research approach among students, the department is heedful in Research &Development projects funded by governmental organizations such as DST and MHRD. In its augmentation, the department involves in collaborative research with industries such as LED forse India, ARR KAY controls, Radiance India, Kailash transformers, Sree Rajeswari Intechs and coupled with its gradual proliferation, the department has signed MoU with Pantechpro Ed., Aurotech transformers, Appasamy associates, Surya enterprises, Abirami Enterprises. In Conjunction with Appasamy associates and Pantechpro Ed, the department has established Industry supported laboratories for the glorification of students.

With determined hope and optimism, the department has dedicated and well qualified faculty members who manifested to be specialized in Power Systems, Power Electronics and Drives, Electrical Machines, Embedded Systems, Renewable Energy, Electric Vehicle etc. with a strive of establishing a Centre of excellence in technical education which in turn will bring out technocrats with extraordinary skills and societal commitment.

Along with the specialization, the department is intense inproviding updated curriculum by covering the emerging areas like Renewable Energy Systems, Embedded System, Electric Hybrid Vehicle, Industrial Automation and Control and Artificial Intelligence. Besides, the students are replenished with advanced international courses for enhancing their technical skills and programming abilitiesto get acquainted with new trends in technology and develop overall potential of the students in diversified aspects.

Vision of the Institute

To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.

Mission of the Institute

- **M1: Quality Education:** To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.
- **M2: Research and Innovation:** To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.
- **M3: Employability and Entrepreneurship:** To inculcate the employability and entrepreneurial skills through value and skill based training.
- **M4: Ethical Values:** To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.

Vision of the Department

To promote proficiency in the field of Electrical and Electronics Engineering by creating a stimulating environment for research, innovation and entrepreneurship.

Mission of the Department

- **M1: Quality Education:** To impart high quality technical education with problem solving capabilities by innovative pedagogy in emerging technologies.
- **M2: Industrial and Societal needs:** To cater the dynamic needs of the industry and society by strengthening industry-institute interaction.
- **M3: Research and Innovation:** To nurture the spirit of research attitude by carrying out innovative technologies pragmatically.
- **M4: Placement and Entrepreneurship:** To inculcate the professionalism in career by advancing synergetic skills to compete in the corporate world.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Professional Knowledge
To possess strong educational foundation in Electrical and Electronics Engineering to attain successful career with professional responsibility.

PEO2: Innovative Skills
To enrich the skills to design and develop innovative solutions for engineering problems in a multidisciplinary environment.

PEO3: Ethics
To actively embrace leadership qualities for achieving professional goals with ethical values.

PEO4: Adaptability
To enhance intellectual competency along with technical skills by adapting to the current trends through eternal learning.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: Core Proficiency
Utilize the engineering core knowledge to identify, formulate, design, and investigate the complex engineering problems of power electronics, electrical machines and power systems.

PSO2: Cutting Edge Technologies
Explore the new cutting edge technologies in the field of Electric vehicle, Automation, Artificial Intelligence, Robotics and Renewable Energy to compete in global market.

PSO3: Design and Evolution
Capability to comprehend the technological advancements with the usage of modern design tools for analysing and designing systems to confront the rapid pace of industrial innovations.

PROGRAMME OUTCOMES (POs)

PO1: Engineering Knowledge:
Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO2: Problem Analysis:
Identify, formulate research literature and analyze complex engineering problems reaching sustainable conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO3: Design and Development of Solutions:
Design solutions for complex engineering problems and design components or processes that meet specified needs with appropriate consideration for public health and safety, and cultural, societal and environmental considerations.

PO4: Conduct Instigations of Complex Problems:
Use research based – knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of 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 modeling to complex engineering activities with an understanding of the limitations.

PO6: The Engineer and Society:
Apply reasoning informed by contextual knowledge to assess societal, safety, health, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PROGRAMME OUTCOMES (POs)

PO7: Environment and Sustainability:
Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate 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 multi disciplinary settings.

PO10: Communication:
Communicate effectively on complex engineering activities with the engineering community and 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 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 multi disciplinary environments.

PO12: Life – long Learning:
Recognize the need for and have the preparation and ability to engage in independent and life-long learning broadest context of technological change.

GOLD MEDALISTS & UNIVERSITY RANK HOLDERS UNDER GRADUATE

ANBARASI.V
2015-2019

ABIRAMI.P
2014-2018

ANBARASI.D
2011-2015

SWATI.V
2010-2014

JANARTHANAN.J
2009-2013

AVINASH MURALI NAIR
2008-2012

SOWMYA.M
2007-2011

GANESAN.A
2006-2010

SHANMUGAM.R
2005-2009

AARTHY.M
2004-2008

VINOTH.P
2000-2004

GOLD MEDALISTS & UNIVERSITY RANK HOLDERS POST GRADUATE

Abinaya Saraswathy.T
2011-2013

Sangeetha.T
2015-2017

Vesali.V
2017-2019

Under Graduate students university rank list year wise

Batch	Total Ranks	Ranks Obtained
2015-2019	9	1,2,3,5,6,7,8,9,10
2014-2018	Yet to be announced	1(Gold medal)
2013-2017	4	2,3,4,6
2012-2016	5	2,3,4,6,7,8
2011-2015	5	1,2,6,7,10
2010-2014	9	1,3,5,6,10,11,12,12,14
2009-2013	10	1,2,4,5,6,7,9,11,12,13
2008-2012	7	1,2,4,9,13,14,15

Post Graduate students university rank list year wise

Batch	Total Ranks	Ranks Obtained
2017-2019	3	1,2,3
2015-2017	2	1,2
2014-2016	1	1
2013-2015	6	2,3,4,6,7,9
2012-2014	6	2,4,5,7,9

Placement Percentage

Batch	Placement percentage%
2017-2021	97.22 %
2016-2020	96.49 %
2015-2019	95.58 %
2014-2018	94.39 %

University Pass Percentage

Batch	University pass percentage %
2017-2021	98.2 %
2016-2020	100 %
2015-2019	87.3 %
2014-2018	87.5%

CII PUDUCHERRY INNOVATION CHALLENGE CONTEST 2021

CII Puducherry Innovation Contest organized in partnership with Atal Incubation Centre, Pondicherry Engineering College Foundation, is an ideal platform for the Students and Startupreneurs of Puducherry to showcase their innovative ideas, proof of concept and prototypes. The event is structured through a 3 stage process which involves applications shortlisting, online presentations and Pitch round. Boot camps, personal mentoring by Industrialists, guidance by AIC will be salient features in the contest.

Our students form IIIrd year had selected and participated till the Incubation round of CII Industrial Innovation contest - 2021 Puducherry which was held from 04/10/2021 to 6/10/2021.
two teams had been finalized in the top 30 list and appreciated by the industrial specialists.

ideas:

- Smart biofloc fish farming
- Electric Vehicle Range extension

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GRAND CHELLENGE

Centre of Excellence (CoE) is being setup for the design and development of products related to Mobile handset accessories and other electronic application products by CDAC Noida in association with the Industry partner - India Cellular and Electronics Association (ICEA). The project is financially supported by Ministry of Electronics and Information Technology (MeitY), Government of India and Government of Uttar Pradesh. Grand Challenge is an initiative by the CoE to energize young minds and develop indigenous innovative commercially viable products that can be up-scaled under the CoE. Centre of Excellence (CoE), Noida currently invites entries for 07 products under the **Grand Challenge**.

Students from III year name Participants in Grand Challenge Contest 2021 which was held on o6/09/2021. "**Low cost Bluetooth Speaker, low cost Power adapter and low cost Power bank"** had went to finalized in the contest

Challenges in medical image analysis became popular after the organization of the Grand Challenges for Medical Image Analysis at the MICCAI conference in 2007. Hosting challenge events quickly became commonplace it conferences such as MICCAI, ISBI, and SPIE Medical Imaging, amongst others, have hosted challenge events. Leading journals such as IEEE Transactions on Medical Imaging and Medical Image Analysis have welcomed overview papers that described the results of individual challenges. Some more background and historical information can be found here.

Grand Challenge was developed in 2010 to make it easy for organizers of challenges to set up a website for a particular challenge and to bring all information on challenges in the domain of biomedical image analysis available at one place.

L & T TECHGIUM

Centre of Excellence (CoE) is being setup for the design and development of products related to Mobile handset accessories and other electronic application products by CDAC Noida in association with the Industry partner - India Cellular and Electronics Association (ICEA). The project is financially supported by Ministry of Electronics and Information Technology (MeitY), Government of India and Government of Uttar Pradesh. Grand Challenge is an initiative by the CoE to energize young minds and develop indigenous innovative commercially viable products that can be up-scaled under the CoE. Centre of Excellence (CoE), Noida currently invites entries for 07 products under the **Grand Challenge**.

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TECHgium® is an open innovation competition which provides students an opportunity to work on major engineering challenges being faced by the industry today. The initiative was first launched by LTTS in 2016.The primary objective of the initiative is to ignite young minds and provide exposure to real challenges faced by the global industry, thereby making it more than just a project or a challenge. Through this platform, students will get an invaluable opportunity to work on futuristic technologies and augment the solution development team of LTTS, while getting recognized as a TECHgium® innovator. Importantly, LTTS is helping build a talent pool who will bring a practical solutions mindset to the industry and not limit it just to theory. Supporting them would be the faculty and top industry experts, thereby exposing them to the industry early in their career.

L&T Technology Services

ETHNOTECH

center of Excellence

AutoCAD Electrical batch 2019-2023

International certification courses were conducted for our III year students in the areas of “AutoCAD Electrical” in order to enhance the Technical skills of our students by Autodesk Ethnotech solutions from 28-02-2022 to 05-03-2022.

IOT-Internet Of Things batch 2019-2023

International certification courses were conducted for our III year students in the areas of “Internet of Things” in order to enhance the Technical skills of our students by from 28-02-2022 to 05-03-2022.

AutoCAD Electrical batch 2020-2024

International certification courses were conducted for our II year students in the areas of “AutoCAD Electrical” in order to enhance the Technical skills of our students by Autodesk Company solutions from 28-02-2022 to 05-03-2022.

In order to cope with this market change and to equip the students to become successful, SMVEC, has come up with Center Of Excellence. This is the place where students’ get company specific training and gets molded to the quality that the corporate require.

Placement plays an important role for any student pursuing his/her engineering program. Nowadays interviews are becoming difficult and more competitive. Because of the sheer volume of students appearing for interview and high quality expected by corporates is the major reason for it. Many students struggle to get placed in a decent company despite scoring a good percentage of marks.

The following are the list of company specific trainings that the college offers for the students aspiring to get job in their dream company

ETHNOTECH ACADEMIC SOLUTIONS

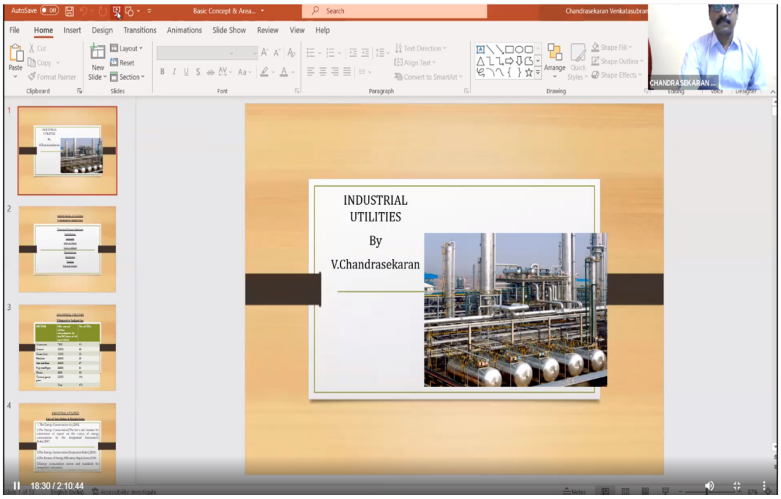
Our College signed MoU’s with Ethnotech Academic Solutions, Bangalore.

- GOOGLE
- MICROSOFT
- IBM
- TEXAS INSTRUMENTS
- BENTLEY
- AUTODESK
- EPLAN
- CISCO

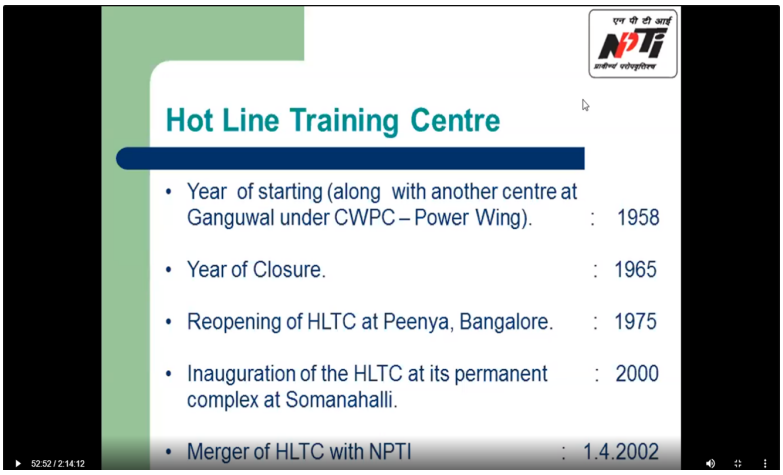
GUEST LECTURE

To develop Students Knowledge.

Mr. V.Chandrasekaran, Chief Executive Officer, NITAS, Chennai, delivered online guest lecture titled **"Industrial Utilities"** to the III year and IV year EEE students on 30.10.2021



Mr. S.Prakash, Assistant Director, National Power Training Institute, Ministry of Power, Government of India, Hot Line Training Centre, Bengaluru, delivered online guest lecture titled **"Live Line Maintenance of Transmission Lines and Substation"** to the III year and IV year EEE students on 23.10.2021



Industrial Utilities

The utilities sector refers to a category of companies that provide basic amenities, such as water, sewage services, electricity, dams, and natural gas. It is a large sector, and an important part of the U.S. economy, with a market capitalization of over $1.5 trillion (as of March 2021).

Although utilities are private, for-profit companies, they are part of the public service landscape—providing as they do such staples for daily living—and are therefore heavily regulated. Investors typically treat utilities as long-term holdings and use them to generate a steady income for their portfolios.

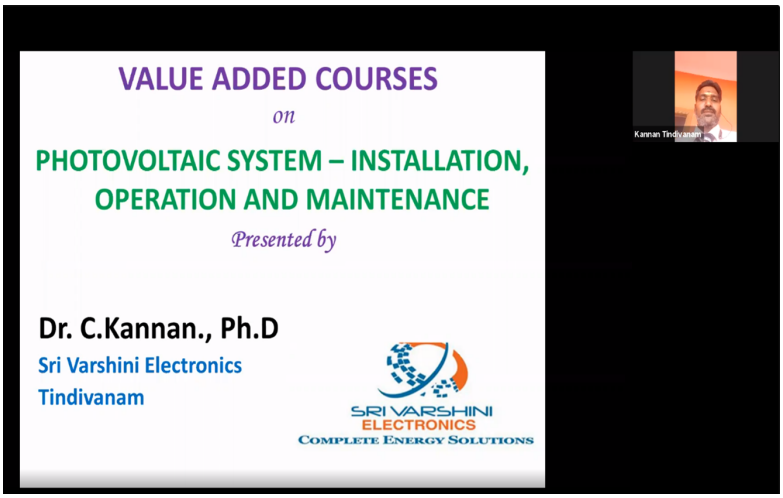
Maintenance of a transmission line is a fundamental part of its functioning, a need that is accentuated by its outdoors location. Such maintenance work, which can add 50 years of life to a transmission line, requires highly qualified electricity technicians and mechanics with the tremendous physical and mental strength needed to gain access to the nearly impenetrable places where these structures are sometimes found.

Transmission lines carry electrical power and their characteristics make them conditional to ongoing checks and inspections. Power transmission lines are made up of towers and they run hundreds of kilometers through vastly different geographies and climates.

GUEST LECTURE

To develop Students Knowledge.

Dr. C. Kannan, CEO, Sri Varshini Electronics, Tindivanam, delivered online guest lecture titled "**Solar Power Installation, Operation and Maintenance**" to the III year and IV year EEE students on 25.09.2021



Photovoltaic System

A photovoltaic system, also PV system or solar power system, is an electric power system designed to supply usable solar power by means of photovoltaics. It consists of an arrangement of several components, including solar panels to absorb and convert sunlight into electricity, a solar inverter to convert the output from direct to alternating current, as well as mounting, cabling, and other electrical accessories to set up a working system. It may also use a solar tracking system to improve the system's overall performance and include an integrated battery.

PV systems convert light directly into electricity, they are not to be confused with other solar technologies, such as concentrated solar power or solar thermal, used for heating and cooling. A solar array only encompasses the ensemble of solar panels, the visible part of the PV system, and does not include all the other hardware, often summarized as balance of system (BOS).

PV systems range from small, rooftop-mounted or building-integrated systems with capacities from a few to several tens of kilowatts, to large utility-scale power stations of hundreds of megawatts. Nowadays, most PV systems are grid-connected, while off-grid or stand-alone systems account for a small portion of the market.

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