

SETGOI CRYSTAL NEWS EE

THE NEWSLETTER

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SANAKA EDUCATIONAL TRUST'S GROUP OF INSTITUTIONS

(A UNIT OF SANAKA EDUCATIONAL TRUST)

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Approved By AICTE, Affiliated to MAKAUT, West Bengal



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1. From the Desk of the HOD

The Department of Electrical Engineering at SETGOI is renowned for its student-focused teaching and education. The department focuses on providing high-quality education and research experiences to prepare students for the future. The department's research activities cover power and renewable energy systems, power electronics, drives, instrumentation, and control. Graduates often secure positions in corporate, government, and educational institutions. The department is dedicated to bringing its education and research programs to higher recognition.

2. Vision – Mission (INSTITUTION)

Vision:

To emerge as a Centre of higher learning fostering a mutually beneficial relationship between professional competency and human values.

Mission:

o->To imbibe the outcome-based education system for continuous development of professional, social and ethical skills.

o->To engage in research and innovation pertaining to the environmental concerns and societal needs.

o->To forge collaborations with industries, academia of repute, research Centre's, and professional bodies to stay relevant and contemporary.

3. Vision – Mission (DEPARTMENT)

Vision:

To envisage developing into and sustaining as a center of excellence by pioneering good quality education and research while producing competent and socially motivated Electrical Engineers.

Mission:

- Have a learning environment and infrastructure that provide quality education, training, and research.
- To bring the learners on par with the most recent scientific and technological advancements and make them industry ready.
- To foster employability, entrepreneurship, leadership capabilities with ethics, and a research mindset.

- explore the design of power system networks, the concept of renewable sources, and basics of automation.

PROGRAM OUTCOMES (POs):

- | | |
|--|---|
| PO 1:
Engineering Knowledge | PO 7:
Environment and Sustainability |
| PO 2:
Problem Analysis | PO 8:
Ethics |
| PO 3:
Design / Development of Solutions | PO 9:
Individual and Team Work |
| PO 4:
Conduct investigations of Complex Problems | PO 10:
Communication |
| PO 5:
Modern Tool Usage | PO 11:
Project Management and Finance |
| PO 6:
The Engineer and Society | PO 12:
Life-long Learning |

4. PEO, PO, PSO

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

- Contribute to the industry as a professional engineer providing solutions for practical problems and develop new techniques.
- Become entrepreneur and establish industry with leadership and professionalism involving team work and ethical practices.
- Pursue higher education and contribute in advanced research and development providing solutions to the emerging needs of the society.

PROGRAM SPECIFIC OUTCOMES (PSOs):

- Students of Electrical Engineering will be able to –
- implement technical knowledge and skill to analyze electrical machines, power electronics components, and electrical system applications.

4. Student Activities

SPECTRA YOUTH 2023: National Youth Day is celebrated on 12th January on the birthday of Swami Vivekananda. Sanaka Educational Trusts' Group of Institutions, along with Institute Innovation Council (IIC), NDLI Club has organized an essay writing competition to check the writing skills of the students of EE.



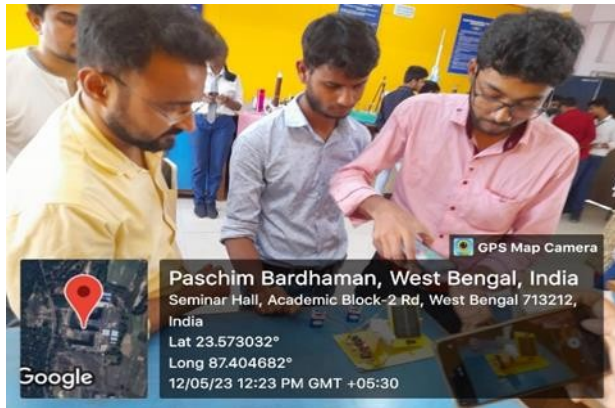
GREEN CORRIDOR OF SETGOI: This is fundamentally a vlog competition, where students will have to accentuate on the campus greeneries. This program was catalogued by our Dean of Student Affairs, IQAC Coordinator and HoD of Electrical Engineering department.



TECHNICAL POSTER 2023: Technological Fest 2023 was organised by SETGOI on 3rd March, 2023 in the college campus. There was an event Technical Poster, where students have shared their innovative posters. This programme was named – “Technotsav”.



DEPARTMENTAL PROJECT EXHIBITION 2023: This project exhibition was conducted by Department of Electrical Engineering and Department of Electronics & Communication Engineering of Sanaka Educational Trusts Group of Institutions on 12th May, 2023.



- Dipankar Sarkar with his team under the mentorship of Dr. Ranadip Roy submitted their research proposal at YUKTI INNOVATION REPOSITORY, MoE.

Placements:

- Dipankar Sarkar of 4th Year, EE got placed on INDIAN OIL.

5. Faculty Achievements

1. Dr. Ayani Nandi and **Dr. Ranadip Roy**, “Hybrid Metaheuristics Search Technique for Profit-based unit commitment with Plug-in Electric Vehicle Charging”, International Journal of Current Science (IJCSPUB), ISSN: 2250-1770.

2. D. Prasad, R. P. Singh, A. Islam, A. Roy, **R. Roy** and S. Mukherjee, “Performance Analysis of Three-Phase Cascaded Hbridge Multi Level Inverters”, 2023 International Conference on Computer, Electrical & Communication Engineering (ICCECE), Jan, 2023

DOI:

10.1109/ICCECE51049.2023.10085108

3. Dr. Ranadip Roy “Wireless charging device using microcontroller with android applications ” at Journal of Emerging Technologies and Innovative Research (JETIR), 10 (7), 2023.

4. Dr. Ranadip Roy and Siddhartha Chakraborty “Three Phase preventer with automatic tripping mechanism” at International journal of research and analytical reviews (IJRAR), 10(2), 2023.

Dr. Ranadip Roy selected as Translator for **NPTEL SWAYAM COURSE**.

Dr. Ranadip Roy acting as “INNOVATION AMBASSADOR” for Institution’s Innovation Council (IIC) for MoE, INDIA.

6. ELECTRICAL FACTS

Lightning is caused by the discharge of electricity in the atmosphere

Lightning is, in fact, caused by one huge electric current. While the clouds may seem to be peacefully moving across the sky, they are actually deceptively active. With ever-changing weather conditions, water and ice are forced up into the atmosphere by warm air currents and then forced back down by gravity. During their travels, the pair become compressed in the clouds, circulating not only around but also inside.



Over time, an electric charge starts to build up inside the clouds – similar to when you rub a balloon against a surface to create static electricity. Inside the

clouds, there are now positive electric charges building up at the top and negative resting along the bottom. These then try their hardest to reach each other in an attempt to neutralize.

On a normal day, this isn't a problem; however, on a stormy day, the turbulent winds cause the electric charges to

separate. The negative charges start moving towards the ground, known to scientists as a 'stepped leader.' In the meantime, an 'upward leader' forms on the earth below, pushing positive charges up into the air. When these meet, they create a giant electric current, which shoots up into the cloud – this is known as lightning!