



NEW HORIZON
COLLEGE OF ENGINEERING

Autonomous College Permanently affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

Department of
Electrical & Electronics Engineering

CURRENTS NEWSLETTER
JULY-DECEMBER 2022

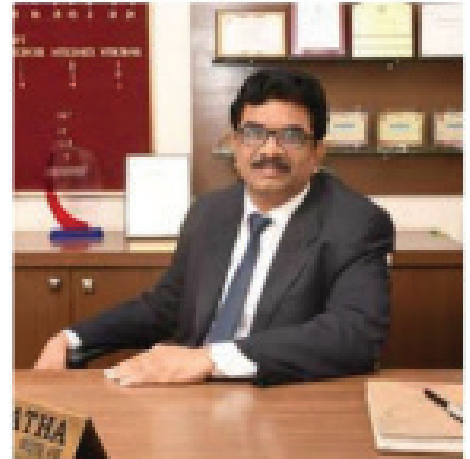
VOLUME-11-ISSUE-1



MESSAGE FROM PRINCIPAL & HOD

Dr. MANJUNATHA PRINCIPAL, NHCE

Dear all, In our college, we and our faculty always think we need to teach beyond curriculum to make our students 'Industry Ready' Recent observations made by many stalwarts in the industry indicate the fact that most Engineering Graduates out of colleges are not employable. NHCE has always been in the forefront in ensuring that students are employable It gives me immense pleasure to write a few words as prologue to the in-house 2022 Newsletter of the EEE Department The issue is designed to present the events that have occurred in the department makes this newsletter resourceful and informative. I congratulate all the contributors and the editorial board for bringing out such a nice issue Happy Reading



Dr. MAHESH M Prof. & HOD EEE,NHCE

Dear readers, I feel happy to release Newsletter titled as "Currents" 2022. Our editorial team has done an appreciable job in reporting all the events which have taken place in the Department over a time period of seven months. To all your notice, our Newsletter is present-ing you the success of major events witnessed by students, faculty and external participants of Electrical Engineering fields. The objective of the Technical Newsletter is to provide information about involvement, inspiration and dedication in diversified areas of Electrical Engineering from students, faculty, parents and alumni- with a timely and honest portrait of our Department activities. This has made an earnest attempt in this direction and all the credit for its success falls upon faculty and students who have worked with dedication and enthusiasm to bring this forward. I convey my regards to all the readers.



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NEW HORIZON COLLEGE OF ENGINEERING

VISION

To emerge as an institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence

MISSION

- To emerge as an institute of eminence in the fields of engineering, technology and management in serving the industry and the nation by empowering students with a high degree of technical, managerial and practical competence.
- To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research & innovation among faculty members and students. To encourage long-term interaction between the academia and industry through their involvement in the design of curriculum and its hands-on implementation.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.

QUALITY POLICY

To provide educational services of the highest quality both curricular and co-curricular to enable students integrate skills and serve the industry and society equally well at global level

VALUES

- Academic Freedom
- Integrity
- Inclusiveness
- Innovation
- Professionalism
- Social Responsibility

ABOUT DEPARTMENT

Welcome to the Department of Electrical & Electronics Engineering (EEE) at New Horizon College of Engineering (NHCE), Bangalore. EEE is one of the prestigious branches of Engineering and one among the oldest departments of NHCE-Bangalore started in 2001. The EEE Department has been playing a vital role in producing engineers and technologists of high caliber ever since it was established in the year 2001. The Department is accredited by NAAC with 'A' Grade and accredited by NBA. The vision of EEE Department is to create contemporary Engineers, innovators and entrepreneurs to make a better nation and in turn, a better world. A critical investigation and innovation into the modern state-of-art and cutting edge technology lead to the fact that an electrical graduate fits better in today's competitive world.

- The strength of the department is highly qualified faculty members with expertise in various fields of electrical engineering, state of art laboratory facilities. The department is inclined towards bridging the gap between Industry and academia by collaborating with Multinational Companies in the field of Electrical Engineering.

- Indo-French Center of Excellence in Electricity, Automation and Energy (IFCEEAE) is one such initiative evolved through "MoU" with French Ministry of National Education and Schneider Electric India Pvt. Ltd., The main objectives of IFCEEAE are

- To train the students of all streams of engineering in automation field

- To facilitate interdisciplinary and applied research with a focus on innovative product development

- To provide excellent career opportunities to students through exchange programs with French Universities, industrial training, innovative learning and R & D activities especially in the areas like Smart Grid, Internet of things (IoT), Energy Management Systems, Embedded systems, Supervisory Control and Data Acquisition (SCADA) and industrial automation.

- The Department nurtures the young minds beyond the curriculum by facilitating technical clubs in promoting technical events, community development/society impact and universal value/ethics programs. In supporting to this, Department of Electrical & Electronics Engineering has established Institute of Electrical and Electronics Engineers (IEEE) – Power Electronics Society (PELS) Student Branch Chapter (Geo-Code: SBC66131) which is the non-profitable, world largest technical professional organization for the advancement of technology. The students have a greater exposure and flexibility in campus placements in core industries, IT sectors and Public Sector Units (PSU).

VISION

To evolve into a centre of excellence in Electrical and Electronics Engineering for bringing out contemporary engineers, innovators, researchers and entrepreneurs for serving nation

MISSION

- To provide suitable forums to enhance the teaching-learning, research and development activities.
- Framing and continuously updating the curriculum to bridge the gap between industry and academia in the contemporary world and serve society.
- To inculcate awareness and responsibility towards the environment and ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: To provide good learning environment to develop entrepreneurship capabilities in various areas of Electrical and Electronics Engineering with enhanced efficiency, productivity, cost effectiveness and technological empowerment of human resource.

PEO2: To inculcate research capabilities in the areas of Electrical & Electronics Engineering to identify, comprehend and solve problems and adopt themselves to rapidly evolving technology.

PEO3: To create high standards of moral and ethical values among the graduates to transform them as responsible citizens of the nation.

Program Outcomes (POs)

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

PO2 Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems in Electrical and Electronics Engineering 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 of Electrical and Electronics Engineering 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 in Electrical and Electronics Engineering, 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 in Electrical and Electronics Engineering 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 in Electrical and Electronics Engineering.

PO7 Environment and Sustainability: Understand the impact of the professional engineering solutions of Electrical and Electronics Engineering 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 Skills: 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)

PSO1: Graduates will be able to solve real life problems of Power system and Power Electronics using MiPower, PSPICE and MATLAB software tools and hardware.

PSO2: Graduates will be able to develop and support systems based on renewable and sustainable Energy sources.

EDITORIAL TEAM



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Senior Assistant Professor, EEE



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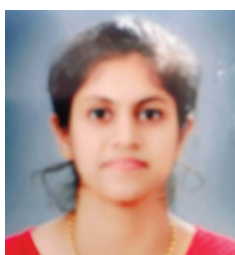
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CLUB EVENTS

QUIZCODE

**NEW HORIZON**
COLLEGE OF ENGINEERING

**IEEE POWER
ELECTRONICS SOCIETY**
Bangalore Chapter

**NHCE-EEE**
CLUB-E SOFT

**INSTITUTION'S
INNOVATION
COUNCIL**
(Ministry of HRD Initiative)

QUIZCODE



Round 1- Quiz
Round 2 - Basic coding questions

Event prerequisites
- Basic algorithm writing
- Basics of C

Date - 13-07-2022
Time- 12:10pm - 1:10pm
Venue - B203



Convener
Dr. M Mahesh
Faculty Coordinator
Dr. S Sujitha
Event Coordinators
Harshika (9523728875)
Shashank Joshi(9916347248)
Sudeep (9535190119)



The event aimed to encourage students to become skilled at the basics of coding, and it was the continuation of the previous event, CODOPIA "A Future Prospective." The event tested participants on the concepts taught in the previous event.

Approximately 30 students participated in the event, and they were able to benefit from the knowledge and skills imparted during the event. The event was organized in a manner that made it interactive and engaging for the participants.

The event was structured in a way that tested the students' knowledge of the basics of coding. The participants were able to apply the concepts they had learned in the previous event and demonstrate their understanding of the topic.

Overall, the event was a great success in achieving its objective of encouraging students to become skilled in the basics of coding. The students who participated in the event were able to improve their coding skills and deepen their understanding of the concepts taught in the previous event.

The organizers deserve appreciation for their efforts in organizing such a useful and informative event for the benefit of the students. By providing such events, the organizers are helping to create a culture of learning and skill development among students, which will benefit them in the long run..

SIMULATE WITH US



The aim of the event was to help B.E students of NHCE get familiarized with basic electrical core concepts and a few simulation software like LT-Spice, Proteus, and MATLAB/SIMULINK. The event was organized jointly by the E-SOFT club and IEEE PELS Bangalore Chapter.

The event was a great success as it benefited 34 participants who were able to learn about simulation in electric circuits. Participants were able to improve their technical knowledge and gain insights into the applications of these software's.

The event was well-structured and included various activities and sessions that provided an excellent learning experience for the participants. The organizers were able to provide the participants with the necessary resources and guidance to help them learn about simulation software in a fun and interactive way.

Overall, the event was a great success and achieved its objective of helping the participants get familiarized with simulation software and improving their technical knowledge. The E-SOFT Club and IEEE PELS Bangalore Chapter deserve appreciation for organizing such a useful and informative event for the benefit of B.E students of NHCE.

INDUSTRIAL VISIT



During our industrial visit to Kaiga Atomic Power Station, you were able to learn about various aspects of nuclear power and its generation. we learned that nuclear power is a form of clean energy that does not emit greenhouse gases and is an effective way to mitigate climate change.

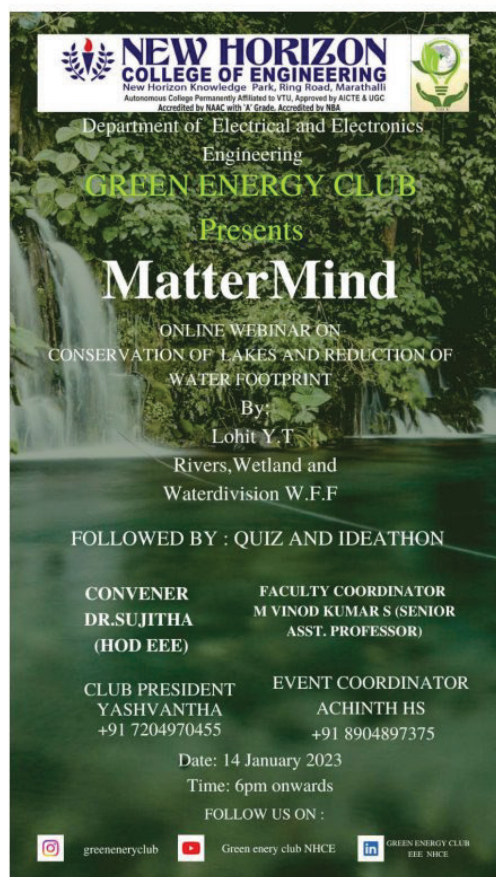
we were introduced to the process of nuclear power generation, which involves the fission of uranium atoms, releasing a large amount of energy. The reactors at Kaiga Atomic Power Station are pressurized heavy-water reactors (PHWRs), which use heavy water as a coolant and moderator.

we learned that safety is of utmost importance in a nuclear power plant and that Kaiga Atomic Power Station has comprehensive safety measures in place, with multiple layers of protection to prevent accidents. we were impressed by the advanced technology and rigorous procedures in place to ensure the safety of workers and the surrounding community.

we also learned about the safe storage and disposal of nuclear waste generated at the plant. we witnessed the secure storage facility and the measures taken to dispose of the waste safely.

Overall, visit to Kaiga Atomic Power Station gave you a comprehensive understanding of nuclear power generation and the various technologies and safety measures involved. we came away with a greater appreciation for the importance of clean energy and nuclear power's role in meeting India's energy needs.

Mattermind Event (Seminar + Quiz)



The event was attended by around 60 students from different colleges and departments who were interested in exploring green energy and sustainability. The participants were engaged in various activities that highlighted the importance of renewable energy sources and how they can be used to address environmental challenges.

The guest speaker, Mr. Lohit Y, delivered an inspiring talk on the latest developments in green energy and how they can be leveraged to create a sustainable future. He emphasized the importance of adopting a holistic approach towards energy conservation and how green energy can be integrated into our daily lives.

The event also featured interactive sessions, group discussions, and presentations by the participants on various topics related to green energy. The

participants were given an opportunity to showcase their creativity and innovation in designing sustainable energy solutions.

The event was concluded with a vote of thanks by Mr. Vinod Kumar S, the Green Energy Club Co-coordinator, who expressed his gratitude to the guest speaker, participants, and everyone who contributed to the success of the event.

In conclusion, the Matter Mind Event of Green Energy Club organized by the Department of Electrical and Electronics Engineering at the New Horizon College of Engineering was a highly engaging and informative event that provided a platform for students to explore the potential of green energy and sustainability. It was a great success and left a lasting impression on all the participants.

Cleanliness Drive at Jakkur Lake



The objective of the event was to spread awareness about cleanliness in the surroundings, specifically near water bodies, as garbage pollution can harm aquatic life. The event was conducted by the Green Energy Club and started at 9:00 am and ended at 12:00 pm.

The participants left from college and reached the venue for the event. The organizers informed them about the agenda for the day. The participants were divided into groups and were given a specific area to clean. The focus was mainly on plastic and related materials as they can cause significant damage to the environment.

After cleaning the area, the garbage was dumped in a designated location. The participants distributed templates and had conversations with the people present there about the importance of cleanliness and how it affects the environment.

At the end of the event, the participants planted some plants to encourage the growth of vegetation in the area.

The event was a success as it achieved its objective of spreading awareness about cleanliness and its importance. The participants were able to make a significant impact on the environment by cleaning the area near the lake, and the distribution of templates helped to raise awareness among the local people about keeping their surroundings clean.

The Green Energy Club deserves appreciation for organizing such an event that not only helped to create awareness about cleanliness but also promoted the importance of taking care of the environment.

TechPlay



NEW HORIZON
COLLEGE OF ENGINEERING

Department of Electrical and Electronics Engineering

IEEE NHCE UCreate club AGTE pels

Presents

TECH PLAY

LEARN AND PLAY WITH TECHNOLOGY!

13TH JANUARY || 2 PM ONWARDS

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U-Create Club

SCAN TO REGISTER

@ucreateclub.nhce



U-Create club of the Electrical and Electronics department conducted an event TECHPLAY ON 13TH JANUARY. The session was hosted by Harshitha. R of the 7th Semester and started with a Welcome Note to our contestants, to all the students of the 3rd and 5th semesters students, and to the faculty of the electrical and electronics department. The event was preceded by a short talk by prof. Kodandapani of the electrical and electronics department. In his talk, he emphasized the importance of Innovation in the Electrical Domain. After which the event started with 30 enthusiastic participants. The event ran in Three rounds where in the first round they have to pick and speak on an electrical topic, the shortlisted members were moved to the second round. In which they had a circuit to block. A circuit was given and was asked to decode it. This was followed by an elimination round. The third round had similar to the second round where the

participants had to debug a code which was given by the ucreate members. Basically, it consist of a code that had errors and the shortlisted participants had to debug the code. which successfully led to the end of the three rounds of TECHPLAY. The participants from various departments actively participated in the event and had a great fun learning session. The students from other branches than the electrical branch got great exposure to Electrical Domain. At the end of this knowledge-oriented day, we came up with three brilliant Participants as winners decorating first, second and third place for whom the prizes were distributed by the faculty coordinator of the U-Create club prof. Kodandapani sir. The event ended with prize distribution and a vote of thanks. The inquisitiveness of all the participants led them to learn all the important aspects of electrical projects which will definitely help them to boost their technical skills indeed this was also an event where the participants used this opportunity to evaluate their knowledge.

THANKYOU

Industry Skill Lab



INTERNATIONAL COLLABORATIONS



INDUSTRY COLLABORATIONS



Student Clubs

CO-CURRICULAR CLUBS



Aerobots Club



Business & Information Technology Club



Cybersecurity & Ethical Hacking Club



Data Analytics Club



ED & Start Up Club



Emsys Club



Evolve.AI



Foss Club



Green Energy Club



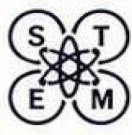
Healthxcel Club



Innovation Club



Robohorizon Club



STEM Club



Tech Forge Club



Mobile App Development Club

EXTRA CURRICULAR CLUBS



Rotaract NHCE



Dance Club



Music Club



Art Club



Literary Club



TEDx Club



NSS Club



Socio-Political Club



Fitness Club



Media Club



Fashion Club



Leo Club



Green Warriors



Drama Club



Alumni Club

SPORTS CLUBS



Volley Ball Club



Basket Ball Club



Badminton Club



Kabaddi Club



Football Club

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