



NEW HORIZON
COLLEGE OF ENGINEERING



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CURRENTS – NEWSLETTER

EEE – we Light the World



EEE

2020

JANUARY TO JULY

Volume 8

Issue 2

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. Electrical & Electronics engineering students have a greater exposure and flexibility in campus placement both in core industries, IT sectors and Public Sector Units.

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 and society.

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.

MESSAGE FROM PRINCIPAL & HOD

Dear all,

In our college, we and our faculty always think we need to teach beyond curriculum so as to make our students 'Industry Ready'. Recent observations made by many stalwarts in the industry indicate the fact that a majority of 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 pen a few words as prologue to the in-house 2020 Newsletter of the EEE Department. The issue is designed to present the events that have occurred as well as technical write-ups which makes the issue resourceful and informative. I congratulate all the contributors and also the editorial board for bringing out such a nice issue. Happy Reading.

Dr. MANJUNATHA
PRINCIPAL, NHCE

Dear readers,

I am elated to announce the release of "Currents" our Newsletter for 2020. Our editorial team has done an impeccable job in reporting all the events which have taken place in the Department from January to July. Our Newsletter is presenting you the success of major events witnessed by students and participants of Electrical Engineering fields. The objective of the Technical Newsletter is to inform, engage, inspire and entertain a diverse readership including students, faculty, parents and alumni- with a timely and honest portrait of our Department activities. This Newsletter 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.

Dr. RamKumar.S
HOD EEE, NHCE

EDITORIAL TEAM

FACULTY ADVISORS

Dr.RAMKUMAR.S

Prof. RASHMI N

Prof. MOHAN .B.S

Prof. SATISHKUMAR.D

STUDENT CO-ORDINATOR

Mr. NISCHAL DINESH

Mr. Md. SAGAR KHAN

DESIGNER

Mr. CHARANTHEJA

DETAILS OF WORKSHOPS/ SEMINARS ORGANISED BY FACULTY

WORKSHOP

Chief Patron
Dr. Mohan Mangharam
Chairman
New Horizon Educational Institutions

Patron
Dr. Narayanaswamy
Principal
New Horizon College of Engineering

Advisory Committee
Dr. C.S.R. Pradeep
Prof & Dean-Engineering, NHCE
Dr. K. Gopala Krishnan
Prof & Dean - E&E, NHCE

Convener
Dr. S. Ramkumar
Head-Electrical and Electronics Engineering

Organizing Coordinators
Prof. Satish Kumar D
Prof. Mohan Das R

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New Horizon Knowledge Park, Ring Road, Bellandur Post, Bangalore 100 100

50th Golden Anniversary
WIND OF INSPIRATION STIRRED

**Online Workshop
on**

“Power Train and Electromagnetic Transients”

18th & 19th May, 2020

**Organized by
Department of
Electrical and Electronics Engineering**

Registration Fees: Rs 100

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Pic: Hands on Virtual Training for Buck Converter Simulation Using PSIM Software

Prof. Satish Kumar.D and Prof. Mohan Das department of Electrical and Electronics Engineering, NHCE-Bangalore, organized Two days Online Workshop, on 18th & 19th May-2020, in association with PWSIM Engg. Solutions Pvt Ltd.

Resource Persons were from PWSIM Engg. Solutions Pvt Ltd.

Workshop platform: GoToMeeting + YouTube Live

Topics Covered during this Workshop: Concepts of Power System, Electromagnetics and Power Electronics using the software: EMTP, JMAG, PSIM, POWER Forge.

Around 438 participants attended this virtual workshop, session ended with positive feedback from all.

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Department of Electrical and Electronics Engineering

Workshop on Electronic Circuit Design for Mother Board Manufacturing

**on
25th January 2020**

Event Schedule:

09.00 am - Inauguration.

09.30 am to 11.00 am - Session 1
Recent Technologies for the fabrication of printed circuit board through Computer Aided Design and ORCAD

11.30 am to 01.30 pm - Session 2
ORCAD Capture CIS and PCB Editor help in the PCB fab process through

- ❖ Drawing and Simulating the LED Schematic
- ❖ Preparing the Schematic for Layout
- ❖ Laying out the Printed Circuit Board

2.30 pm - 03.30 pm - Session 3

- ❖ Generating Documentation
- ❖ Fabrication check through Simulation

04.00 pm - Valediction and Certificate Distribution.

OUTCOME

- ❖ Understand about the printed circuit board through Computer Aided Design and ORCAD.
- ❖ Learn how a printed circuit board is fabricated.
- ❖ Understand how ORCAD Capture CIS and PCB Editor help in the PCB fab process through
- ❖ Drawing and Simulating the LED Schematic
- ❖ Preparing the Schematic for Layout
- ❖ Laying out the Printed Circuit Board
- ❖ Generating Documentation
- ❖ Fabrication check through Simulation

Abstracting the Circuit World

For Registration:

Event Organizing Faculty, Coordinator : Dr.S.Sujitha

Event Organizing Student Coordinator:

Mr. Lohith, Esoft Club - 8105859489

Mr. Md-Sagar-Rhan, Esoft Club-8942916221

Ms. Darshini M S, Esoft Club - 9731504276

...not just software! ...not just for designing PCB!

Pic: Work Shop on Electrnic Circuit Design for Mother Board

The Department of Electrical and Electronics Engineering organized a work shop on electronic circuit design for mother board in CTPS LAB and the Organizing Coordinators are Dr. S.Sujitha and Mr. T. Muniprakash. Resource Person S Bharani, Design Engineer, Quest Global having 10 years of experience in OrCad PCB design manufacturing. Event was organized on 25.01.2020

Objectives And Outcome Of The Event:

- Understand about the printed circuit board through Computer Aided Design and ORCAD.
- Learn how a printed circuit board is fabricated.
- Understand how ORCAD Capture CIS and PCB Editor help in the PCB fab process through
 - Drawing and Simulating the LED Schematic
 - Preparing the Schematic for Layout
 - Laying out the Printed Circuit Board
 - Generating Documentation
 - Fabrication check through Simulation

Number of Participants were around 50, session ended with positive feedback from all. Congratulations to ESoft Club Office Bearers, Organizing Coordinator Dr. Sujitha S & Mr. Muniprakash T and Head of the Department Dr. S. Ramkumar and Esoft Club Student Members.




NATIONAL WEBINARS

The Department of Electrical and Electronics Engineering organized a National Webinar on 'Microsensors and Instrumentation' on 11-06-2020 in Bangalore. The aim of this webinar was to explain the importance of research on sensors and instrumentation in Electrical and Electronics field. The session was deliberated by Dr Udayakumar from Anna University and the session received positive feedback from all the participants.



We thank the Management New Horizon College of Engineering for supporting us in organizing this event.

Pic: National Webinar on 'Microsensors and Instrumentation' brochure

MODELING ELECTRICAL SYSTEM USING SIMULINK WEBINAR



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Department of Electrical and Electronics Engineering
Webinar on Modeling Electrical Systems Using Simulink

Title
Modeling Electrical Systems Using Simulink

Topics

- Introduction to Model Based Design
- Model Building with Simulink
- How to use Simulink to test components and subsystems
- Analysis of RL Circuit Model.
- Build and Analyse Motor Control Algorithms.
- Electric Power Converter
- Scope for Electrical Systems




In association with
CoreEL Technologies

12
JUNE

Time:
 10:00 am
 to 01:00 pm

SPEAKER
Mr. Rakshith


Sr. Application Engineer



Faculty Co-Ordinator:
Dr. Ramkumar S, HoD-EEE

Ms.Roopaa C :- +91 90365 51500

Mr. Mohan B S:- +91 81234 06405

FREE 

The Department of Electrical and Electronics Engineering organized National Webinar on Modeling Electrical system using Simulink on 12-06-2020 in association with CoreEL Technologies Bangalore. The intent of the webinar was to lay importance of the MATLAB and Simulink tool in building and simulating the various Electrical and Electronics circuits. The session was deliberated by Mr.Rakshith, Senior Application Engineer, CoreEL Technologies, Bangalore. During the deliberation Mr.Rakshith took the many examples of electrical circuits and built the same in Simulink and explained it to the participants. We thank the Management New Horizon College of Engineering for supporting us in organizing this event.

NATIONAL WORKSHOP ON INTELLECTUAL PROPERTY RIGHTS

The Department of Electrical and Electronics Engineering organized a National workshop on Intellectual Property Rights on 17-06-2020. There were two sessions conducted during the course of the workshop. The Morning session was deliberated by Dr.Balaji Devarajan, IP consultant, KPR Institute of Technology, Coimbatore and the afternoon session was handled by Adv. Jebakumar Samuel, MS (IITM), LLB, IP Attorney and Registered Indian Patent Agent Manager, Molecular Connections Pvt Ltd, Bangalore. During the deliberation both the speakers gave information about the Indian Patenting rules and regulation and how to make quality projects and convert them to patents. We thank the Management New Horizon College of Engineering for supporting us in organizing this event.



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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
One Day Workshop on
INTELLECTUAL PROPERTY RIGHTS

Registration
 200/-



Dr. Balaji Devarajan
 IP Consultant
 Asst. Prof, KPR Institute of Technology, Coimbatore

Date: 17th June

17

Two Session

- Session 1- 10:00am to 1:00 pm
- Session 2- 2:00pm to 4:00 pm

Adv. Jebakumar Samuel
 MS (IITM), LLB, IP Attorney and
 Registered Indian Patent Agent
 Manager, Molecular Connections
 Pvt Ltd, Bangalore.





Session link will be shared to registered e-mail/WhatsApp

Faculty Co-Ordinator: Dr. Ramkumar S HoD-EEE

Ms.Roopaa C :- +91 9036551500 & Mr. Mohan B S:- +91 8123406405

NATIONAL HANDS-ON WORKSHOP ON MATLAB AND SIMULINK

The Department of Electrical and Electronics Engineering and Department of Electronics and Communication together organized One day National Hands-on workshop on MATLAB and Simulink on 16-06-2020 in association with Corel Technologies Bangalore. The intent of the workshop was to lay importance of the MATLAB and Simulink tool in building and simulating the various Electrical and Electronics circuits. The session was deliberated by Mr. Rakshith, Senior Application Engineer, Corel Technologies, Bangalore. During the deliberation Mr. Rakshith took the many examples of electrical circuits and built the same in Simulink and explained it to the participants. For student's, the more user friendly and easier option of MATLAB in Mobile was introduced and taught. We thank the Management New Horizon College of Engineering for supporting us in organizing this event.

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Department of Electrical and Electronics Engineering & Electronics and Communication Engineering
In association with **CoreEL Technologies, Bangalore**

ORGANIZING

Hands-On workshop "Introduction to Matlab and Simulink"

SPEAKER: Mr. Rakshith, Sr. Application Engineer

CoreEL Technologies

JUNE 16

Time: 02:30 pm to 04:30 pm

Faculty Co-Ordinator:
Dr. Ramkumar S, HoD-EEE
Ms. Roopa C :- +91 90365 51500
Mr. Mohan B S:- +91 81234 06405
Dr. Sanjeev Sharma, HoD-ECE
Mr. G Rajesh:- 8919002384

Pic: National Hands-on workshop on MATLAB and Simulink

PAPER PUBLICATIONS BY FACULTY

- International Journal of Scientific Research in Science, Engineering and Technology © 2020 IJSRSET | Volume 7 | Issue 2 | Print ISSN: 2395-1990 | Online ISSN : 2394-4099 DOI : <https://doi.org/10.32628/IJSRSET207241> "Design and Development of Cleaning System for Cups Using PLC" Mr. Vinod Kumar S, R. Mohan Das Department of Electrical & Electronics Engineering, New Horizon college of Engineering, Bengaluru, Karnataka, India
- Intelligent controller based on emotional learning of the brain for the PMBLDC motor drive system in industrial applications – Dr. B. Gunapriya published in e-Proceedings of First International Conference on Automation, Signal Processing, Instrumentation and Control-iCA SIC-2020 organized by School of Electrical Engineering at Vellore Institute of Technology, Vellore.
- Impact of Anti-Windup PI controller on BLDC Motor Drive System- Dr. B. Gunapriya has published in e-Proceedings of First International Conference on Automation, Signal Processing, Instrumentation and Control-iCASIC-2020 organized by School of Electrical Engineering at Vellore Institute of Technology, Vellore.
- Dr. B. Gunapriya's research paper has been accepted in BIOSCIENCE BIOTECHNOLOGY RESEARCH COMMUNICATIONS Special Issue entitled, "Advancement of Electrical, Information and Communication Technologies for Life Application", 15.05.2020
- Prof. Rashmi N has published a research paper entitled 'Fault Detecting Robot for Underground Electrical Cables Using Atmega Aurdino' in the International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), Volume 6, Issue 3, May-June 2020.
- Prof. Rashmi N has published a research paper entitled 'Nanotechnology based Polymerized Solar Cells and Screen-Printing Technique for Power Generation' in the International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), Volume 6, Issue 4, July-August 2020.

- Prof. Deepa V.B Published Paper on 'Identification of L-G fault in Power System by Machine Learning using Labview', IJREAM, Volume 5, Issue 12, March 2020,145-147, March 2020.
- Prof. Deepa V.B Published Paper on 'Solar Panel Monitoring and Maintenance System' in an international Journal International Journal of Scientific Research in Computer Science, Engineering and Information Technology, ISSN:2456-3307, UGC journal No: 64718, Volume 6, Issue 3,536-542, June 2020

FACULTY ACHIVEMENTS

- Dr.B.Gunapriya has participated in the Online Webinar and online Examination organized by Atal Incubation Centre-Pondicherry Engineering College Foundation titled "How to Conduct Online Class to Students" followed by an online Examination conducted on 09-04-2020 and secured "S" Grade.
- Prof. Muni Prakash has Participated and scored 90% in a "National level Technical E Quiz on Electrical & Electronics Fundamentals" organized by Sir Issac Netwon College of Engineering & Technology on 26/05/2020.
- Prof. Muni Prakash has Participated and secured good marks in a "Online Technical Quiz in Electrical Engineering (CT, Electrical Machines, Control Systems, T&D)" organized by RVS College of Engineering and Technology on 27/05/2020.

STAFF ATTENDED FDP / WEBINARS/ WORKSHOP DETAILS

- Prof. Mohan Das and Prof. Vinod Kumar S attended Five days FDP "Technological Advancement in Power System Control, Power Controllers, Drives & E-Vehicles - TAPPAD 2020" from 27.04.2020 to 1.05.2020 at Dr.NGP Institute of Technology Coimbatore.
- Prof. Mohan Das attended FDP on "Emerging trends in industrial Automation" on 01.05.2020 by Sri Eshwar College of Engineering Coimbatore.
- Prof. Vinod Kumar S attended five days FDP on "Role of IOT, Embedded, Electric Vehicle & power converters for Smart world" from 18.05.2020 and 22.05.2020 at St. Joseph's college of Engineering Chennai.
- Prof. Rashmi N attended National level FDP on Decoding examination during and post COVID 19 on 8.5.2020 organized by Skillslate, via online Zovy studios, Pune.
- Prof. Deepa V Bolanavar, attended FDP Research opportunities in Electrical Engineering and its Applications from 18.5.2020 to 23.5.2020 organized by P.S.R College of Engineering Sivakashi, via online platform.
- Prof. Muni Prakash attended FDP on topic "Strategies for Effective Work Life Balance of Academicians" organized by Karpagam College of Engineering on 4.5.2020. Also on Introduction to Nanosensors organized by IEEE IAS SBC Jawaharlal College of Engineering as a part of COMET, an SBC initiative of IEEE IA/IE/PELS Joint Chapter Kerala on 05/05/2020, via online platform.
- Prof. Satish kumar.D attended ATAL Online FDP on "Artificial Intelligence" – 30/04/2020 to 04/05/2020.

FACULTY ATTENDED WEBINARS:

- Prof.Satish Kumar, Prof.Rashmi N, Prof.Mohan B.S attended Webinar on “Research paper writing for scientific journals” on 22.5.2020 presented by Dr.Ramesh, Vice principal, KIT college, Coimbatore, via online platform.
- Prof.Deepa V Bolanavar, attended Art of writing research paper on 13.5.2020 organized by M.A.M College of Engineering and Technology Thiruchinapalli, via online.
- Prof.Deepa V Bolanavar, attended Energy 4.0 and the way forward Post COVID on 16.5.2020 and Substation Automation System on 17.5.2020 organized by Amrita Vishwa Vidhyapeetham Bangalore, via online platform.
- Prof. Muni Prakash attended Webinar on “Emerging Trends on Industry Automation” organized by Sri Eshwar College of Engineering on 01/05/2020 and on “Smart Grid” conducted by IEEE SB Jawaharlal College of Engineering & Technology on 29/04/2020, via online platform

FACULTY ATTENDED WORKSHOP:

- Dr.B.Gunapriya, participated in an online FDP on ‘Project Proposal Writing’ held during 08/05/2020 to 09/05/2020, Velammal Engineering College, Chennai.
- Dr.B.Gunapriya participated in a 5 day workshop on “Design Analysis and Application for power electronics converter” from 11th to 15th May 2020. BMS College of Engineering, Bangalore and also participated in IGEN ENERGATHON –Virtual Conference ENERGATHON 2020 on 02/05/2020.
- Prof.Satish Kumar.D participated in an online Workshop on “Book & Article Publishing and SpringerLink Platform Demonstration” on 22/04/2020 and attended International Tech Conclave (ITC-2020) from 26/04/2020 to 30/04/2020.
- Prof. Muni Prakash attended an online workshop on “Writing a Competitive Research Grant Proposal” organized by SJC Institute of Technology, with collaboration of IEEE Bangalore section on 27/04/2020.
- Prof.Rashmi N attended two days Workshop on “Research Methodology” organized by Cambridge Institute of Technology, in the college campus from 13/03/2020 to 14/03/2020.
- Prof.Mohan B.S attended two days Workshop on “Research Methodology” organized by Cambridge Institute of Technology, in the college campus from 13/03/2020 to 14/03/2020.
- Dr.B.Gunapriya attended short term course on Renewable Powered EV- Station- Sponsored by NaMPET PHASE III – CDAC and was organized by NIT CALICUT from 10/03/2020 to 14/03/2020.

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.

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 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

