NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently affiliated to VTU Approved by AICTE
Accredited by NAAC with 'A' Grade

Department of Electrical & Electronics Engineering

CURRENTS

NEWSLETTER

Vol 6, Issue II, June '17

newhorizonindia.edu/nhengineering/

CONTENT

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MESSAGE FROM HEAD OF THE DEPARTMENT

With yet another release of this semesters issue of " News Letter- Currents". I am extremely delighted to acknowledge that the editorial team has done a stupendous job of subsuming all the key events which have taken place over the course of last few months. To Top it off, this News letter includes major events witnessed by our department as well as Engineering Advances in the Electrical Field.

The essential objective of the 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 issue 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 the second issue forward. I convey my regards to all the readers.

Dr.R.Elumalai

ABOUT THE DEPARTMENT

Electrical and Electronics Engineering is a continuously evolving subject. As technology has advanced, so have the challenge facing the modern engineer. EEE is a subject that naturally partners with other disciplines with whole new engineering avenues. From the very inception of the college in 2001,the Department of EEE offers four year full-time B.E program under three variants Global, Professional and Executive, affiliated to VTU with the intake of 60 students, now boast of 120 students per year. The Department is equipped with all the required laboratories, infrastructure and class rooms.

The B.E Degree program is designed to achieve a balance between depth of knowledge acquired through specialization and breadth of knowledge gained through exploration. The undergraduate degree courses offered by department provide a comprehensive foundation in the core topics of EEE coupled with an area of specialization relevant to emerging engineering challenges. The curriculum has been designed to create professional electrical and electronics engineers, who can serve the fields of core Electrical Engineering, information and communication systems, and other related fields.

VISION OF THE DEPARTMENT

To produce competent Engineers to excel in the field of Electrical and Electronics Engineering by providing necessary knowledge and skills through measurable and continuous improvement methods.

MISSION OF THE DEPARTMENT

To provide an environment in which both faculty and students can think critically and assimilate knowledge

By imparting quality technical education for students to develop into globally competent technology professionals.

By collaborating with industry, research organizations and academia to encourage creativity and innovation.

By preparing graduates with positive attitude and ethical values.

PROGRAM OUTCOMES

Electrical and Electronics Engineering Graduates will be able to:

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

Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

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

Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

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.

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.

Environment and sustainability: Understand the impact of the professional engineering solutions insocietal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Communication: 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.

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.

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

PSO 1: Graduates will be able to solve real life problems of power system and power Electronics using MiPower, PSPICE and MATLAB software tools and hardware.

PSO 2: Graduates will be able to develop and support systems based on Renewable and sustainable Energy sources.

BOOK PUBLICATIONS BY FACULTY

BOOK	AUTHOR s)	PUBLISHER
Circuit Theory	Prof. B.S.Mohan ,Dr.S.Sujitha,Prof. M.Arun Kumar,Dr.Elumalai	Charulatha Publications, Chennai
Electromagnetic Fields	Dr.S.Sujitha, Prof. B.S.Mohan, Dr.Elumalai, Prof. M.Arun Kumar	Charulatha Publications, Chennai
Microprocessor and Microcontroller	Dr.Elumalai,Prof. M.Arun Kumar,Dr.S.Sujitha Prof. B.S.Mohan	Charulatha Publications, Chennai
Embedded Systems	Prof. M.Arun Kumar, Dr.Elumalai,Prof. B.S.Mohan, Dr.S.Sujitha	Charulatha Publications, Chennai

PATENTS FILING BY STUDENTS

USN	NAME OF THE STUDENT	TITLE OF PATENT	APPLICATION NO. AND DATE
1NH14EE711	INDRANIL DAS	A SENSOR IGNITION SYSTEM FOR TWO WHEELERS	E-2/99/2017-KOL AND APPLICATION NO. 201731012865 DT.11.04.2017
1NH13EE717	DIPESH BHUSHAN	ELECTRONIC VARIABLE SPEED GOVERNOR FOR TWO WHEELER	E-2/1433/2017-CHE AND APPLICATION NO. 201741018096 DT.23.05.2017
1NH13EE044	KOTA REDDY LAKSHMI	A METHOD TO ALERT THE USER IN CASE OF A MOBILE THEFT/UNAUTHORIZED USE	E-2/1412/2017-CHE AND APPLICATION NO. 201741018075 DT.23.05.2017
1NH12EE722	KARTHIK. M	DESIGN AND INSTALLATION OF ECONOMICAL PICO-HYDRO ELECTRIFICATION USING GREEN ENERGY	E-2/1451/2017-CHE AND APPLICATION NO. 2017410121383 DT.19.06.2017
1NH12EE035	PRASANNA. R	GREEN ENERGY-HYBRID RENEWABLE POWER GENERATION (SOLAR-WIND) FOR IRRIGATION	E-2/1451/2017-CHE AND APPLICATION NO. 2017410121382 DT.19.06.2017

PATENTS FILING BY FACULTY

Topic	Author Name	CBR Number / Patent Number	CBR Date
SYSTEM AND METHODS FOR SMART AND EXPANDABLE HELMET WITH IOT CAPABILITIES	DR.NISHA	201741018076	22.06.2017
GREEN ENERGY – HYBRID RENEWABLE POWER GENERATION (SOLAR WIND) FOR IRRIGATION	DR.MAHESH K MR.LITHESH J	21416 / 201741021382	19-06-2017
DESIGN AND INSTALLATION OF ECONOMICAL PICO HYDRO ELECTRIFICATION USING GREEN ENERGY	DR.MAHESH K MR.INBASAKARAN.S	21416 / 201741021383	19-06-2017
SECURITY ENHANCEMENT FOR FOUR WHEEL AUTOMOTIVE SYSTEM USING LIGHT STACK POSITION	DR.ELUMALAI.R MR.DUNEY D SAM	19301/201741018336	25-05-2017

INTERNATIONAL JOURNAL/CONFERENCE PUBLICATIONS

Name of the Faculty	Title	Name of the Journal/Conference	Volume/ Issue/Journals/ conference	Impact Factor
Dr.Sujitha .S	Exploration of Hybrid Switched Reluctance motor drives Using H Bridge Converter	Middle East Journal of Scientific Research	ISSN:1990-9233,volume 25,Issue 5,june 2017	3.11
Dr.Sujitha .S	Investigation of Standalone PV Fed Switched Reluctance Motor Drivers Using C Dump Converter	Global Journal of pure and Applied Mathematics	ISSN: 0973-1768,volume13, Issue 10, 2017	3.181
Mrs.Kavitha chenna reddy	Analysis of sub-synchronous resonance with VSC-based HVDC system	International journal of Advanced research in electrical, electronics and instrumentation engineering.	ISSN:2320-3765,volume 6,Issue 6,june 2017	5.621
Mr.Sunil S.K, Mr.Santosh S	Energy Management Techniques with solar roof Top with Grid-A Case Study	International journal of Advanced research in electrical, electronics and computational system	ISSN:2348-117X,volume 6,Issue 6,june 2017	5.621
Mr.Sunil S.K	Smart System for power saving using PWM Technology	International journal of Advanced research in electrical, electronics and computational system	ISSN:2348-117X,volume 6,Issue 6,june 2017	5.621
Mrs.Latha, Mrs.Deepa V B	PWM Generation using PIC16F877A For bidirectional V/F control of single – phase induction motors	International journal of Advanced research in electrical, electronics and instrumentation engineering.	ISSN:2320-3765,volume 6,Issue 6,june 2017	5.69
Mrs.Deepa V B, Mrs.Latha	A Novel Approach to Compress and Reconstruct an Audio Signal	International journal of Advanced research in electrical, electronics and instrumentation engineering	ISSN:2320-3765,volume 6,Issue 6,june 2017	5.69
Mrs.priyanka S Kole	An overview of nanotechnology and its energy application	International journal of Advanced research in engineering, Science & technology	ISSN:2393-9877,volume 4,Issue 6,june 2017	4.542
Mrs.priyanka S Kole	Application of WiMAX for load monitoring in smart Grid infrastructure	International journal of Advanced research in engineering, Science & technology	ISSN:2393-9877,volume 4,Issue 6,june 2017	4.542
Mrs.Priyanka S Kole	A case study on IEEE-14 bus system with an emphasis on optimized reactive power compensation	International journal of Advanced research in engineering, Science & technology	ISSN:2393-9877,volume 4,Issue 6,june 2017	4.54

WORKSHOPS

Circuit Drafting using Electrical AutoCAD

Hand on workshop - "Circuit Drafting Using Electrical AutoCAD"

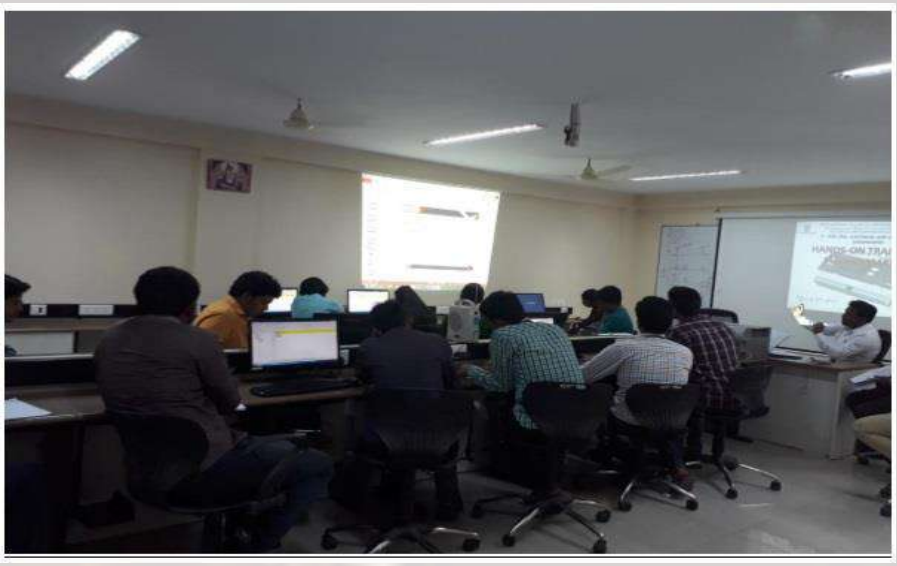
The Livewire Trainers conducted the workshop on AutoCAD, organized by E-Soft Club of EEE Department on 01 Feb 2017. Around 81 students attended the workshop, divided in two batches. It was organized by Dr. S. Sujitha, Coordinated by Prof. Mohan B.S & E Soft Club President Ms. Madhiha, III Year EEE, all Committee Members and also supported by Mr. Muniraj and Mr. Rajesh. AutoCAD Electrical is a powerful AutoCAD add-on for electrical designers and engineers, offering automated drafting tools for designing wiring, circuiting, PLC modules, panels, and data and schedules. It features symbol Libraries. The session was interactive and the involvement of our faculties added on to keep up the interest of the students. It rendered us knowledge regarding minimizing the use of pen and paper for circuit drawing .The session was followed by one hour test for recollecting and putting forth whatever we had learned which would upgrade us to the next upcoming levels.

Solar Energy Harnessing

The Green Energy Club of EEE Department hosted the workshop based on 24th March 2017. It was headed by Roshini Sholapurwala, Alumni of NHCE, EEE. She studied at Standford University, USA. She is also the Additional Director at Zeonics System Defence and Aerospace Engineering Pvt Ltd. The workshop was held at NHCE, and 2 members per team were allowed to participate. Only 30 teams were allowed where each team gave the registration fees worth Rs 799. The student co-ordinator of overall workshop was Prashant. It introduced students to the practical applications of the theories studied and how to build a solar mobile charger was also taught in this workshop.

Department's Green Energy Club organized one day work shop on "Solar Energy Harnessing"
Department thanks, Roshni Sholapurwala(Alumni, EEE department) Stanford University, USA,
Additional Director, ZEONICS SYSTEM DEFENCE & AEROSPACE ENGINEERING PVT LTD

Training in "PLC Automation"



The Training in "PLC Automation" was held on 2nd march, 2017 in New Horizon College of Engineering for the students who have registered for the Workshop. The Workshop was hosted by the E-SOFT club members of NHCE, Organized by Dr. S. Sujitha, Coordinated by E Soft Club President Ms. Madiha, III Year EEE, Secretary Mr. D. N. Pradeep & all Committee Members of E Soft Club and also supported by Mr.Muniraj. It was conducted by Livewire and forwarded by Mr. K. Mahesh, Technical Engineer by LIVE WIRE, Chennai. The one day Workshop was for the Period of 3 hours in morning from 9:30am-12:30pm about Usage of PLC and SCADA Design. The students were able to get knowledge about the Designing and industries Expectations. In the Afternoon, a Hands on Training session was held for selected students who have passed the First Round in AutoCAD. The Second Round was all about PLC Programming. The Second Round was held in Electrical Department for Electrical Students. Three hours of Training was given for the students on PLC Programming by the Faculty members of LiveWire.. It was a very interactive Workshop by the experts of LiveWire. The students were able to get the topic very easily and learn about the basics of PLC Programming by help of experts. After the session of three hours, a test was conducted on the session on PLC Programming for 100 marks by the experts of LiveWire for duration of 1hour and the winners were promoted to next round , SCADA Design. The final round winners were awarded with prizes by LiveWire.

Workshop on Industrial Automation

This workshop was mainly focused on Programmable Logic Controller (PLC), Supervisory Control and Data Acquisition (SCADA) and the way of using such modern technologies in Industrial Automation. The Technical Experts from Axis Global Institute of Information Technology (AGIIT) were invited to conduct the workshop on Industrial Automation. They were kind enough to get the kits to demonstrate the working of Relay Logic, PLC and SCADA. The workshop was held on 9th March, 2017 in New Horizon College of Engineering for the students who have registered for the Workshop. The Workshop was organized by Dr.S.Sujitha Under E-SOFT club of NHCE, an aim of imparting the knowledge about Relay Sensing, PLC and SCADA, the workshop began at 10 am.

For an introductory session, students were briefed about the importance of Industrial Automation by the Head of the Department Dr. R. Elumalai and Mr. Jijo (AGIIT).

The workshop then proceeded to Hands on experience in Simulation Lab. Initially, there was a lecture on Relay Sensing and explained clearly about the working of Relay logic and how it is being used in industries. There was an interactive session, wherein the students were free to ask clarifications to the experts. The workshop proceeded towards PLC and its applications in Automation. There was even a demonstration about the working of PLC and Relay Logic brought by the experts. The software through which relay logic can be controlled and the Supervisory Control and Data Acquisition (SCADA) to controls the PLCs (master control) was explained practically to the students. The workshop was successful in imparting the knowledge about the emerging technology. The students enjoyed the session in particular and developed their interest in Automation.

Workshop on "REVITMEP AND PRIMEVERA"

The workshop was conducted by Experts from EduCADD, Bangalore on 30th March 2017. It was headed by Mathew C Thomae, Director; Bala Sunil Kumar, Tech Manager, Prinju Prasad,Center Manager Marathalli. With a worthy aim of educating students in the field of REVIT MEP. The workshop was organized by ESoft club coordinated by Faculty Coordinators Dr.Sujitha S and Prof. S. Santhosh.

REVIT is software which is a boon to the students. The Electrical Engineers who access the way of working can accelerate their design thinking and their studio work. It can be applied across the spectrum of building design and documentation: conceptual design, detailed design, building analysis, construction documentation, visualization, etc. The Technical Experts from EduCADD explained us how to use this software effectively. MEP, as they say, is nothing but Mechanical, Electrical and Plumbing. So, basically it is software through which we can actually do the Mechanical, Electrical and Plumbing work and simulate it. In other words, we can build various mechanical components; do the domestic wiring, and also the plumbing work just in software so that we can simulate the working conditions. The major advantage of this feature is that we can judge the stability of a newly constructed building (with regard to mechanical components, electrical wiring and the plumbing) before actual construction. The Experts also explained us the other applications of MEP software..

Energy Conservation Awareness Programme

I The Green Energy Club's initiative towards the conservation and utilization of electrical energy in day to day life. Young and dynamic team was sphere headed by the faculty coordinator Dr. Mahesh. K, club-president Prashant Bhallaalong with all club members, Faculty and Student coordinator. One week campaign on Energy Conservation Awareness Program was carried out at NHCE from 20/02/2017 to 28/02/2017 in association with Karnataka Renewable Energy Development Limited (KRDEL Government of Karnataka undertaking). Campaigning to Enlightening Young Minds is a part of Energy Conservation Awareness Program. Information and procedure for Electrical Energy Conservation were highlighted in the Calendars and Boucher which were distributed by team members. The motto of the whole campaign was "ENERGY CONSERVATION : A LITTLE LESS NOW, A LITTLE MORE FOR THE FUTURE"

The campaigning was scheduled to visit at Government Model Primary School (GMPS), Dommasandra, Sarjapur Road and Government Higher Girls School (GHGS), Dommasandra, Sarjapur Road on 20-02-2017. It was co-ordinated by Dr. Mahesh Prof of EEE Department (Faculty coordinator of GEC Club), Prof. Kavitha, Prof. Sunil, Prof. Lithesh and 6th semester students. The campaign was scheduled to visit two Government schools in acquainting why and how proficiently one can contribute consumption of energy in an efficient manner. At first, the importance of this campaigning was briefed to all staff members followed by enlightening young minds in 6th, 7th & 8th grade students. Our team was split to three different groups to address respective grades. Each member of our team actively interacted with the students and enlightened them about their duties and responsibilities towards the energy conservation. Along with the verbal briefing we also had a virtual video session with the help of projector, displaying the current scenario and the needs to improve it. Student interaction & quiz session was held where a great response was experienced from students. Towards the session end, campaign brochures, posters were distributed along with a small token arranged by EEE department which includes basic stationary and refreshment. The next venue of campaign was at GHGS.

ELECTROHORIZON

Electro Horizon 2017- Techno Cultural Fest jointly organized by department of EEE & ECE on 13th April 2017.

Technical Fest was organized in NHCE by EEE Department. It was conducted on 13th April 2017. Technology refers to the practical application of scientific knowledge and also includes the capability and skills required to apply the knowledge. Techfest presented a series of innovative challenges intended to deepen the understanding of our knowledge. The fest consisted of various competitions based on application of recent technologies. Many candidates participated in this event. At end of the event winners of Electro Horizon was declared.

TECH HORIZON

Techhorizon 2017 was a National Conference held on 27th May 2017. The theme of conference was inspired by Make in India, an initiative to inspire youngsters into innovation and recent technologies. Many new ideas were introduced through this exhibition. Renewable energy, Control Systems, Electrical Technology, Digital Signal Processing, Smart Grids, Automation were the major topics of interest throughout the event.

GUEST LECTURE

Guest Lecture for 4th semester students on "Trends in ARM Processors" by Mr. Phani Kumar – INTEL Corporation, Bangalore - 03rd to 04th April 2017.

The Guest Lecture was given by Mr Phani Kumar. He is a Project Manager at INTEL Corporation, Bengaluru. He guided students about ARM Processor. This talk was held on 03rd April 2017 in EEE Department attended by 4th semester students. An ARM Processor is one of the family of CPUs based on the RISC (Reduced Instruction Set Computer) architecture developed by Advanced RISC Machines(ARM). ARM processors are designed to perform a smaller number of types of computing instructions so that they can operate at a higher speed, performing more millions of instructions per second (MIPS). ARM can be used for quick and efficient application developments was the main objective of this talk.

Dr. A. N Ravi, Retired Scientist, Central Power Research Institute, Bangalore		
Trends in High Voltage	(VIII A and B)	28/04/2017
Mr. Phani Kumar, Project Manager, INTEL Corporation, Bangalore		
ARM Processor	(IV A and B)	03/04/2017
Priyanka Kole,Assistant Professor,Dept of EEE,NHCE, Bangalore		
Simulation of estimation algorithms	VIII (A and B)	23/03/2017
Hemanth Maddhula, Hardware Engineer,Aruba Networks Pvt. Ltd.		
Construction and Operating Principles Numerical Relays	VI (A and B)	10/05/2017
Ms Roshini, Additional Director Zeonics Systech Pvt Ltd, Bangalore		
Current Status of Wind Generation in India	VI (A and B)	11/05/17

ETHNIC DAY CELEBRATION

It was not just another normal day in the Department as the campus was decorated in a traditional way. The energy levels were quite high as the campus was bursting with enthusiasm and passion.

As a part of our NHCE tradition, The faculty and students joined hands to celebrate and showcase our regional culture and tradition to everyone present on campus by celebrating ETHNIC DAY.

Girls were dressed in Ghagharas, Lehngas and traditional Sarees and the boys wore lungis, dhothis and even be jewelled turbans, like those worn by kings in ancient times. CSE students were not been seen anywhere wearing Jeans and T-shirts in the sprawling grounds. The students not only donned an ethnic attire but also showcased various traditional performances.

In a display of ethnic dresses the students came one after another on to the stage and explained briefly about the dress they were wearing. A few awards were also given away during the function. The prize winners in the different categories are "Best ethnic women dress, Best ethnic male dress".

The main message of the celebration was to respect the tradition and recognize the culture of our Country.

FAREWELL

"To part is the lot of all mankind. The world is a scene of constant leave-taking, and the hands that grasp in cordial greeting today, are doomed ere long to unite for the last time, when the quivering lips pronounce the word – Farewell."

-R.M. Ballantyne

WOMEN'S DAY CELEBRATION "KHUSHI"

Woman, she held her head high and looked the world straight in the eye, we celebrate her strength.

The International women's day event was given the name 'KHUSHI', as the event intended to bring together all the women from the campus and celebrate women's efforts and importance in our lives. The event was conducted with the collaboration of extra-curricular clubs namely The Art Club, Lit club, Adventure club, Socio-political club, Media club, Music club, Photography club and the Fashion club. The event was held on 8th march 2017 in the Auditorium at 12:00 pm. The decorations for the event were made by the Art club members. The decorations depicted the stages of a women's life and her growth along with balloons and various craft work.

Varieties of performances took place in the event like solo dance, group signing, solo singing , group dance, Magic performance, Live Painting, ramp walk and stand up comedy. Outside the library number of event based artworks made by students were displayed on the board. In addition to it, an Instagram photo booth was installed so that people could take photos. Various food stalls were put up in the campus. We had DJ Esha playing in the jukebox at the outdoor basketball court at 3:00 pm. The whole crowd seemed energetic and having fun dancing on the music. The event seemed to be a huge success everyone enjoyed and relaxed especially the women. We saw glimpse of massive talents in the performances. This was the day were all the club's worked together showing unity and team work, thus making this event possible a great success.

International Women's Day "Khushi"

International Women's Day "Khushi"

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