

ELECTRON EDGE

2023 Volume 5 Issue 2



Newsletter

Department of Electronics and Communication Engineering



Bhoj Reddy
Engineering College
for Women



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VISION

ECE department envisions developing technically competent and meritorious women engineers with a keen sense of social responsibility.



MISSION

- To provide a challenging and value-based education, enriching knowledge of young engineers in the field of Electronics and Communication Engineering.
- To strive for the intellectual and personal development of young women to build a healthy society by improving the quality of life through the application of Electronics.
- To inculcate self-confidence, teamwork, leadership, and entrepreneurship in students through curricular, co-curricular and extracurricular activities.
- To develop adaptable thinking and the ability to apply the techniques of communication innovatively in a realistic environment for the current and future technological requirements.

IETE Students Forum (ISF) Coordinators Meet

The Institution of Electronics and Telecommunication Engineers (IETE) is a prominent professional society in India dedicated to the advancement of electronics, telecommunication, and information technology. Established in 1953, IETE provides a platform for professionals, researchers, and students to collaborate, share knowledge, and contribute to the development of these fields. The IETE Students Forum (ISF) is an integral part of IETE, aiming to nurture and develop technical skills among students. ISF chapters are established in various engineering colleges and institutions across India.

Nuli Namassivaya, Chairman, IETE, Osmania University Campus, Hyderabad Centre introduced all the committee members of IETE. Various Engineering Colleges and ISF Coordinators attended the session IETE Chairman introduced the coordinators to the IETE Committee members and explained the benefits of IETE.

IETE

LEARNING TODAY, LEADING TOMORROW



IETE Coordinators Meet

IETE CHAIRMAN in the meeting opined to motivate the students to register for IETE. Every Sunday IETE, Osmania University will be conducting webinars (online mode) on all the topics pertaining to Engineering which will be helpful for our faculty and students.

N.S Rao Honorary Treasurer, IETE, Osmania University Campus, Hyderabad Centre informed all ISF coordinators to inform the HODs and students about the workshops and conferences conducted by IETE and MVSR Engineering College, Nadargul.

Guest Lecture

7th August
2023

“Awareness Program on Professional Bodies Membership and its benefits”

Electronics and Communication Engineering (ECE) Department conducted an Awareness Program on “Professional Bodies membership and its benefits” for I and II B Tech ECE students on 7th August, 2023 and the program was scheduled from 2.30pm to 4.30pm at Ramdev Indoor Auditorium, Bhoj Reddy Engineering College for Women.



Dr. Nukala Srinivasa Rao,
Honorary Treasurer, IETE, O.U
Campus

A Distinguished Professor has 29 years of experience in the academia - industry sector. He is presently working as Professor & Head of the E.C.E Department, Matrusri Engineering College, Saidabad, Hyderabad. He is a Life Member, Institute of Electronics and Telecommunication Engineers, New Delhi, Life Member, Indian Society for Technical Education, New Delhi.



Dr. Sharath Chandra Inguva,
Associate Professor,
ECE Department, Matrusri
Engineering College,
Hyderabad.

Awarded with PhD Degree from GITAM University, Visakhapatnam, Andhra Pradesh, India. Dr. Sharath has an experience of 15 Years in teaching B. Tech Graduates. He is currently working as an Associate Professor in the Department of ECE, Matrusri Engineering College. He is a member of IEEE and Life member of Technical Chapters like IETE, ISTE.

A Guest Lecture |

On

“Awareness Program on Professional Bodies Membership and its benefits”

by

Dr. Nukala Srinivasa Rao, Honorary Treasurer, IETE, O.U Campus

Dr. Sharath Chandra, Associate Professor at Matrusri Engineering College, Saidabad, member IETE and ISTE Telangana State section Committee member

Dr. Sarveswara Rao, Retd. Scientist DRDO

7th August 2023
Venue: Indoor Auditorium, Ramdev Block (RIA)



Insight into a guest lecture session



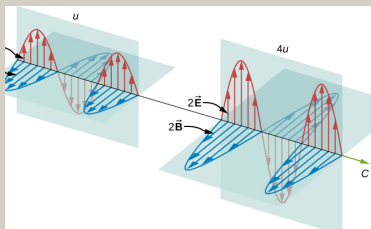
4G and 5G technology has revolutionized the way we communicate and access the internet. It provides high-speed internet access and enhanced multimedia features, making it the preferred choice for mobile communication worldwide and wireless communications globally.

GUEST LECTURE

2023



*Vacuum-friendly
electromagnetic waves lecture*



Electromagnetic waves



*Electromagnetic waves in
vacuum, impactful lecture*

ELECTROMAGNETIC FIELDS & WAVES

The ECE department has conducted a guest lecture on "Electromagnetic Fields and Waves" for II B Tech ECE students on 28th August, 2023. The guest lecture was scheduled from 14:30 to 16:30 Hrs at Seminar Hall (WB 402). Electromagnetic fields are regions in space where electric charges experience forces due to their interactions with other charges. These fields are created by electric charges and currents. When electric and magnetic fields change over time, they give rise to electromagnetic waves that propagate through space at the speed of light. Electromagnetic waves do not require a medium to travel, they can move through a vacuum.

This guest lecture enlightened our students with a comprehensive understanding of the fundamental concepts of electromagnetism, their real-world applications, and their role in shaping modern technology.

28th
August
2023

GUEST LECTURE

The ECE Department has organised a Guest Lecture on "Creativity- A Necessity for Success in Career" and "Positive Attitude- A Gateway to Success" for I, II & III year B Tech ECE students on 16th October, 2023.

Guest Lecture was scheduled from 10:30 to 12:30 Hrs. and 14.00 to 16:00 Hrs. Inaugural function was attended by the Speaker Prof M L Saikumar Former Dean, Institute of Public Enterprise, HOD Mrs S Manjula, Workshop in-charge Mrs. K Virija, ECE staff, I, II and III year ECE students. The venue was Seminar Hall WB-402.

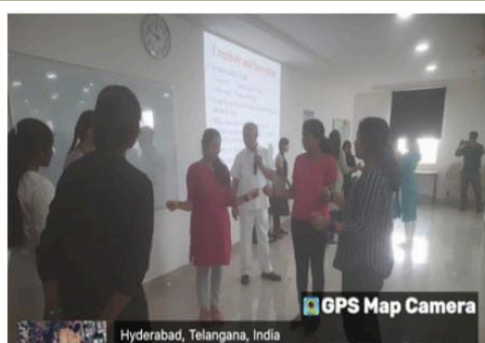


SPEAKER:

Prof M L Saikumar

"Learning never exhausts the mind."

- Leonardo da Vinci



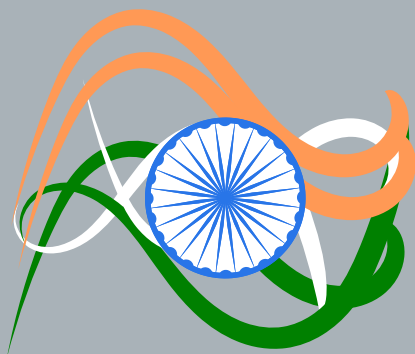
The guest lecture provides a way to create an intensive educational experience in a short span of time, when the time for a more comprehensive effort may not be available. The guest lecture can introduce a new concept, spurring participants to investigate it further on their own, or can demonstrate and encourage the practice of actual methods. This guest lecture guides a person about career, effective time management, creativity and all the necessary concepts which leads a person to successful path.

Guest lectures not only impart knowledge but also inspire students by bringing real-world perspectives into the classroom. They serve as catalysts for critical thinking and deep exploration of topics beyond the curriculum, fostering a holistic approach to learning and personal development.



Engage with our guest speaker session

"Creativity"



INDEPENDENCE DAY CELEBRATIONS

Independence Day is a significant occasion that marks the anniversary of a nation's freedom from colonial rule or oppression. Celebrated with great enthusiasm and patriotic fervor, this day is a reminder of the struggles and sacrifices made by countless individuals to secure liberty and sovereignty. It is a time to honor the history and heritage of the nation, reflect on the values of freedom and democracy, and recognise the progress made since independence. Flag hoisting ceremonies, cultural programmes, speeches, and community activities are commonly organised to commemorate this day. Independence Day not only fosters a sense of national pride and unity but also inspires citizens to contribute to the ongoing development and prosperity of their country.

Our college celebrated Independence Day on 15th August, 2023 at 9:30 A.M. With the completion of 76 years of Independence, India will be celebrating its 77th Independence Day 2023. While it is widely known that this independence is a gift of our ancestors' courage and struggle, it cannot be neglected that education has played an important role in the Indian Freedom Struggle. Students shall know about the impact of education on the freedom struggle and its eventual growth changing the lives of all the young people of the country. In the mid-18th century when the Britishers entered India with a purpose to rule, with trade and commerce, India was not prepared enough to fight back for its rights.

Since Independence, India has worked tirelessly to educate the young and to motivate the elderly to send their children to schools and colleges. India has also incorporated the "Right to Education" in the Indian Constitution under Article 21A, adding "free and compulsory" for the children of the age of six to fourteen years. So, as the next generation of the country, each and every student should be aware and ready to grow with the help of education and take the stakes of the country as one of the super nations in the world.



Celebrate our nation's freedom

STUDENT CLUBS INAUGURATION

5th
SEP
2023

Student clubs play a vital role in the academic and social lives of students, providing a platform for personal development, networking, and exploring interests beyond the classroom. These clubs, often organized around specific themes such as academics, hobbies, culture, or social causes, offer numerous benefits to their members. Student Clubs at the college are attuned to help the students get most out of their experience while they are enrolled at the college for their academic pursuits. These student clubs offer limitless opportunities for student leadership and participation beyond classroom setup and academic programme. They provide a great platform to usher-in the distinctive perspectives and life experiences that all students bring to the college.

They indeed help in students' transformation and holistic development in a big way. So it is that these clubs are specially aimed at helping students to get involved and carry their niche in the college.

Student clubs are an essential aspect of the educational experience, offering a diverse range of opportunities for growth, learning, and enjoyment. By participating in these clubs, students can enhance their college experience, build lasting friendships, and prepare themselves for future personal and professional endeavors.



Student clubs inauguration event

"Keep moving forward." - Walt Disney

Student clubs are vital for college life, offering opportunities for personal growth, community building, and skill development. They provide a platform for students to explore interests beyond academics, develop leadership skills through organizing events, and foster a sense of belonging through shared experiences and diverse perspectives. Participating in clubs enhances the college experience, prepares students for future endeavors, and promotes a supportive environment where students can thrive both personally and professionally.

FRESHERS' DAY

Freshers' Day is an event organised to welcome new students to an educational institution. It aims to help them feel comfortable, get to know their peers, and integrate into the campus community. BRECW has organised "Freshers-Day" for all the students. ECE department has celebrated Freshers' day on 13th October, 2023. Several events were organised including the ramp walk, there was an hour break for lunch in the polytechnic college premises. After lunch the event was continued, with several cultural activities.



***New year,
New adventures***

***Welcoming new
students joyously***

Workshop

Bhoj Reddy Engineering College for Women has organised a two-day workshop on “PCB Design and Fabrication” for II B Tech ECE students during 18-21 December 2023. . The software explanation part was explained in the computer lab 3,4 (NB 108,109) and hands-on session was conducted. This workshop was conducted by Mr. B. Ramanjaneyulu, Senior project engineer, Embedded system IoT M/s Pantech E learnings, Pvt., Ltd Hyderabad. The workshop was scheduled between 09:30 – 16:30 Hrs. Today, many of our daily appliances and equipment use electronics, sensors and sophisticated computer technologies. Circuit Designing & PCB Designing is an integral part of any Electronic Gadget or Robotics. Inauguration session was attended by Principal Dr J Madhavan, Dean Academics Dr Asa Jyoti, ECE-HOD Mrs S Manjula, Workshop in-charge Mrs K virija, ECE staff and II ECE students. The venue was Seminar Hall (WB 402). On 18 December 2023 forenoon, each resource person, experts in their respective fields, led sessions on the outlined topics. Interactive discussions, case studies, and hands-on activities were integrated to enhance the participants' understanding of the practical aspects of PCB Design and Fabrication. His diverse backgrounds to delve into the intricacies of Printed Circuit Board (PCB) design and fabrication. The event aimed to provide valuable insights into the latest technologies, best practices, and hands-on experience in creating efficient and reliable PCBs. Overview of PCB components and their functions.



Explore our workshop session



Engaging workshop over two days

In the afternoon, tips and tricks for efficient schematic capture and layout design session was held.

The features of the session:

1. Fabrication Process Overview of the PCB fabrication process.
2. Understanding materials and their impact on PCB performance.

Bhoj Reddy Engineering College for Women remains committed to organising such workshops, thereby fostering a learning environment that prepares students for the challenges and opportunities presented by emerging technologies..



Day-1 of workshop



Day-2 of workshop

PCB (Printed Circuit Board) design and fabrication is a meticulous process involving several stages to ensure the creation of functional and reliable circuit boards. The process begins with the design phase, where engineers use specialized software like Eagle, KiCad, or Altium Designer to create a schematic diagram representing the electrical connections of the circuit. This is followed by the PCB layout, where component footprints are assigned, the board outline is defined, components are strategically placed, and copper traces are routed according to design rules. After the design is finalized, it is exported as Gerber files and an Excellon drill file, which provide detailed information for each layer of the PCB and drilling specifications, respectively. Additionally, a Bill of Materials (BOM) is created, listing all necessary components with their specifications. The fabrication stage involves selecting appropriate materials such as the substrate and copper cladding, and then proceeding with various manufacturing steps including laminating, imaging, etching, drilling, plating, and applying solder masks and silkscreens. Quality control is crucial at this stage, involving electrical testing and visual inspections to detect any defects. Finally, the PCB assembly process includes applying solder paste, placing components using automated machines, and soldering, followed by thorough testing to ensure the board's functionality. This detailed and rigorous process ensures that the final PCBs are reliable and meet the required specifications for their intended applications.

PCB DESIGN & Fabrication

Unlock Your Potential: Join the Workshop!

FACULTY SPORTS

Sports play a crucial role in the holistic development of individuals, offering numerous physical, mental, and social benefits. Engaging in sports helps to improve physical fitness, build muscle strength, and enhance coordination and agility. Beyond physical health, sports foster mental resilience, teaching valuable life skills such as discipline, teamwork, leadership, and perseverance. They provide an outlet for stress and a sense of accomplishment through competition and personal improvement. Socially, sports bring people together, creating a sense of community and belonging, and encouraging the development of strong, supportive relationships. Overall, participation in sports enriches life, contributing to well-rounded and balanced personal growth.

The faculty sports in BRECW was conducted on 11th November, 2023. All the faculty members played every sporting event conducted to both the female and male faculty members. Various outdoor sports like musical chair, running, tennikoit, throwball, basketball, lemon spoon and indoor games such as carroms and chess were organised.



Champions on the field