



# VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

# TECHINNOVATION

## NEWS LETTER

APR - JUN, 2024

DEPT. OF ECE

VOLUME NO.: 32

### ECE Department

Electronics and Communication engineering is a discipline which uses the scientific knowledge of the behaviour and effects of electrons to develop components, devices, systems, or equipment that uses electricity as part of its driving force. This engineering field encompasses many subfields like signal processing, semiconductor chip design, telecommunication, data communication networks, satellite and radar link setup, embedded systems, robotics and many more.

Electronics and Communication engineering department transforms our day-to-day lives through a multitude of innovative technologies and products. The ECE department is intended to expose students to the unlimited opportunities for innovation in this exciting field, and to the methodologies and tools used by ECE engineers for the exploration and design of new technologies and products.

The applications of Electronics & Communication engineering is an endless list with a lot of scope in each and every subfield. It is a versatile branch that opens path for core electronics & communication jobs. Besides the numerous jobs in core field, the IT sector also welcomes an ECE engineer with open arms.

As compared to other branches, there are more interdisciplinary specializations in higher studies for ECE students like Embedded Systems, VLSI, Wireless communication, Signal Processing. Therefore, ECE students have a wider choice.

Department of Electronics and Communication Engineering was started since the inception of Vignan's Institute of Management and Technology for Women during 2008 with an initial intake of 90. The strength was enhanced to 120 during 2010. The Department had added Post graduate programme in VLSI during the year 2011 and Embedded Systems during 2014 with an intake of 18 each.

The Department has state-of-art laboratories equipped with advanced and well-maintained equipment, continuously updated application software packages, more than adequate computing systems with 24x7, 40 MBPS internet facility. All faculties are having a minimum teaching experience of 4 years. Seminars, Guest Lectures, Workshops, and Technical Symposia are conducted in the department to keep faculty and students updated with the latest developments in various technologies.

The Department is accredited by the National Board of Accreditation (NBA) has been accredited by National Board of Accreditation (NBA) successively two times i.e. in 2019 and 2022, which is valid up to 2025.

ECE students of the institution are well placed in different companies with

### Department Vision

To transform the students into technologically competent professionals, with abilities to address the societal challenges of the time through innovative technical practices in electronics & communication engineering.

### Department Mission

- M1: To foster inquisitive-driven advanced knowledge building among students for reinforcing the domain knowledge, develop capabilities, skills and solve complex engineering problems.
- M2: To prepare industry-ready graduates for global Electronics as well as communication-based engineering companies by conducting training programs, workshops and industry visits.
- M3: To build entrepreneurship and leadership qualities, research aptitude among students for the contribution of economic and technological development in cutting edge technologies in the national and as well as in the global arena.

### Program Educational Objectives:

- PEO1: To develop the student's ability on technical concepts to design, simulate, and synthesize various electronic and communication circuits & systems for their research advancements.
- PEO2: To impart analytical skills and to prepare the students to excel in applying state-of-the-art hardware and software tools to solve complex engineering problems for R&D, Industry, and societal requirements.
- PEO3: To prepare the students to work in teams, take independent decisions, and integrate engineering issues for a successful career in a multi-disciplinary environment.
- PEO4: To promote entrepreneurship among the students to become successful entrepreneurs with professional ethics.

### Program Specific Outcomes:

- A graduate of the Electronics and Communication Engineering Program will be able to
- PSO1: **Professional Skills Ability:** Identify, design electronics & communication circuits and conduct experiments with electronics & communication systems, analyze and interpret data, formulate and solve electronics & communication engineering problems.
- PSO2: **Industrial Skills Ability:** Design digital and analog systems, algorithms, fire ware, modern engineering tools, software, etc. as per needs and specifications and work in laboratory and multidisciplinary tasks.
- PSO3: **Ethical and Social Responsibility:** Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show an understanding of the impact of engineering solutions on the society, and also will be aware of contemporary issues.

### EDITORIAL BOARD

- Mr.P.Harikrishna, HOD, ECE.
- Mrs. D. Shirisha, Assistant Professor, ECE.
- Mrs. V. Suzan Shalini, Assistant Professor, BS&H.
- E. Nikitha, ECE (Student)
- M. Raja Suhasini, ECE (Student)
- Surigi Shivani, ECE (Student)
- Bonala Sohini, ECE (Student)





## HOD'S MESSAGE

Mr. P. Harikrishna,  
Associate Professor &  
HEAD OF THE DEPARTMENT,  
DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING.

It gives me immense pleasure to present the April–June 2024 issue of our department newsletter, TECHINNOVATION. This newsletter reflects the dedication and achievements of our students and faculty, celebrating academic excellence, innovation, and creativity. I congratulate everyone involved in maintaining the high standards of the department and wish our students continued success in their professional journey.

## COLLEGE EVENT-KIYE: IGNITING INNOVATION IN YOUNG MIND

The KIYE (Knowledge Integration for Young Engineers) event at our college proved to be an exciting platform where creativity met technology. Organized by the Department of Electronics and Communication Engineering, the event aimed to encourage students to apply classroom knowledge to real-world innovations.

### A Platform for Innovation

Students showcased their technical skills through project exhibitions, paper presentations, and idea pitching sessions. From AI-based attendance systems to IoT-enabled smart devices, the event was filled with brilliant ideas that reflected the passion and problem-solving ability of young engineers.

### Learning Beyond Books

The sessions included expert talks, interactive workshops, and demonstrations that helped students gain practical insights into modern technologies. The event emphasized the importance of teamwork, design thinking, and innovation — qualities essential for future engineers.

### Spirit of Collaboration

What made KIYE special was the unity and enthusiasm among students. The event brought together participants from various departments, fostering collaboration and cross-disciplinary learning. Faculty members appreciated the students' dedication and encouraged them to continue exploring new ideas.

**“KIYE reminds us that innovation begins with curiosity — and every young engineer has the power to change the future.”**





## Red Cross Event: Spreading Awareness and Compassion

The Red Cross Club of our college recently organized an inspiring event aimed at promoting health awareness, safety, and humanitarian values among students. The initiative highlighted the importance of volunteering, community service, and being prepared to help in emergencies.

## Awareness Drives and Workshops

The event featured first aid training, blood donation awareness, and health check-up camps. Students learned essential skills such as CPR, handling minor injuries, and understanding emergency protocols. Experts emphasized the significance of timely action in saving lives and the social responsibility of being a helpful citizen.

## Engaging the Student Community

Students actively participated in quizzes, demonstrations, and interactive sessions that not only educated but also encouraged empathy and teamwork. The energy and enthusiasm reflected the college's commitment to fostering a culture of care and service.

## Beyond the Event

The Red Cross event reminded everyone that small acts of kindness can make a big difference. By learning to serve others, students develop a sense of responsibility, leadership, and compassion, qualities that go beyond textbooks and classrooms.

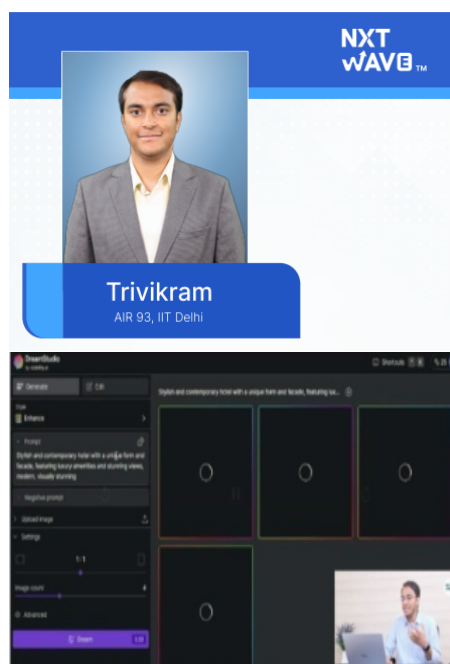
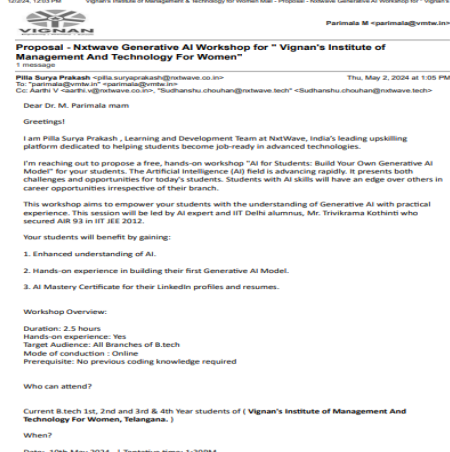
## "Helping hands and a caring heart"



## EVENTS AT DEPARTMENT

The Department of Computer Science and Engineering and Electronics and Communication Engineering Department at Vignan's Institute of Management and Technology for Women (VMTW) organized an Online Workshop for II-year students in association with NxtWave. The session aimed to enhance students' industry readiness by introducing them to emerging technologies and practical skills in coding and software development. The workshop provided valuable insights into real-world applications, helping students

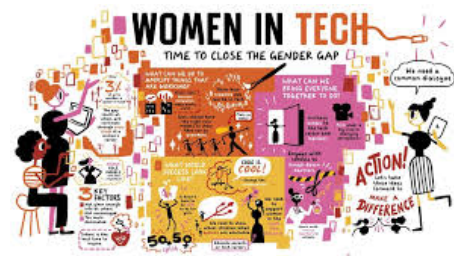
strengthen their technical foundation



## Faculty article on Women in Tech – Empowering Innovation Through Diversity

By, Mrs Pravallika , Assistant Professor (ECE)

## Women in Tech – Empowering Innovation Through Diversity



The technology industry, once considered a male-dominated field, is witnessing a powerful transformation with the increasing participation of women in technology. Women are breaking barriers, leading innovations, and redefining the future of computing, data science, artificial intelligence, and entrepreneurship.

Diversity in technology fosters creativity, inclusivity, and balanced problem-solving, as different perspectives bring fresh ideas and holistic solutions. Today, women technologists are not just coding and designing systems but also taking leadership roles in global tech organizations, startups, and research communities.

However, there is still a need to encourage young women to pursue careers in STEM by creating supportive academic environments, mentorship opportunities, and equal representation in workplaces. As educators, we play a vital role in motivating our students to believe in their abilities and embrace technology as a tool for empowerment.

Empowering women in tech is not just about equality—it is about building a stronger, smarter, and more innovative world.

## Student article on Predictive Analysis – Shaping the Future with Data

By, M. Ruchitha, III year, ECE

### Predictive Analysis – Shaping the Future with Data

IoT Project Gains Industry Recognition Third - year ECE student M. Ruchitha developed a real-time IoT-based Smart Street Lighting System under the guidance of Prof. Rajeshwari. Her project was selected for presentation at the TechVision Expo 2025. The system uses adaptive sensors to reduce power wastage and improve city lighting efficiency. Meghana's innovation was praised for its practical application and environmental impact.



## Three-Day Workshop on “Research Methodology”

The Department of Electronics and Communication Engineering, Vignan Institute of Management and Technology for Women, organized a Three-Day Workshop on “Research Methodology” from 17th to 19th June 2024 at the 'A'-Block Seminar Hall, VMTW.

The workshop was organized with the objective of creating awareness among faculty members, research scholars, and students about the fundamentals of research, systematic research processes, and effective research practices. The program aimed to enhance participants' understanding of research planning, data collection, analysis techniques, and report writing.

The workshop was conducted under the guidance and patronage of the management of Vignan Group of Institutions. The event received constant support and encouragement from Dr. L. Rathaiah, Chairman, Mr. B. Shravan, CEO, and Dr. G. Apparao Naidu, Principal, VMTW.

The Resource Person for the workshop was Dr. Neeraja Upadhyay, Professor, Department of Computer Science and Engineering, who delivered insightful sessions on various aspects of research methodology. The workshop was coordinated by Dr. Jhansi, Faculty Coordinator, with active support from Mr. Jangili Sunil Kumar, Faculty Co-Coordinator, and Mr. P. Hari Krishna, Associate Professor & HOD, ECE.

During the three-day program, the resource person elaborated on topics such as:

- Meaning and importance of research
- Identification of research problems
- Literature survey techniques
- Research design and methodology
- Data collection methods
- Sampling techniques

- Data analysis and interpretation
- Research paper writing and publication ethics

The sessions were highly interactive, with participants actively engaging in discussions and clarifying their doubts related to research processes and challenges faced during academic research. Real-time examples and case studies were used to help participants understand the practical application of research concepts.

A good number of faculty members, research scholars, and students participated in the workshop. The participants expressed that the workshop was highly informative and beneficial, helping them gain clarity on conducting quality research and preparing research publications.

The workshop concluded with a vote of thanks, acknowledging the management, resource person, coordinators, and all participants for making the event a great success.

### Outcome of the Workshop:

The workshop successfully enhanced the research skills of participants and motivated them to undertake quality





## FDP ORGANIZED

| SI No | Name of the faculty | Title                                           | Event Type | Date of event            | No.of Participants | Mode of attending |
|-------|---------------------|-------------------------------------------------|------------|--------------------------|--------------------|-------------------|
| 1     | Dr.T.Pullaiyah      | Deep Learning and Its Cutting Edge Applications | National   | 01-04-2024 to 06-04-2024 | 56                 | ONLINE            |

## FDP ATTENDED

| SI No | Name of the faculty         | Title                                                                   | Event Type | Date of event            | Mode of attending |
|-------|-----------------------------|-------------------------------------------------------------------------|------------|--------------------------|-------------------|
| 1     | Mrs.G.Indira Priya darshini | CLOUD COMPUTING                                                         | NPTEL      | Apr-24                   | ONLINE            |
| 2     | Mrs.D.Shirisha              | Introduction to Internet of things                                      | NPTEL      | Apr-24                   | ONLINE            |
| 3     | Mrs.D.Shirisha              | Cloud Computing                                                         | NPTEL      | Apr-24                   | ONLINE            |
| 4     | Mrs.D.Shirisha              | AI Insights: Predictive Power of ML,DI&NLP                              | National   | 14/05/2024 To 18/05/2024 | ONLINE            |
| 5     | Mrs.M.Pravallika            | Introduction to Internet of things                                      | NPTEL      | Apr-24                   | ONLINE            |
| 6     | Mrs.M.Pravallika            | "Recent Advancements in Deep Learning for Computer Vision Applications" | National   | 01/04/2024 To 12/04/2024 | ONLINE            |

## FACULTY PUBLICATIONS

| SI No | Author          | Title                                                                                | Date of Published |
|-------|-----------------|--------------------------------------------------------------------------------------|-------------------|
| 1     | Ms.K.Padmaleela | Analysis of Machine Learning Methods for the prediction of Major Depressive Disorder | May-24            |

## YOGA DAY CELEBRATIONS

Vignan's Institute of Management and Technology for Women successfully organized an International Yoga Day program on campus with active participation from students and faculty. The event was conducted in a serene outdoor setting, creating a calm and disciplined atmosphere suitable for yoga practice.

The program began with a brief introduction highlighting the importance of yoga for physical, mental, and emotional well-being. Trained instructors guided the students through various yoga asanas, breathing exercises (pranayama), and meditation techniques. The sessions focused on improving flexibility, concentration, stress management, and overall health.

A large number of students participated enthusiastically, following the instructions with dedication and discipline. Faculty members also joined the program, encouraging students and emphasizing the role of yoga in maintaining a balanced lifestyle, especially for youth.

The event concluded with a message on "Yoga for Health and Harmony", stressing the need to incorporate yoga into daily life. The International Yoga Day celebration was meaningful and refreshing, reinforcing the institute's commitment to holistic education and student well-being.



## VISITED KANHA SHANTI VANAM

Students visited KANHA SHANTI VANAM: A one of a kind celebration of social consciousness, harmony & awakening through spirituality.





**thingQbator idea challenge 2024:** The thingQbator Idea Challenge 2024, organized by the NASSCOM Foundation, encouraged young innovators to bring forward groundbreaking ideas with the potential to transform society. Students were invited to submit their creative concepts and stand a chance to win seed funding of Rs. 5 lakhs for their startups along with other exciting rewards. The initiative aimed to foster innovation, entrepreneurship, and problem-solving skills among youth, inspiring them to turn ideas into impactful solutions for a better tomorrow.

## Program Outcomes (Adapted from NBA)

Engineering Graduates will be able to:

**P01: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**P02: 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.

**P03: 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.

**P04: 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.

**P05: 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.

**P06: 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.

**P07: Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**P08: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**P09: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**P010: 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.

**P011: 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.

**P012: 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.

## CAMPUS RECRUITMENT

## UPCOMING EVENT

| Registration Form                 |                                                                                           |
|-----------------------------------|-------------------------------------------------------------------------------------------|
| Name: .....                       | Chief-patrons:<br><b>Dr. L. Rathaiiah</b> ,<br>Chairman,<br>Vignan Group of Institutions. |
| Date of Birth & Age: .....        |                                                                                           |
| Gender (M/F): .....               | <b>Mr. B. Shrivani</b> ,<br>CEO,<br>Vignan Group of Institutions                          |
| Qualifications: .....             |                                                                                           |
| A). Institution: .....            | Patron:<br><b>Dr. G. Apparao Naidu</b> ,<br>Principal, VMTW                               |
| B). Affiliating University: ..... |                                                                                           |
| Address for Communication: .....  | <b>Mr. P. Hari Krishna</b> ,<br>Associate Professor & HOD, ECE.                           |
| Phone No (1): .....               |                                                                                           |
| Phone No (2): .....               | Co-ordinator:<br><b>Ms.G.Susmitha</b>                                                     |
| Office: .....                     |                                                                                           |
| Email: .....                      | Faculty Co-ordinator:<br><b>Ms.Samarla Shilpa</b>                                         |

**VIGNAN'S**  
INSTITUTE OF MANAGEMENT AND  
TECHNOLOGY FOR WOMEN

Approved by AICTE, New Delhi & Affiliated to JNTU, Hyderabad  
Kondapur (V), Ghatkesar (M), Medchal - Malkajgiri (D) - 501 301

ONE DAY WORKSHOP ON  
"VIRTUAL LABS"

12<sup>th</sup> Aug, 2024

Venue:  
"A"-Block Seminar Hall,  
VMTW.

Organized by:  
DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING

Last Date For Registration: 08<sup>th</sup> Aug, 2024