



A HALF YEARLY
NEWSLETTER



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING



ELECTRO VISION

VOLUME 11, ISSUE 2

EDITION: JAN - JUN

AY:2025-26

"Powering Minds, Illuminating Futures."



www.gemspolytechnic.edu.in

INSIDE THIS ISSUE

**About the
Department**

01

HOD's Desk

02

Editorial Desk

03

**Events
Conducted**

04

**Students' &
Alumni Corner**

05

Faculty Corner

06

About the Department

Established in 2015, the Department of Electrical & Electronics Engineering (EEE) at GEMS Polytechnic College is committed to academic excellence, innovation, and practical learning. Proudly recognized as the first EEE department in Bihar to receive NBA Accreditation, the department promotes Outcome-Based Education (OBE), continuous quality improvement, and student-centered learning. With experienced faculty, modern laboratories, and industry-oriented training, students gain hands-on experience through workshops, industrial visits, expert lectures, internships, certification programs, and technical projects. The department also encourages research, innovation, entrepreneurship, and participation in technical competitions, helping students develop problem-solving, leadership, and professional skills. By nurturing technical competence, ethical values, and lifelong learning, the department prepares graduates for successful careers in industry, entrepreneurship, and higher education.





Vision

To be a forerunner in producing Electrical and Electronics graduates who will be competent in innovations among federal institutions, be a dynamite entrepreneur, and a skilled representative to complement in industry with ethical values to address the needs of the society and Nation.



Mission

- M1.** To provide academic excellence by adopting innovative teaching and learning methods to enhance lifelong learning.
- M2.** To bridge the gap between the industry and academia by undertaking collaborative projects from industry.
- M3.** To promote multidisciplinary activities by enhancing the skills of faculty and students to solve complex technological problems of the society.
- M4.** To raise entrepreneurs with a passion to contribute to the needs of the society.
- M5.** To produce responsible leaders by inculcating moral and ethical values to the faculty and the students.

PROGRAM EDUCATIONAL OBJECTIVES(PEOs):

- PEO1.** To enable graduates to pursue successful careers by applying the knowledge and skills acquired during their course to meet professional and industry requirements.
- PEO2.** To prepare graduates with competencies aligned to professional standards, enabling them to qualify competitive examinations, pursue higher education, and perform effectively as skilled professionals in industry.
- PEO3.** To develop ethically responsible professionals and entrepreneurs who demonstrate integrity, professionalism, effective communication, and the ability to work efficiently in cross cultural and multidisciplinary team environments while addressing societal challenges.

PROGRAM SPECIFIC OUTCOMES (PSOs):

- PSO1.** Provide a strong foundation in mathematical, Science, Electrical and Electronics Engineering to solve electrical and electronics Problems
- PSO2.** Understand, analyze, simulate and design electrical machines, modern electrical drives, latest electronic systems, Embedded and automation of systems and to determine their performance through testing.
- PSO3.** To develop and implement electrical and electronics allied interdisciplinary projects to meet the demands of industry and to provide solutions for energy conservation and sustainability

ELECTRO VISION

NEWSLETTER

2025-26

Edition: Jan - Jun

Message From HOD Desk

Dear Readers,

Welcome to another edition of Electro Vision!

This semester has been a journey of learning, innovation, and achievement for the Department of Electrical & Electronics Engineering. Our students and faculty actively participated in workshops, expert lectures, industrial visits, technical competitions, project exhibitions, and skill development programs, strengthening both academic knowledge and practical expertise.

The department continues to promote Outcome-Based Education (OBE), innovation, and industry-oriented learning through hands-on experiences and collaborative activities. Every event and accomplishment featured in this newsletter reflects the dedication, creativity, and teamwork of our EEE family.

Beyond academics, we encourage our students to develop leadership, communication, and problem-solving skills through co-curricular and extracurricular activities.

The department is committed to developing technically skilled, ethical, and industry-ready engineers. We thank our management, faculty, students, alumni, parents, and industry partners for their continued support.

We are delighted to share the highlights, achievements, and memorable moments of the semester. We hope this edition inspires our readers and motivates our students to continue striving for excellence in engineering and beyond.

Happy Reading!



Mrs. Pameela M
HoD/EEE

EDITOR'S NOTE

Dear Readers,

We are delighted to present Electro Vision – Volume 11, the departmental newsletter of the Department of Electrical & Electronics Engineering, GEMS Polytechnic College, for the Academic Year 2025–26 (Even Semester). This edition highlights our continued journey toward academic excellence, innovation, skill development, and professional growth.

During this semester, the department focused on effective teaching–learning practices, practical exposure, industry interaction, technical enrichment, and student development through expert talks, workshops, training programmes, project-based learning, and career guidance initiatives.

We also continued our efforts in faculty development, Outcome-Based Education (OBE), and academic quality enhancement, encouraging students to explore emerging technologies, strengthen problem-solving skills, and apply theoretical knowledge to practical situations.

As an NBA-accredited department, we remain committed to quality education, continuous improvement, innovation, and nurturing industry-ready professionals.

We sincerely thank all our faculty members, students, contributors, and well-wishers for their valuable support in bringing out this edition of Electro Vision.

Editorial Team

Electro Vision – Volume 11

Department of Electrical & Electronics Engg

GEMS Polytechnic College

Ms.Pathmapriya A

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Chief Editor*



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*EEE-III Year
Content Writer*



Mr. Dhruv Kumar

*EEE-III Year
Content Coordinator*



Mr. Ankit Kumar

*EEE-II Year
Designer*

EVENTS CONDUCTED

Orientation on OBE

The Plug-in Association of the Department of Electrical and Electronics Engineering organized an Orientation Program on Outcome-Based Education (OBE) on 13th January 2026. The program aimed to create awareness about OBE and help students understand the department's academic framework and outcome-based structure.



A brighter future begins when we come together with compassion and purpose. Volunteering unites people from all walks of life to create lasting change in our communities, our environment, and our world. When we stand together, our collective efforts can light the way for generations to come.

Mr. Ketu Sir explained the Department Vision, Mission, and PEOs, highlighting their role in shaping technically competent and ethically responsible engineers. Mr. Ragnath Sir introduced the POs, PSOs, and COs, explaining their interrelationship and importance in students' academic and professional development. The interactive session helped students understand the objectives of Outcome-Based Education (OBE) and concluded with active participation and positive feedback.



Quality education begins with clear outcomes and ends with confident graduates

The OBE Orientation Program provided students with a clear understanding of the outcome-based academic structure. The session was insightful and helped students realize their role in achieving departmental and program objectives.

Workshop on Effective Sales & Marketing Strategies



Fueling Start-Up Success with Effective Strategies:

The Institution's Innovation Council (IIC), in collaboration with the Electrical & Electronics Engineering Department, organized a workshop on “Effective Sales & Marketing Strategies for Start-Ups” on 21st February 2026 at the GPC Seminar Hall.



The session was inaugurated and led by Mrs. Catharine K., IIC President, who highlighted the importance of effective sales and marketing strategies in transforming innovative ideas into successful and sustainable businesses.

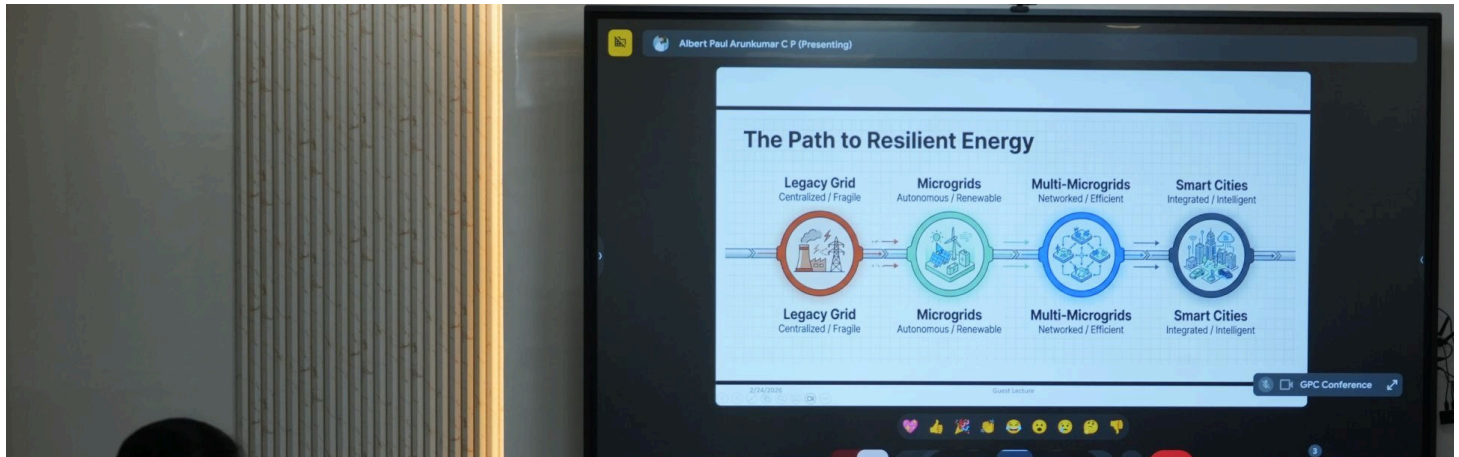
The workshop enhanced students' understanding of sales, marketing strategies, and the Business Model Canvas (BMC) while fostering practical learning, teamwork, and an entrepreneurial mindset.

Expert Session and BMC Workshop

The expert session by Ms. Jershini Daniel provided students with practical knowledge of sales, marketing, branding, and the Business Model Canvas (BMC), followed by a BMC-based group activity led by Mrs. Catharine K. The session concluded with an engaging Q&A session, inspiring students to think innovatively and develop an entrepreneurial mindset.



Expert Talk on Multi-microgrids: Next Gen Power Systems



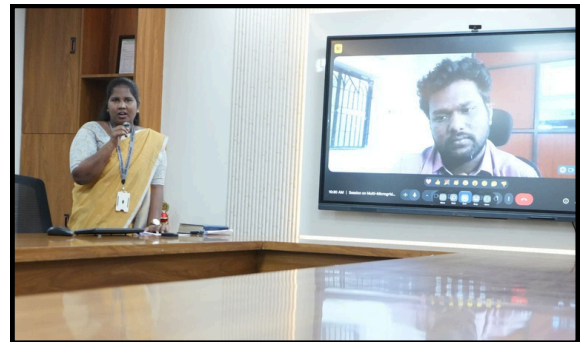
Powering the Future: Expert Talk on Multi-Microgrids

The Plug-in Association of the EEE Department organized an Expert Talk on “Multi-Microgrids: Next Gen Power Systems” on 24th February 2026. Dr. C. P. Albert Paul, Senior Electrical Engineer, Saturn Pyro Sdn. Bhd., introduced students to the concept and significance of multi-microgrid systems.

Exploring Next-Generation Power Systems

During the session, Dr. Albert Paul explained the integration of solar and wind energy into multi-microgrid systems, highlighting the importance of smart grids, distributed generation, and intelligent energy management.

He also shared practical industry experiences and discussed how these technologies address the challenges of modern power generation and distribution. The interactive session encouraged students to actively participate through questions and discussions.



Learning Outcome

The event was successfully coordinated by Mr. Sumit Kumar Singh, with the support of Plug-in Association student coordinators Mr. Devanshu Kumar and Ms. Kajal Kumari (III Year EEE). The expert talk provided students with valuable insights into next-generation power systems and emerging electrical technologies, inspiring them to explore future opportunities in power engineering.

Career Guidance Program Skill Up & Stand Out

The Plug-in Association of the Department of Electrical & Electronics Engineering organized a Career Guidance Program – "Skill Up & Stand Out" to help students explore career opportunities, enhance employability skills, and prepare for successful professional careers. The keynote session by Mr. Bhaskar Ranjan, TPO Head, GEMS Polytechnic College, focused on career planning, higher education, placements, interview skills, and professional development.



The department recognized Semester Toppers, students who successfully cleared supplementary examinations, and third-year students for their dedication and contributions to departmental activities. Certificates and appreciation gifts were presented to motivate students towards excellence, perseverance, and committed service.

Outcome of Program

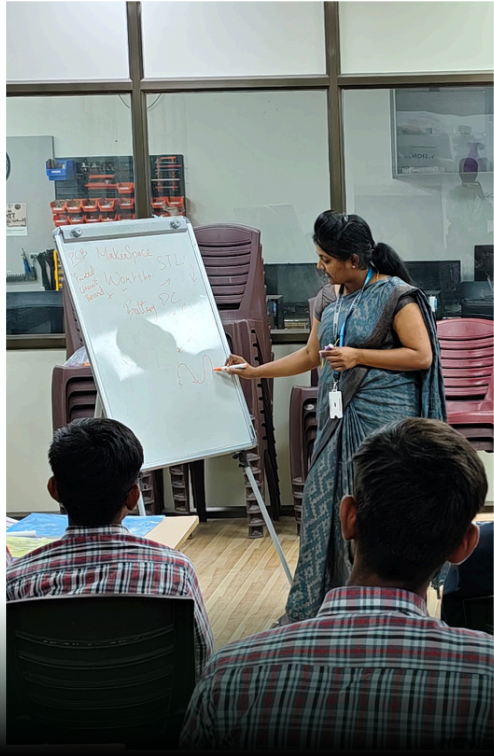
The interactive program enhanced students' awareness of career opportunities, higher education, entrepreneurship, and employability skills. It inspired them to set clear career goals while fostering confidence, motivation, and a spirit of continuous learning.



Special sessions were conducted by Mr. Ketu Kumar Sahitya on GATE and Government Exam Preparation, emphasizing strategic learning and competitive opportunities, and by Mr. Ragunath on Entrepreneurship & Start-up Opportunities, encouraging students to develop innovative ideas, leadership qualities, and an entrepreneurial mindset.

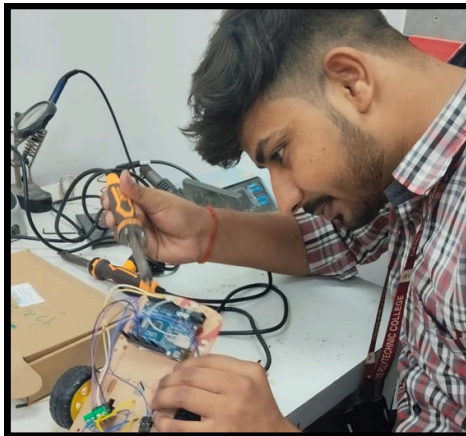
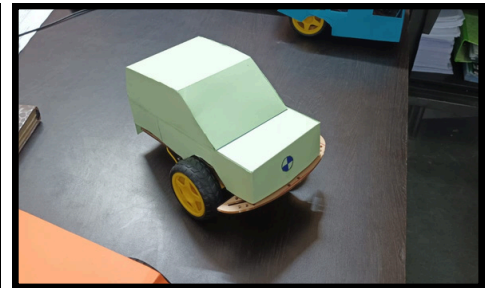
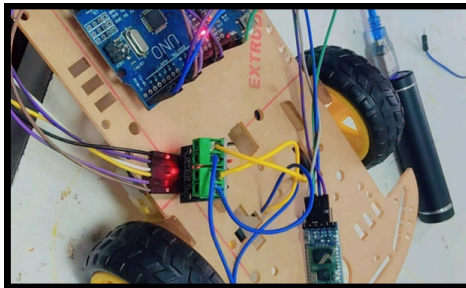


2-Day Workshop on Smart Mobility Cart



The workshop was conducted by Mrs. Catharine K., SDC Coordinator, introducing students to the design, working principles, and applications of Smart Mobility Carts. Through theory and hands-on activities, students learned about sensors, controllers, electric drive systems, and automation technologies, gaining practical insights into emerging intelligent transportation solutions. The workshop also enhanced their problem-solving skills, creativity, and ability to apply technical concepts in real-world applications.

The Plug-in Association of the Department of Electrical & Electronics Engineering, GEMS Polytechnic College, successfully organized a Two-Day Workshop on "Smart Mobility Cart" on 6th and 7th March 2026 at the GPC Seminar Hall. Conducted at the demo level, the workshop provided students with hands-on exposure to smart mobility technologies and their applications in modern transportation systems.



Workshop Outcome

The workshop was successfully coordinated by Mr. Ketu Kumar Sahitya, with the support of student coordinators Mr. Vivek Kumar Ankit and Ms. Sapna Kumari (III Year EEE). The two-day workshop concluded with students successfully designing and building a Smart Mobility Trolley Robot using Arduino, showcasing their technical skills, creativity, and teamwork. Certificates of appreciation were awarded to the participants, making the workshop a memorable and enriching learning experience.

INDUSTRIAL VISIT

"Observe. Learn. Apply. Grow."



As part of the curriculum, an Industrial Visit to SUDHA Dairy Plant, Dehri-on-Sone, Bihar, was organized for II and III Year EEE students on 12th March 2026. A total of 27 students, accompanied by Ms. Pathmapriya and Ms. Quda J, participated in the visit to gain practical exposure to industrial processes and understand the application of electrical and automation systems in modern industries.

Visit Highlights

During the visit, students observed the complete milk processing cycle, including pasteurization, homogenization, automated packaging, cold storage, quality testing, CIP, and ETP systems. Industry experts also explained electrical control panels, automation, and quality assurance practices.



Objectives:

The visit bridged classroom learning with industrial practices, enabling students to understand the real-world applications of electrical machines, automation, control systems, safety, and quality management in dairy processing.



Learning Outcomes

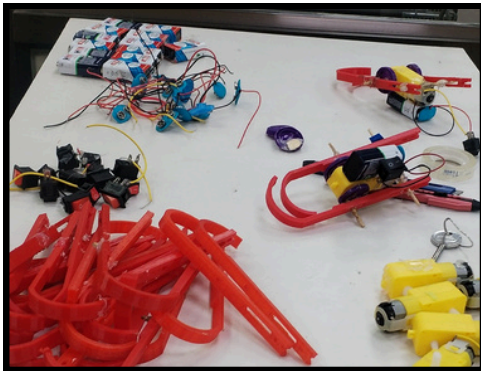
The industrial visit provided students with practical knowledge of dairy processing, automation, and electrical control systems, while enhancing their understanding of quality standards, safety measures, industrial applications, and workplace practices.



TECHNO OLYMPICS

Design, Build, Compete, and Innovate.

The EEE Department actively participated in Techno Olympics, an exciting technical event organized by the Skill Development Center (SDC) in association with GPC IIC on 22 January 2026. The event was coordinated under the guidance of Mrs. Catharine, SDC Coordinator, and provided students with an excellent platform to showcase their creativity, technical skills, and innovative thinking.



10 students from the EEE Department participated in the thrilling Rope Climbing Robot Race, where students demonstrated their abilities in robot design, fabrication, programming, and teamwork. The activity encouraged students to apply their theoretical knowledge to a practical robotic application while developing problem-solving and collaborative skills.



The event created an enthusiastic and competitive atmosphere, inspiring students to Design, Build, Compete, and Innovate. The participation of EEE students highlighted the department's commitment to hands-on learning, innovation, and skill development.

FAREWELL

A Heartfelt Farewell – A New Beginning

The institution organized a warm and memorable Farewell Programme to honor our outgoing students and celebrate their journey at GEMS Polytechnic College on 2nd May 2026.

Following the institutional programme, the students gathered in the Department of Electrical & Electronics Engineering to share their experiences, memories, and reflections from their academic journey.

The gathering was filled with joy, laughter, and heartfelt emotions as students recalled the special moments they had shared with their classmates and faculty members.



Devanshu Kumar student of EEE department shared his inspiring journey and memorable experiences with his batchmates, reflecting on their time together and encouraging them to confidently embrace the opportunities and challenges that lie ahead.



The event concluded with a memorable group photograph, capturing the beautiful bonds and cherished memories of the day.



We wish all our outgoing students great success, happiness, and a bright future ahead. May you continue to learn, grow, and shine wherever life takes you

STUDENTS' CORNER

Workshop Participation at NIT Mizoram



Six students from the II Year EEE Department

- Anurag Kumar,
- Raviraj Kumar,
- Sulabh Kumar,
- Amit Kumar,
- Prachi Kumari
- Dhruv Kumar

participated in the five-day online workshop on “Modern Trends in Power Electronics and Sustainable Energy Systems,” organized by NIT Mizoram

from 13.04.2026 to 17.04.2026. The workshop provided valuable insights into emerging trends in power electronics and sustainable energy systems. All participating students successfully completed the program and received participation certificates.

EEE Students Contribute to We स्मृति 3.0 – A Celebration of Creativity and Well-being

The Department of Electrical & Electronics Engineering proudly celebrates the creative contributions of its students to We स्मृति 3.0, a special magazine launched on 8 March 2026 to mark International Women's Day, in collaboration with the IEEE Women in Engineering Madhya Pradesh Section and the IEEE Kalinga University Student Branch.

This year's edition focused on themes such as Healthy Life, Stress Management, Positivity, Creative Thinking, and "Me Hours", highlighting the importance of self-care, mental well-being, and personal reflection in today's fast-paced world.

We are delighted to share that eight girl students from the Department of Electrical & Electronics Engineering actively participated by contributing their articles to this inspiring magazine.



WRITTEN WITH HEART: OUR STUDENTS' CONTRIBUTIONS -WE स्मृति 3.0

We स्मृति 3.0

CREATIVE THINKING



Kajal Kumari
Student
GEMS Polytechnic
College, Aurangabad

Creative thought—a shining light,
That turns the dark to visions bright.

It helps her see new paths untold,
Where dreams are shaped in brave and bold.

Within each woman lives a flame,
A spark no boundary dares to tame.

A student learning, strong and wise,
A homemaker where love resides,
A leader standing firm and tall
Creativity lives in all.

On Women's Day we proudly say,
She finds new hope in her own way.

Not only art in colors bright,
But daily strength and inner sight.

A mother's plan, a young girl's dream,
A team led with a thoughtful scheme
Each act reflects her daring mind,
New solutions she will find.

Let her believe, let doubt grow thin,
For creative power lies within.

CREATIVE THINKING



Monika Sharma
Student
GEMS Polytechnic
College, Aurangabad

Creative thinking is the art
Of seeing things in a different way.
Finding fresh and unique ideas
To brighten every day.

It grows with practice and open minds,
With imagination free,
Helping us explore new paths
And endless possibility.

In school, in work, in daily life,
It guides us to improve,
Through questions, sharing,
and even mistakes
We learn, create, and move.

Creative thinking leads to progress,
To success and innovation too
A valuable skill for everyone
In all we say and do

86

We स्मृति 3.0

HEALTHY LIFE



Simi Kumari
Student

GEMS Polytechnic
College, Aurangabad

Health is wealth,
A simple truth we know,
Without good health,
Life cannot truly glow.

A healthy lifestyle
Brings strength each day,
In body, mind, and heart
It shows the way.

Balanced food we eat,
With vitamins and care,
Keeps the body strong
And illness rare.

Exercise and good sleep
Help us stay bright,
Managing stress wisely
Makes our future light.

A healthy woman shines,
With confidence and grace,
For good health is the foundation
Of a happy life's embrace

POSITIVITY



Sapna Kumari
Student
GEMS Polytechnic College, Aurangabad

When clouds appear and skies turn gray,
Positivity lights the way.
It whispers hope in silent tone,
Reminding us we're not alone.

It blooms like flowers after rain,
And softens sorrow, heals the pain.
Not blind to storms that life may send,
But strong enough to rise and mend.
A gentle smile, a faithful heart,

A choice to see the brighter part
In darkest night, it shines so true,
A golden spark in all we do.

With every fall, it helps us stand,
With courage held in steady hand.
For minds that choose the hopeful
Create a world refreshed and new.
Positivity is quiet might—
A small, brave flame that grows to light

61

STRESS TO STRENGTH



Shakshi Kumari
Student

GEMS Polytechnic
College, Aurangabad

Stress whispers softly, then loudly it grows,
Through busy days and silent woes.
It touches the heart, the mind, the soul,
Disturbing peace, disturbing control.

Anxiety rises, moods may swing,
Energy fades like early spring.
Thoughts grow heavy, focus unclear,
Frustration and doubt quietly appear.

Yet strength lives deep in every woman's grace,
A gentle power no stress can erase.
Through self-care moments, calm and kind,
She heals her body, heart, and mind.

STUDENTS' ARTICLES



Multi Micro Grid

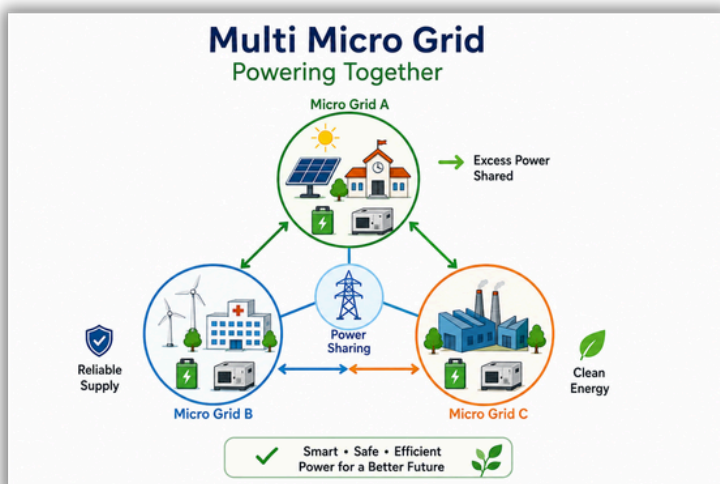
Amrita Kumari
I Year – EEE

Electricity is an essential part of our daily lives, powering homes, schools, hospitals, industries, and many other facilities. As the demand for electricity continues to increase, there is a need for reliable, efficient, and sustainable power systems. A Multi Micro Grid (MMG) is one such modern solution.

Multi Micro Grid (MMG) is a system where two or more microgrids are interconnected to work together. Each microgrid generates electricity using solar, wind, batteries, or generators and can share surplus power with other microgrids whenever needed, ensuring a reliable, efficient, and uninterrupted power supply.

For example, if one microgrid generates extra solar power while another needs more electricity, the surplus power can be shared between them. This helps ensure a reliable power supply and reduces power interruptions.

Multi Micro Grids improve power reliability, energy efficiency, and the use of renewable energy, making them an important solution for a smart and sustainable energy future.



Every Failure Leaves a Clue

Ankit Kumar
I Year – EEE

During one of our practical classes, our team was trying to light a simple bulb. We checked every connection, but the bulb still did not glow. After a few minutes of careful inspection, we discovered that just one small wire was loose. We fixed the connection, and the bulb lit up instantly.

That simple incident taught me an important lesson: engineering is not just about circuits—it is also about life. Many times, success is within our reach, but a small mistake, lack of confidence, or missing skill can hold us back. Instead of giving up, we should continue to observe, learn, and improve.

Just as a bulb needs a complete circuit to shine, our dreams need knowledge, patience, perseverance, and determination to become reality.

"Every failure is not the end—it is a clue that brings us one step closer to success."



Importance of Renewable Energy (Solar and Wind Energy)

Monika Kumari
I Year – EEE

**The sun shines bright, the wind blows free,
Powering our world with clean energy.**

**Solar and wind light every way,
Keeping pollution far away.**

**Saving nature, sky, and sea,
For a greener world for you and me.
Renewable energy is the future's key.**

ACADEMIC ECXCELLENCE

EVEN SEMESTER EXAMINATION – 2026

II Semester Toppers



Mr. Bittu Kumar

Reg No: 1993925014
Marks: 817



Mr. Himesh Kumar

Reg No: 1993925017
Marks: 816



Mr. Ayush Raj

Reg No: 1993925011
Marks: 813

IV Semester Toppers



Ms. Prachi Kumari

Reg No: 1993924015
Marks: 873



Mr. Raviraj Kumar

Reg No: 1993924007
Marks: 873



Mr. Anurag Kumar

Reg No: 1993924013
Marks: 835

VI Semester Toppers



Ms. Kajal Kumari

Reg No: 1993923006
Marks: 665



Mr. Devanshu Kumar

Reg No: 1993923004
Marks: 614



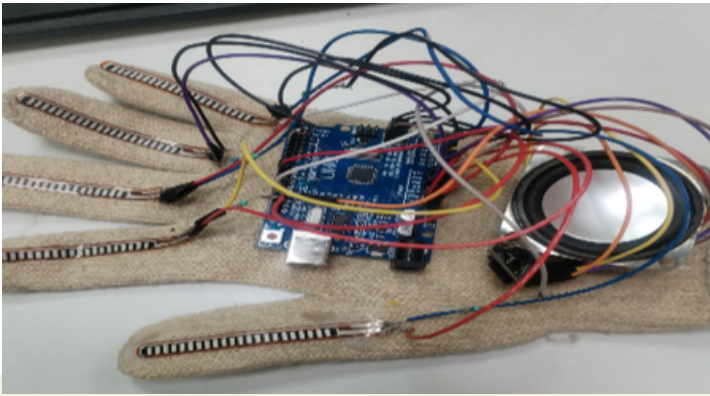
Mr. Jayant Kumar

Reg No: 1993923005
Marks: 597

Congratulations to all the toppers of the Even Semester(2025-26). Keep shining and inspiring others with your success.

-Department of EEE

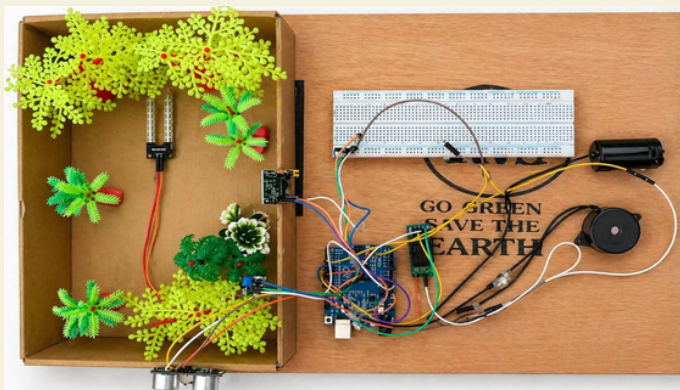
MAJOR PROJECTS



SIGN LANGUAGE TO HINDI VOICE OVER

An Arduino-based system that detects sign language gestures using sensors and converts them into Hindi voice output in real time. It helps bridge the communication gap and promotes inclusive and accessible communication for hearing and speech-impaired individuals.

- SDG 10 – Reduced Inequalities | SDG 4 – Quality Education | SDG 3 – Good Health and Well-being



SMART CROP PROTECTION SYSTEM

An automated system that uses Arduino, PIR and ultrasonic sensors, soil moisture sensors, buzzer, relay, and water sprayer to detect animal movement and protect crops.

- SDG 2 – Zero Hunger | SDG 9 – Industry, Innovation and Infrastructure | SDG 12 – Responsible Consumption and Production



"IOT-BASED HEALTH

MONITORING SYSTEM USING ESP8266

An IoT-based system that monitors heart rate, SpO₂, and body temperature using sensors and displays real-time data through the Blynk mobile application. It enables remote and continuous health monitoring, especially for elderly people and patients.

- SDG 3 – Good Health and Well-being | SDG 9 – Industry, Innovation and Infrastructure



SMART SOLAR UMBRELLA

The Smart Solar Umbrella combines shade with solar power, using PV panels to generate and store energy for charging devices and powering small appliances. It offers a clean and portable power solution for various outdoor spaces.

- SDG 7 – Affordable and Clean Energy | SDG 9 – Industry, Innovation and Infrastructure | SDG 11 – Sustainable Cities and Communities

ALUMNI REFLECTIONS

Success Stories



Mr. Ujjwal Kumar,
Supervisor at NTPC Nabinagar
Batch : 2022–2025

I am currently working as a Supervisor at NTPC Nabinagar through BHEL, where I supervise site activities, coordinate with workers, ensure safety, and maintain quality standards. My journey at GEMS Polytechnic College, Aurangabad, was one of the most memorable phases of my life. The college helped me develop technical knowledge, discipline, teamwork, leadership, and self-confidence.

One of my proudest memories was serving as the Yellow House Captain of the EEE Department during the first-ever Sports Day and winning the championship with my team. I am sincerely grateful to Pamela Ma'am, Raghunath Sir, Ketu Sir, and all my teachers for their continuous guidance and encouragement.

Coming from a Hindi-medium background, I initially struggled with English communication, but with regular practice and my teachers' support, I gradually gained confidence.

My message to juniors: Respect your teachers, value your friends, participate actively in college activities, never fear challenges or failures, and always keep learning.

I am proud and grateful to be a part of the GEMS Polytechnic College and EEE family, which has given me knowledge, confidence, unforgettable memories, and values for life.



Mr. Devanshu Kumar,
Robo Operator
EKA mobility plant 2 chakan
Batch : 2023–2026

I'm Devanshu Kumar, a Diploma graduate in Electrical & Electronics Engineering from GEMS Polytechnic College, currently working as a Robo Operator in the Paint Shop at EKA Mobility, Plant 2. My responsibilities include operating and monitoring robotic painting systems, ensuring smooth operations, maintaining paint quality, and following safety and quality standards.

My professional experience has helped me develop technical knowledge, problem-solving abilities, teamwork, discipline, and responsibility. I also work closely with the maintenance team to identify technical issues and minimize production delays.

My journey from the classroom to the workplace has been a valuable learning experience. The theoretical knowledge, practical laboratory sessions, projects, and guidance from faculty members at GEMS Polytechnic College gave me a strong foundation in Electrical & Electronics Engineering. My college life also helped me improve my communication, confidence, teamwork, and practical problem-solving skills, which continue to support me in my career.

I am truly grateful to my college and faculty members for shaping my personal and professional growth. I look forward to learning new technologies, embracing new challenges, gaining valuable experience, and continuing to grow in my professional journey.

ALUMNI ARTICLES

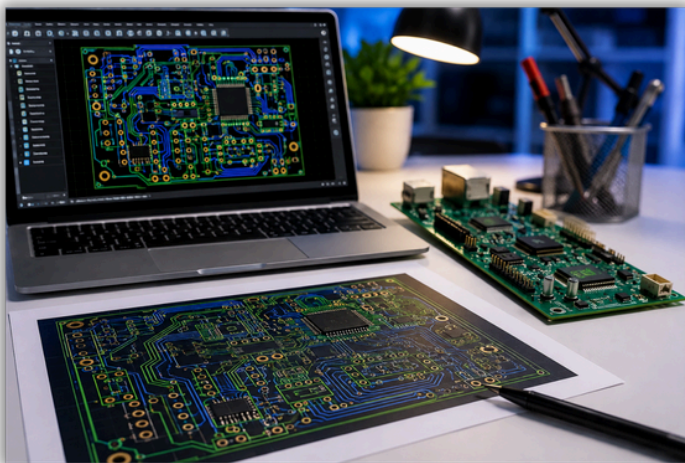
ECAD: TRANSFORMING ELECTRONIC DESIGN



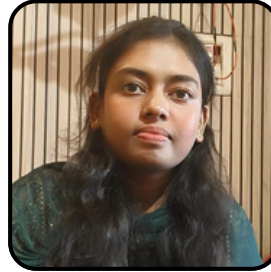
Shashi Bushan
Robo Operator
EKA mobility plant 2 chakan
Batch : 2023-2026

Electronic Computer-Aided Design (ECAD) is a powerful technology used to design, simulate, and analyze electronic circuits and systems using computer software. It helps engineers create circuit diagrams, design PCBs, test circuit performance, and identify errors before fabrication.

ECAD tools reduce design time, improve accuracy, and support the development of complex electronic systems. Learning ECAD enables students to connect theory with practical applications and develop skills in power electronics, embedded systems, automation, robotics, electric vehicles, and renewable energy. As technology advances, ECAD continues to empower engineers to transform innovative ideas into efficient and reliable electronic solutions.



PLC AND SCADA: THE BACKBONE OF MODERN INDUSTRIAL AUTOMATION



Khushboo Kumari
Junior Engineer
Epitome private limited
Batch : 2022-2025

Industrial automation has become essential for improving productivity, reducing human error, and ensuring safety. **Programmable Logic Controllers (PLCs) and Supervisory Control and Data Acquisition (SCADA)** systems are the core technologies that enable industries to monitor, control, and optimize industrial processes.

A PLC is an industrial computer that controls machines by processing input signals from sensors and operating devices such as motors, valves, and relays. SCADA is a supervisory system that collects real-time data from PLCs, provides graphical monitoring, data logging, alarm management, and remote control of industrial processes.

While PLCs perform machine-level control, SCADA provides centralized monitoring and supervision. Together, they are widely used in manufacturing, power plants, water treatment, oil and gas, pharmaceuticals, and building automation.

With the growth of Industry 4.0, IIoT, AI, and cloud computing, PLC and SCADA systems are becoming smarter and more connected. Learning these technologies equips engineers with valuable skills for careers in electrical, electronics, and industrial automation.

FACULTY CORNER

A Journey of Continuous Learning and Academic Excellence

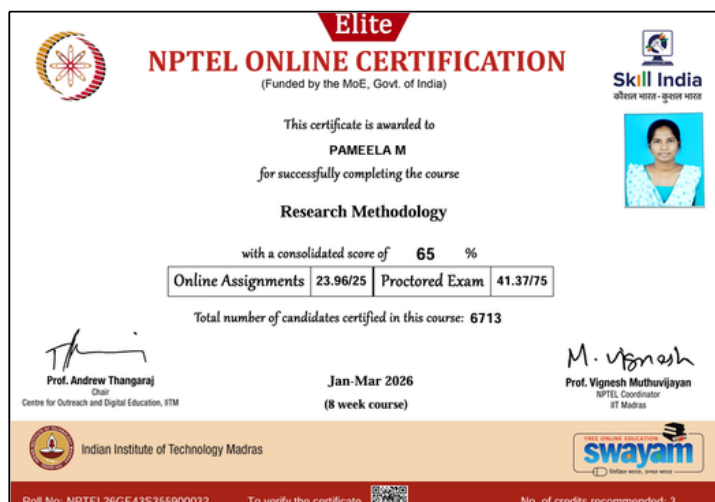
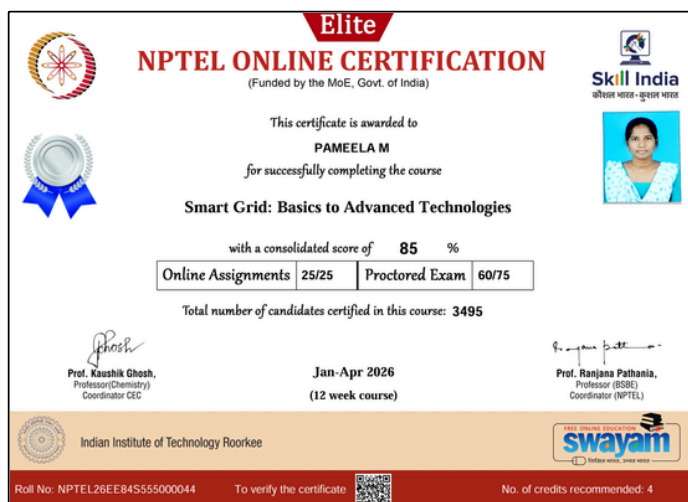


We are delighted to highlight the academic achievements and continuous professional development of Mrs. Pameela M, Head of the Department of Electrical & Electronics Engineering, who continues to enhance her knowledge through higher education and professional learning. She is currently pursuing her **Ph.D. at the National Institute of Technology (NIT), Mizoram**, reflecting her commitment to advanced research and academic excellence.

Adding to her professional development, she has successfully completed and earned certificates in two NPTEL courses in 2026:

- **Smart Grid: Basics to Advanced Technologies – 12-week course, 4 credits**
- **Research Methodology – 8-week course, 3 credits**

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The Department of Electrical & Electronics Engineering congratulates Mrs. Pameela M on these achievements and wishes her continued success in her Ph.D. journey and future academic endeavours.

NBA Mentoring Sessions under SBTE Mentor–Mentee Scheme

As part of the SBTE Mentor–Mentee Scheme, NBA Mentoring Sessions were successfully conducted on 5 and 6 January 2026 at the Boardroom of GEMS Polytechnic College for the allotted Government Polytechnic Colleges. The sessions were facilitated by Mr. Ragunath A, Faculty Member of the Department of Electrical & Electronics Engineering and IQAC Coordinator, GEMS Polytechnic College. The mentoring sessions focused on providing comprehensive guidance on key aspects of the NBA accreditation process, including Self-Assessment Report (SAR) preparation, Outcome-Based Education (OBE), Course Outcomes (COs), Program Outcomes (POs), Program Specific Outcomes (PSOs), CO–PO–PSO mapping, documentation, evidence preparation, and effective quality assurance practices.



The department appreciates the valuable contribution of Mr. Ragunath A in sharing his expertise and extending mentoring support to the allotted Government Polytechnic Colleges under the SBTE Mentor–Mentee Scheme.

BEST LIBRARY USER AWARD



We are delighted to share that Mrs. Pameela M, Head of the Department (EEE), and Mr. Ragunath A, IQAC Coordinator, from the Department of Electrical & Electronics Engineering, were honoured with the **Best Library User Award under the institution's NDLI Club initiative for the Academic Year 2025-26**. They received the award certificates from the Director Sir in recognition of their active utilization of library resources and commitment to continuous learning. Their achievement serves as an inspiration to students and faculty to make effective use of library resources for academic and professional development.

CLOSING NOTE

As we conclude this edition of Electro Vision, we reflect with pride on another semester filled with learning, innovation, and achievements. The accomplishments of our students and faculty demonstrate the department's commitment to academic excellence, technical competence, and continuous growth.

We extend our sincere appreciation to everyone who contributed to this newsletter and made these milestones possible. May we continue to learn, innovate, and inspire one another as we strive for excellence.

"Empowering Minds, Energizing the Future."

**Department of Electrical & Electronics Engineering,
GEMS Polytechnic College.**