# TECHWAVE- EC

Department of Electronics Engineering

QUARTERLY NEWSLETTER

## DEPARTMENT OF SCIENCE TECHNOLOGY AND TECHNICAL EDUCATION GOVERNMENT OF BIHAR

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# VISION OF THE DEPARTMENT

To achieve excellence in Electronics Engineering education by developing technically skilled, innovative, and ethically responsible professionals to meet industry and societal needs.

# MISSION OF THE DEPARTMENT

1. To provide strong theoretical foundations and hands-on practical training in core areas of Electronics Engineering.
2. To enhance students' technical competencies through laboratories, workshops, projects, and industry-oriented activities.
3. To encourage innovation, problem-solving skills, and the use of emerging technologies such as IoT, embedded systems, automation, and electric vehicles.
4. To develop professionally competent, socially responsible, and ethically strong engineers capable of lifelong learning.
5. To promote teamwork, leadership qualities, and continuous improvement among students and faculty members.

## EDITORIAL COMMITTEE



Editor in Chief
Dr. Praveen pachauri
Principal, GP Siwan



Associate Editor
Ms. Manisha Kumari
Lecturer, Electronic



Student Editor
Sumit Shah
Electronics 2nd year



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# MESSAGE FROM THE HOD



**Mrs. Payal Singh**
**Head of Department**
**Electronics Engineering**
**Government Polytechnic, Siwan**

It gives me immense pleasure to present the Department Newsletter of Electronics Engineering for the academic session 2026–2027. Our department is committed to academic excellence, practical learning, and innovation. I appreciate the dedicated efforts of our faculty members and the enthusiasm of our students in various academic and co-curricular activities.

Together, we strive to nurture technical skills, creativity, and professional excellence for a brighter future.

"Learning, Innovation, and Excellence for a Better Tomorrow."

# DEPARTMENT FACULITY



- Name: Mrs. Payal Singh
- Designation: Lecturer (Electronics Engineering)
- Qualification: B.Tech
- Area of Expertise: Microwave and Radar
- Experience: (2 Yr) Experience in JRF in DLJ (Defence lab Jodhpur) lab DRO,(0.5 Yr) Experience in SRF in DRO



- Name: Ms. Manisha Kumari
- Designation: Lecturer (Electronics Engineering)
- Qualification: B.Tech
- Area of Expertise: EMSD in ECIL and Teaching
- Experience: Technical Officer in ECIL (1.5 Yr), Lecturer (4 years)



- Name: Mrs. Priyanka Kumari
- Designation: Guest Lecturer (Electronics Engineering)
- Qulification: B.Tech
- Experience: As a guest lecturer at GP Siwan



- Name: Mr. Akhilendra Kumar
- Designation: Guest Lecturer (Electronics Engineering)
- Qulification: B.Tech and M.E
- Experience: 2 year in GP Siwan as a guest lecturer (Electronics Engineering)



- Name: Md. Kaif Sohsil
- Designation: Guest Lecturer (Electronics Engineering)
- Qualification: B.Tech
- Experience: As a guest lecturer (Electronics Engineering)



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# DEPARTMENT LAB ASSISTANT'S



- Name: Mr. Shivam Mayank
- Designation: Guest Lab Assistant
- Qulification: Diploma in Electronics Engineering
- Experience: As a guest lab assistant in GP Siwan from 6 month

- Name: Mr. Suryanshu Singh
- Designation: Guest Lab Assistant
- Qulification: Diploma in (Electronics engg) and B.Tech in CSE
- Experience: As a guest lab assistant in GP Buxur from 1 year in Electronics department and As a lab assistant in GP Siwan



# EVENTS & WORKSHOPS

## 1. Training on project development using Arduino

By 06\07\2026 to 12\07\2026



The Department of Electronics Engineering successfully organized a one week Training on project development using Arduino.

The objective of the program was to provide students with practical exposure of Arduino concepts, hardware interfacing, and real-time applications through project-based learning

*Coordinator/programmer In-charge
1. Pyush Kumar
2. Shivam Mayank

*Student Trainers
1. Sagar Rai
2. Anuj Kumar
3. Sarfaraj

*Venue: Hardware Lad in GP Siwan

DAY 1: INTRODUCTION OF ARDUINO

Here all studend learned about analog and digital signals, different types of logic gates, resistors, jumper wires, breadboards, Arduino UNO, and USB cables. An analog signal changes continuously with time, whereas a digital signal has two states: HIGH (1) and LOW (0). We studied AND, OR, NOT, NAND, NOR, XOR, and XNOR gates and their basic functions. We also learned that resistors control current, jumper wires connect components, and breadboards help build circuits without soldering. Finally, we learned about Arduino UNO, a microcontroller board used for electronic projects, and how a USB cable connects it to a computer for programming and power supply.

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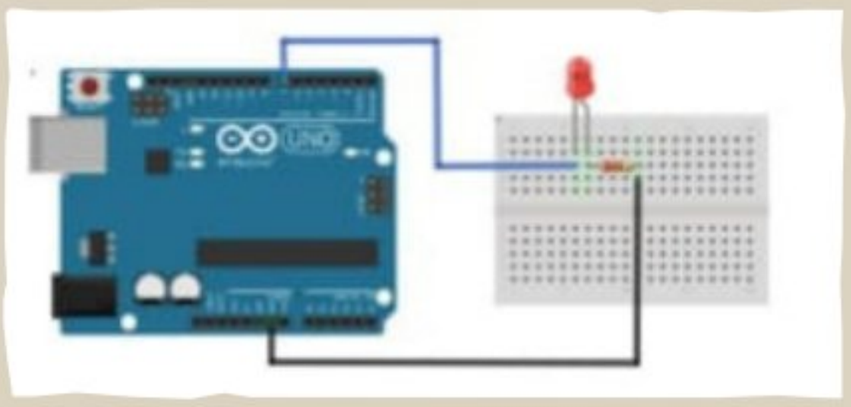
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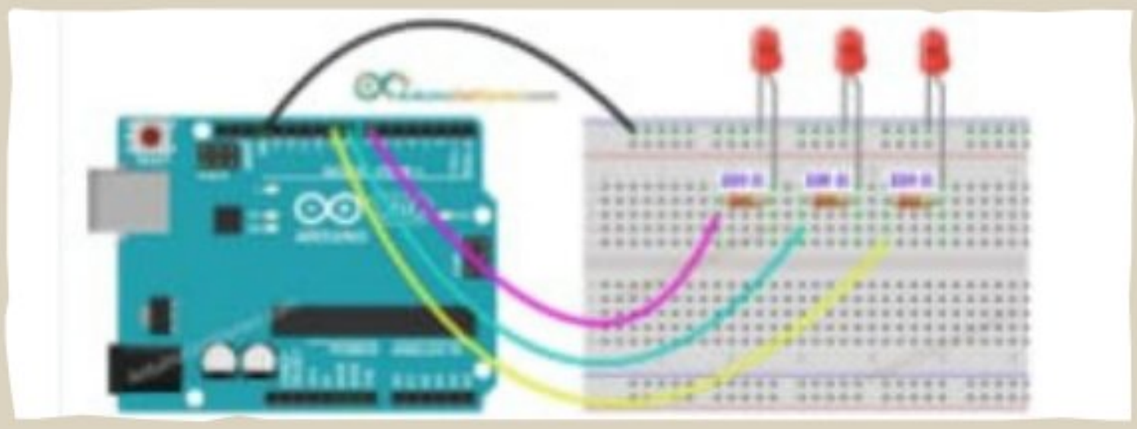




DAY 2: TO BLINK A SINGLE LED BLINKING AND TO BLINK THREE LED USING ARDUINO

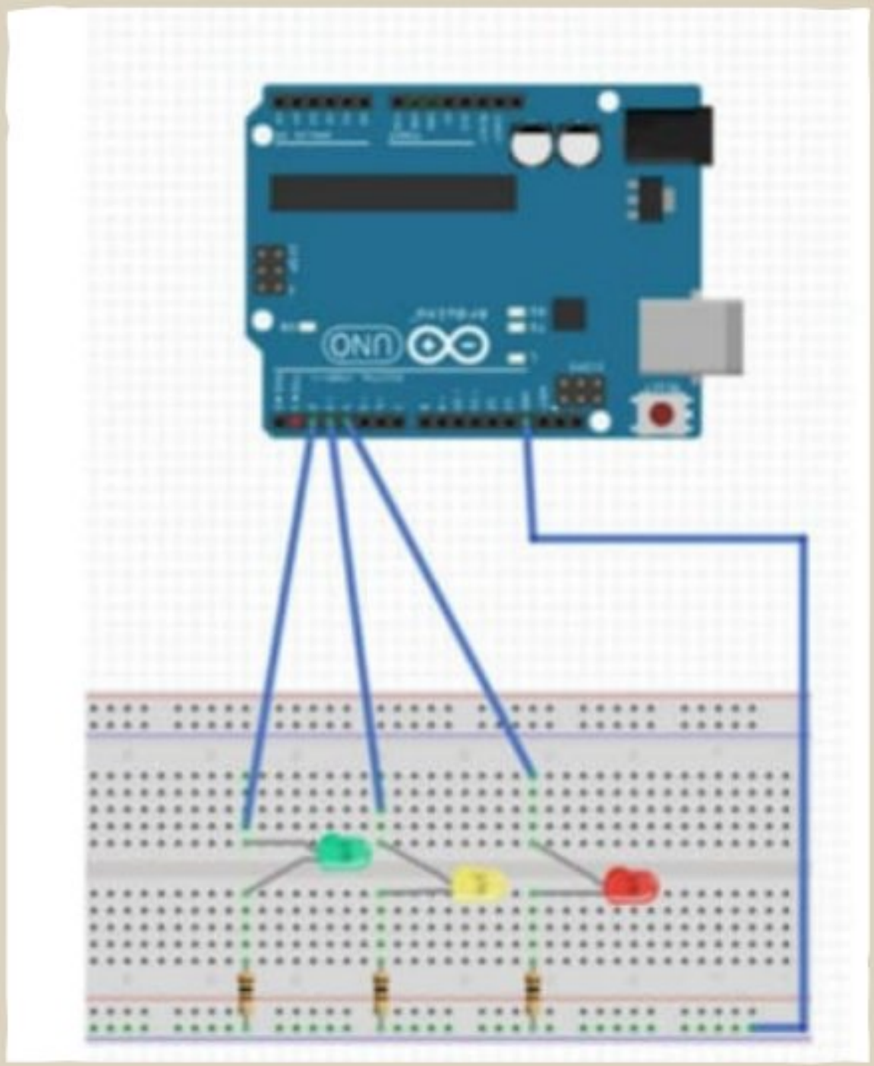
The required components are Arduino Uno, LEDs, resistors, a breadboard, jumper wires, and a USB cable. The LED anodes are connected to digital pins 13, 8, 9, and 10 through resistors, while the cathodes are connected to GND. The Arduino is connected to a computer, and the program is uploaded to control the LEDs. A single LED blinks at one-second intervals, while three LEDs blink one after another with a delay of 500 milliseconds. Thus, both LED blinking experiments are performed successfully.





DAY 3: TO BILNK TRAFFIC LINGHT SYSTEM

The project uses Arduino Uno, a breadboard, three LEDs (Red, Yellow and Green), three 220Ω resistors, jumper wires and a USB cable. The LEDs are connected to Arduino pins 8, 9 and 10, with their negative legs connected to GND. The Arduino controls the traffic lights automatically: the Green LED glows for 5 seconds, the Yellow LED for 2 seconds and the Red LED for 5 seconds. This cycle repeats continuously. Purpose: To learn Arduino programming, LED control and the basic working of a traffic light system.



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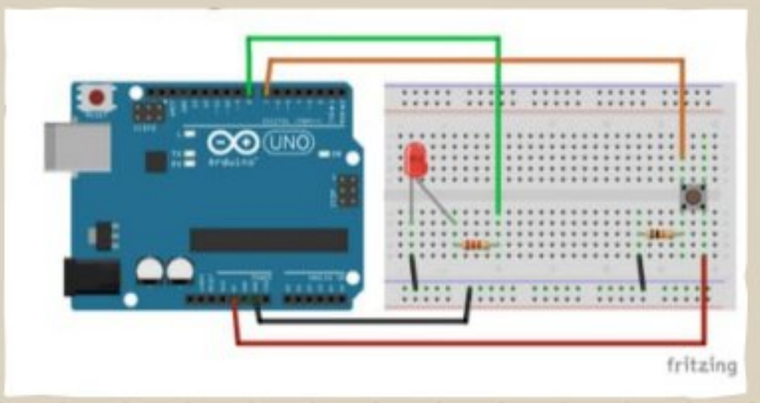
DAY 4: DIWALI LIGHT WITH ARDUINO

This project uses Arduino Uno, three red LEDs, three 220Ω resistors, a breadboard, jumper wires and a USB cable. The positive legs of the LEDs are connected to Arduino pins 8, 9 and 10 through resistors, while the negative legs are connected to GND. The Arduino is programmed to control the LEDs and create a decorative lighting effect. Purpose: To learn Arduino programming, LED control and create a simple Diwali lighting system.



DAY 5: ARDUINO USING PUSH BUJTTON

This project guides you to control an LED using an Arduino Uno and a push button. It lists the necessary components, including a breadboard, jumper wires, and resistors (220Ω for the LED and 10kΩ for the button). By connecting the button to digital pin 2 and the LED to pin 8 according to the step-by-step instructions, the included code programs the Arduino to turn the LED on or off based on button presses.

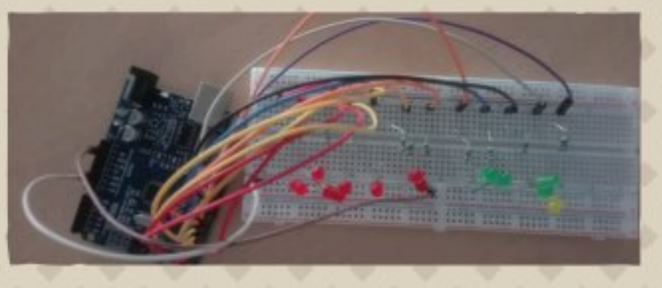


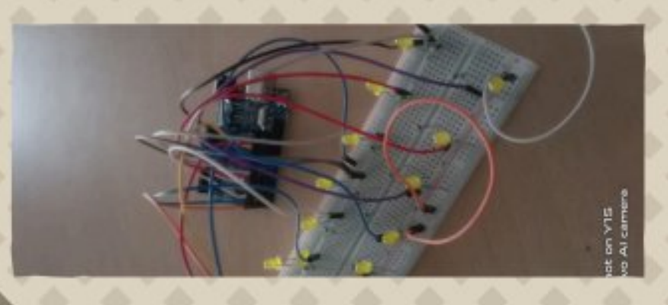


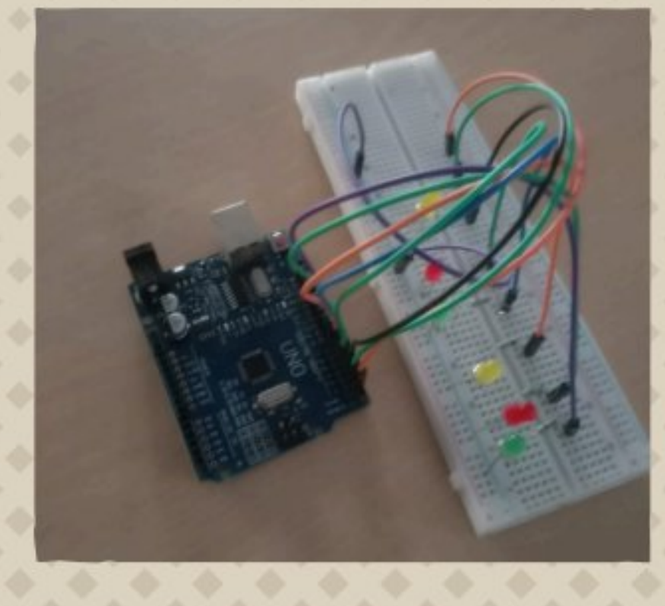

DAY 6: AUTOMATIC STREET LIGHT

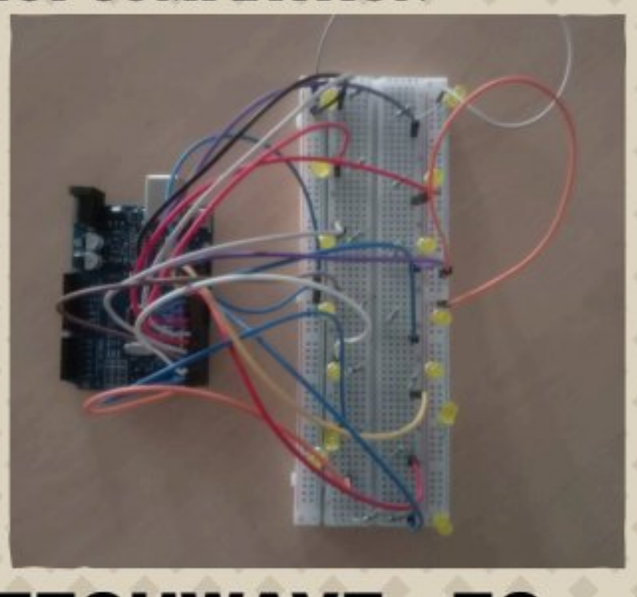
The required components for this project include an Arduino Uno, an LDR sensor, a breadboard, an LED, 220-ohm resistors, jumper wires, and a USB cable. To set up the circuit connection, start by placing the Arduino Uno and the breadboard on a flat surface, ensuring that the LDR sensor module, LED, resistors, jumper wires, and USB cable are ready. Next, connect the GND pin of the LDR sensor to the 5V pin of the Arduino Uno, and then connect the other GND pin of the LDR sensor to the GND pin of the Arduino. Finally, connect the output pin to complete the layout.

DAY 7: SEVEN DAY TRAINING PROGRAM AND FINAL DAY PROJECT COMPETITION









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## 2. Online Virtual Lab Workshop

*Conducted by virtual lab team

Virtual lab expert:
1.Mr. Shani Kumar
2.Mr. Ubaid Mustaq Najar
Conduct on 29 July 2026

Mrs. Payal Singh
(Lecturer Electronics Engg)
Nodal Coordinator

Dr.Praveen Pachauri
Principal GP Siwan
Patron






## 3. Infosys Springboard Livelihood

Government Polytechnic Siwan is proud to host the Infosys Springboard Livelihood Program in collaboration with Infosys Foundation and Centum Foundation

1723 July 2026 - 08 August 2026

Polytechnic Siwan Government Department of Science, Technology & Technical Education, Government of Bihar

This initiative focuses on skill development, employability enhancement, digital learning, confidence building, and career readiness for our students.

Empowering youth with industry-relevant skills and creating opportunities for a brighter future.

TPO: Mr. Vimal Kumar, Mr. Prashant Kumar
Principal: Dr. Praveen Pachauri

Together, we continue our commitment to student empowerment and future-ready education.








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## 4. Orientation & Induction Program

Duration: 05.08.2026 to 06.08.2026

Venue: Seminar Hall in GP Siwan






## 5. Mental Health Awareness

Date: 05.082026

Time: 11:30AM

Venue: Seminar Hall







## 6. Basic Circuit Design Using Arduino

*Date: 17.09.2026

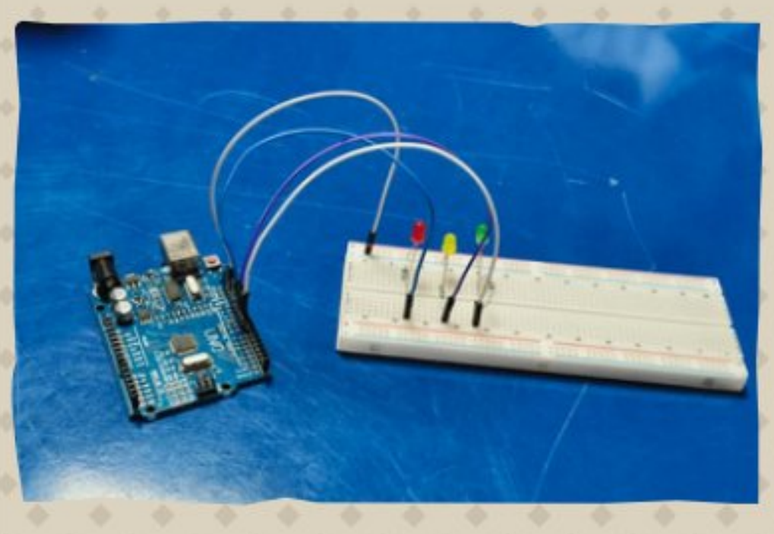
*enue: Hardware Lab

*Coordinator /Programme In Charge

- Mrs. Payal Singh
- Shivam Mayank

*Student Trainers

- Sonu Kumar
- Mritunjay Singh
- Madhu Kumari
- Sunny Singh







The activity titled “Arduino Training Program” was planned to provide participants with relevant knowledge and practical exposure in the selected area. To develop participants' practical skills in programming Arduino boards and interfacing electronic components for embedded-system and IoT applications. The programme was intended to connect classroom learning with practical applications.




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Introduction to Arduino boards, IDE installation/setup and board selection
Structure of an Arduino sketch, variables, functions and basic programming
Digital input/output, LED blinking, push-button interfacing and serial monitoring
Analog input and interfacing of sensors such as LDR, temperature or distance sensors, as available
Control of output devices such as buzzers, LEDs, relays or motors, subject to available equipment
Mini-project development, testing, debugging and demonstration
Students made traffic light , police light and Deepawali light using arduino, Led and  breadboard.







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## 7. Solar Lab Visit

*Coordinator /Programme In Charge

- Mrs. Payal Singh
- Shivam Mayank



A visit to the solar power plant was organized inside our college campus to provide practical knowledge about solar energy and its applications. During the visit, we learned how solar panels convert sunlight into electrical energy. We also understood the working of solar panels, inverters, batteries, and other important components of the solar power system. This visit helped us understand the importance of renewable energy, reduce electricity consumption, and protect the environment. Overall, it was an informative and educational experience.

## 8. Industrial Visit BSNL (Siwan)

*Date: 23.09.2026 *At: BSNL (Siwan)

*Branch: Electronics Engineering

*Patron: *TPO:

*Dr. Praveen Pachauri *Mr. Vimal Kumar

Principal GP Siwan *Mr. Prashant Kumar






Our college organized an industrial visit to BSNL (Bharat Sanchar Nigam Limited), Siwan. The main purpose of this visit was to gain practical knowledge about the telecommunication industry and understand how communication networks work. During the visit, we learned about various telecommunication equipment, networking systems, internet services, and the working of modern communication technology. The BSNL staff explained the functioning of different systems and their importance in providing reliable communication services. This visit was a great learning experience for us, as it helped us connect our theoretical knowledge with practical applications and understand the real-world working environment of the telecommunication industry.

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# STUDENT ACHIEVEMENTS

## 1. Technical Achievements

### *Hacklith 1.0

A Remarkable Achievement for Government Polytechnic Siwan

We are proud to share that Government Polytechnic Siwan participated in Hacklith 1.0, organized by GEC Banka, and our student teams achieved outstanding positions with their innovative projects.




Rank 1 - Medi Tech
Team Members: Anuj Kumar & Namit Kumar

Rank 3 - Smart Safety
Team Members: Aman Kumar Sharma, Shubham Kumar Tiwari & Chandan Kumar

Rank 5 - Smart Wheelchair
Team Members: Rahul Kumar Tiwari, Prince Kumar & Sarfaraz Husain






These achievements reflect the students' innovation, technical skills, teamwork, creativity and commitment to developing technology-driven solutions for real-world challenges.

Heartfelt congratulations to all the teams for their dedication and outstanding performance.

Special appreciation to the faculty members, mentors and everyone at Government Polytechnic Siwan whose guidance and support contributed to this achievement.

Innovate Create Solve. Impact

Government Polytechnic Siwan

Empowering Students Through Innovation & Technology

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# 2. Cultural Activities
# *Independence Day



On the occasion of Independence day, Rani Kumari from Electronics Engineering delivered an excellent and inspiring speech.



Parade on 15/08/2026 in the coordination of Sumit shah (49/EC/25)





An Electronics Engineering student, led the team as its coordinator. He guided all team members and supervised the activities throughout the program, ensuring smooth coordination and teamwork.





Dance on 15/08/2026 by Electronics Engineering 1st year students








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## *Fresher  Party (2026)













Freshers party organised in GP Siwan  On 01/10/2026 by the coordination of Electronics  Engineering Student's

## *Valmiki Jayanti













Valmiki Jayanti was celebrated with great enthusiasm and respect at our college. On this special occasion, our respected Principal Sir delivered an inspiring speech highlighting the life, teachings, and contributions of Maharishi Valmiki. Shivam Sir presented a wonderful slogan that added enthusiasm and meaning to the celebration. The entire programme was smoothly hosted by Sumit Shah, an Electronic Engineering student, who conducted the anchoring with confidence and coordination. The event was memorable and helped spread the valuable teachings and messages of Maharishi Valmiki among all the students.

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## *Hindi diwas




On the occasion of Hindi Diwas, (Pallavi Raj) from Electronics Engineering delivered an excellent and inspiring speech highlighting the importance of the Hindi language, its rich cultural heritage, and its role in promoting unity and national identity. Her speech was informative and impressive, spreading awareness about the importance of preserving and promoting our mother tongue.

## *Summer Intership PPT Presentation





## 3. Academic Excellence



Pankaj Kr. Sah
1st Position in 2nd Year



Adityaraj Kumar
2nd Position in 2nd Year



Sagar Kumar
3rd Position in 2nd year

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Sonu Kr. Khushwaha
(1st Position) in 1st Year



Madhu Kumari
(2nd Position) in 1st Year



Mrityunjay Singh
(3rd Position) in 1st year

## *Magazine Contribution

## *Teacher's Day  Celebration







Teachers' Day was celebrated with great enthusiasm and joy by the 2nd-year Electronics Engineering students. The students organized various activities to express their gratitude and respect towards their teachers. The celebration included speeches, cultural performances, and special moments dedicated to the teachers. It was a memorable occasion filled with happiness, respect, and appreciation for the valuable guidance and support provided by our teachers.

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# ALUMNI ACHIEVEMENTS



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# LABORATORY

## *Electrical And Electronics Workshop





First year Electronics lab taken  by Suryanshu Singh



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